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# PACIFIC RURAL PRESS

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Number 1

## The Great Cotton Show of 1881.

The engraving on this page presents a bird's-eye view of the ground where one of the most important industrial events of the decade will transpire. It gives a general view of the grounds and buildings which will be used in the International Cotton Exposition, which will open October 5th, and continue until December 31, 1881. The scene is Oglethorpe Park, Atlanta, Georgia.

It is eminently proper that there should be a great cotton exhibition in the United States, for cotton is one of the great staples of our country, and has done more, perhaps, than any other product to give us a high place both in

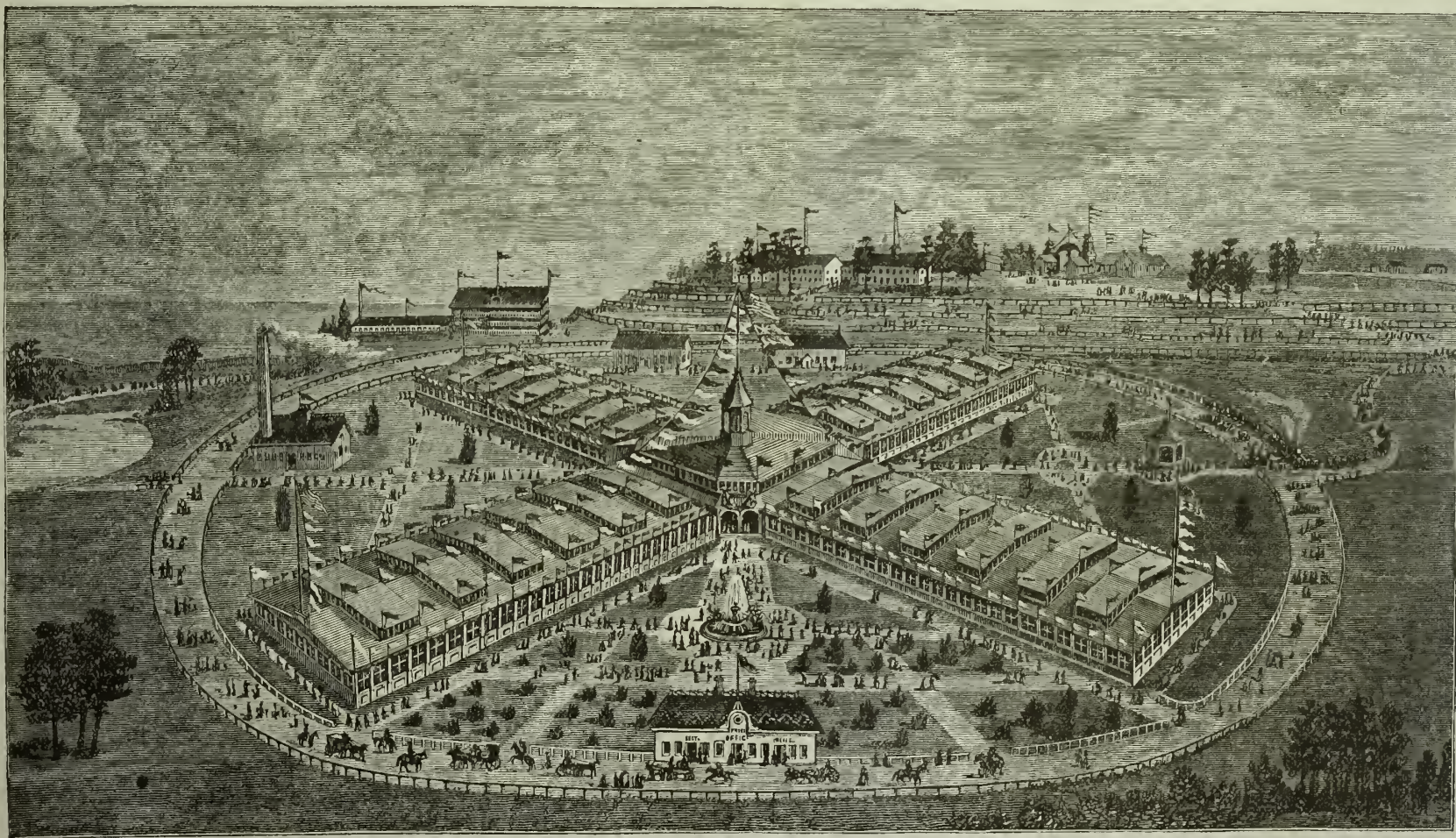
ever held in the South, very properly derives its title from the leading Southern product—the staple which forms the nucleus of the widest range of Southern industry—but its scope is by no means confined to cotton and its analogous interests. The schedule of articles shows that the various departments are so constituted as to offer the freest opportunity for general exhibition. The classification has been made with the greatest care and attention, so as to include, in the most satisfactory manner possible, the prominent branches of industry without diminishing in any degree the pre-eminence of cotton and its accessories. Such changes or new features as may hereafter be suggested or may appear advisable or necessary for a more complete success will be incorporated. The Executive Committee desire, by every means

The public will be enabled to see the cotton plant, from all parts of the world, in all stages of its culture, in well arranged plats, planted in successive seasons, with every variety of seeds; and, also, judge of the worth of the various fertilizers and systems of agriculture, as exhibited in the plats cultivated under the eye of a superintendent, by various contestants for large premiums. Seed has already been forwarded from California and planted on the exposition grounds.

Very liberal preparations have been made for the exhibition of all classes of machinery, in operation, and for the display of manufactures and natural products. Arrangements have been made for the transportation of articles for the exposition from all parts of the country at half rates, if returned by the same route, and

## Complete Harvesters.

This year bids fair to decide many practical points concerning the combined headers and separators of which several kinds have gained access to our harvest fields. They are seen of course only in the great valleys of our State, where the immense expanses of grain permit their working, and where, if they prove to be successful pecuniarily and mechanically, they may solve the problem of cheap grain growing. Outside of this State and inside of it, except in the valleys aforesaid, these machines are only known by hearsay. They are large contrivances of course, headers and threshing machines combined, which cut the standing grain and discharge it in sacks, as they



THE INTERNATIONAL COTTON EXPOSITION, TO BE HELD IN OGLETHORPE PARK, ATLANTA, GEORGIA.

the direction of production and manufacture. It is excellent, too, that the South, just entering upon her new life as a promising field for industry and investment, should have the opportunity to unite a world's representatives within her borders, there to behold the best a world can do in the production of textiles and in the invention of machinery to transform them to meet the needs of humanity. We count it fortunate in every way that a grand cotton exposition should have been thought of, and hope it may prove a notable success in every way. The fair was first proposed at a meeting of Northern and Southern business men, held in Atlanta in October, 1880, and organized in December, and has received the popular and financial endorsement of the leading cities of the country, and is already widely celebrated for its importance throughout Europe, South America, etc. Its affairs are managed under an abundant guarantee fund, in such a manner as to assure to all visitors and exhibitors that their interests will be satisfactorily supervised.

The exposition, being the first, world's fair

in their power, to foster and promote through this exposition the varied industrial interests of the country.

The rules to govern the exposition give evidence of an impartial plan of management. There are no private interests to subservise in any way, and the undertaking is in no sense a private enterprise or speculation. The arrangements that have already been consummated are of such a nature as to fully justify the Executive Committee in confidently assuring the people that it will be equal in variety and magnitude and in its great leading department superior, in point of interest and attraction, to most expositions that have preceded it.

The principal building was devised for and has been adopted as a model cotton mill, and it will be seen is of such form and construction that space may be added for either department, according to the demand, up to the last moment. A number of annexes for special purposes will be erected, in addition to the large buildings now on the grounds, which will be utilized for the various purposes of the exposition.

for their removal from the depots to the exhibition buildings at Oglethorpe Park with safety and at low rates. Arrangements for reduced rates of fare have been made with the railroad and steamship companies. The exposition will be held at the season of year when the South, particularly the mountainous region surrounding Atlanta, presents its grandest aspect and becomes a delightful resort for the people of the Eastern, Central and Western States.

The exhibition will be held in Atlanta, the principal city in Georgia, which, though destroyed during the war, has recuperated wonderfully since, and is now one of the leading cities of the South. The principal officers of the exposition are: Hon. J. E. Brown, Pres.; S. M. Inman, Treas.; J. W. Ryckman, Sec'y, and H. I. Kimball, ex-Comissioner and Director of all.

The Prince of Wales has subscribed 100 guineas to the Beaconsfield memorial. The admirers of the late ex-Premier hope that this will encourage public subscriptions, which flow in lowly, and come mostly from conservatives.

pass along over the field. Last year there were marvelously small figures given as the cost of sacking an acre of wheat, but we are not aware that systematic tests were made of the grain-saving qualities as compared with the old style of harvesting. It was reported to us last winter that a very heavy growth of volunteer showed that much grain had been scattered. This is a point which should be tested systematically, and we are glad to know that this will be done this year. Dr. Glenn, the famous grain grower of Colusa county, is testing the Centennial harvester, which was one of the first brought out by the inventor, and the Chico Record says that several men from that vicinity who visited the machine at work on Glenn's ranch pronounced it working to a charm, but just how much it will harvest, thresh and sack in a day has not yet been tested. It is reported that Dr. Glenn intends running it a couple of weeks, and then average the amount of labor performed with other methods of heading and threshing. We would suggest also that an average per acre of similar grain harvested in this and in the old way should be ascertained if possible.



## HORTICULTURE.

### The Peach.

The following paper was read by Leonard Coates, of Yountville, at the June meeting of the Horticultural Society:

Although it would not be altogether uninteresting or unimportant to trace the history of the peach in America, and more particularly on our own coast, yet we have time for but little outside of what is strictly practical. The peach will grow and produce fruit, such as it is, upon any kind of soil, and of course all who have a small orchard will plant a few trees, but it is the culture of the peach considered commercially, and as an industry to which more attention should be given, that we would speak of more expressly. Our reasons for this are obvious and various. First, a general awakening to the fact that we must consider the San Francisco market secondarily, and must aim to produce those fruits which can be marketable in the Eastern States and in Europe. To do this we should give especial attention to those varieties which may be canned or dried to advantage.

Secondly, the partial, and, in some cases, almost entire failure of the peach crop in the South Western and Southern States for the last two years, and the rapid decay and premature death of many of the trees, owing chiefly to the prevalence of the "yellows," a disease as yet unknown in California. Thirdly, the adaptability of so many thousands of acres of cheap foothill lands in our State to the culture and perfect maturation of this hitherto somewhat neglected fruit.

#### Soil and Location.

The deep, sandy loam, or sedimentary deposit bordering the creek beds of our warm valleys is of course preferable, not only for the peach, but for most fruits. It will not only produce fruit of the finest quality, but the trees grown therein are naturally longer lived, owing to the great depth of soil. But this land is generally held at a high figure, and not, therefore, obtainable for the man of small means, and it is, of course, comparatively limited in extent. The peach, however, will thrive luxuriantly, and mature its fruit to perfection on land within the reach of all—land that can be bought at from \$5 to \$50 per acre, according to its being improved or unimproved, and its comparative nearness to a town or railroad. I refer to the "foothill lands of California." This term is becoming rather stereotyped, and is also rather indefinite, but it is generally understood to refer to the low and easily-tilled hills fringing our innumerable valleys, and reclining at the base of the higher ranges of mountains.

The soil varies greatly, and that selected should be of a free, loose nature and as deep as possible; those slopes, however, in which the seepage is great during the spring months should be avoided. To find these foothill lands I would recommend the use of a saddle horse instead of a real estate agent. I have myself seen thousands of acres of such in Solano, Napa, Sonoma and Contra Costa counties; and, upon inquiry, find that some portions are for sale at an average of, say \$25 per acre, some soon will be, being heavily mortgaged, and other large tracts belong to large land owners and are not to be bought. The prevalence of spring frosts would be an objection, but this and other points may be gathered from old settlers in the neighborhood of a given locality.

The peach is the stock most generally used on which to bud the peach, but we would strongly recommend the hard-shell almond. It is by some objected to, because it will not stand so much water about the roots, but who would think of planting a peach orchard in land that was not well drained, either naturally or artificially? On the authority of Dr. Strentzel, the peach is thriffter, and suffers less from curl-leaf when budded on the almond, and I have myself seen most flattering results when this stock is used, and any one who has taken up a seedling almond, or peach budded on to it, must have noticed the remarkable vigor of the roots, and the great hold they have in the ground. When the peach stock is used, the pits should be selected, and not obtained from a heterogeneous collection; thus, some advise the exclusive use of the seed of the strawberry variety, while others prefer some of the late, yellow kinds, as the Smock's free.

The distance apart at which to plant the peach is an important point. This tree matures its fruit very early, bears enormously, and draws upon the strength of the soil more, I think, than any other fruit tree, and yet it is the common custom to give them only 16 ft. in the orchard, and frequently less. They should not be less than 24 ft. apart, unless planted in the quincunx form, when trees which live to a great age—such as olives, walnuts, pecans, etc.—are set out at 30 or 35 ft., with alternate rows of peaches between them, which will be taken up in 10 or 15 years, the other trees then requiring the whole of the ground. No fruit will repay so much for the expense and trouble of manuring well as the peach. Indeed, to continue, year after year, to gather enormous crops of fruit, without a marked deterioration of quality, manuring must be resorted to. Don't spread it over the ground leaving it exposed to the evaporating influences of the sun and air,

but cover it up that the various gases may be retained, many of which are soluble in water, and will be washed into the soil by the early winter rains.

#### Pruning.

During the first and second years the trees should be cut back sufficiently to strengthen the main limbs, and the amount to be cut off must be according to the growth. The peach will often bear a fair crop the second year from planting, and as soon as a full crop of fruit is well set, and the time has passed by when frosts may be expected, thinning should be commenced and carried on with as much system and dispatch as possible. The larger varieties should be allowed eight inches between each peach, and the smaller not less than six. The fruit should be picked off, and not knocked off with a pole, as is sometimes done. This extra labor may seem tedious, but every one who has done it once, will find his peaches every year that the crop is set full. The peach requires a totally different method of treatment after it commences to bear than the apple or pear, for, as it bears only on one-year-old wood, the fruit buds for the coming season being formed while the fruit is still on the tree, cutting back must be more severe, as the growth of new wood diminishes. Not more than five or six fruit buds should be left on a shoot, and if the fruit all sets, it must be also thinned as before stated. The trees should be trained low and their vigor encouraged by permitting a reasonable amount of young shoots to grow around the lower part of the main limbs. When this method is continued systematically every season, the trees will bear large crops of fruit, of good quality, for many years. When they are allowed to over-bear for one or two seasons, the fruit will decrease in size, and soon become almost worthless; the trees will be enfeebled, and in consequence, very liable to be attacked by disease. The only thing to be done in this case is to cut off the whole top of the tree, allowing it to form a new head. I have seen old peach orchards thus renovated, and the results are often very flattering, but it is far better not to allow them to get into such a condition when this desperate remedy is necessary.

#### The Diseases

The peach is subject to in California are, happily, not of a very serious nature. That is, they may be counteracted by planting the proper varieties, and in a suitable locality. In this connection we can but generalize. The intending peach grower must consult the nurseryman or orchardist who resides in the neighborhood in which he intends to plant. The white mildew has been spreading to rather an alarming extent of late years in the Sacramento and Santa Clara valleys, and some other sections of the State. It is confined more particularly to certain varieties, which the nurserymen should discontinue to propagate. On the first appearance of this mildew, which not only injures the leaves, but causes the fruit to be covered with unsightly blotches, rendering it unfit for market, bluestone should be applied to the roots, and sprinkled on the leaves. When an orchard is badly affected by it the best thing to do is to dig the trees up. The peach is a sensitive tree, and will not recover when once a disease has taken firmly hold of it. Those varieties which are destitute of glands on the petiole or leaf-stalk may be put down as very liable to be attacked by mildew; but I am inclined to think that this disease is contagious to some extent, like the "yellows," which is playing such havoc in the peach orchards of the States east of the Rocky mountains.

#### The Curl-leaf

Is more general in California, and is the worst evil with which we have to contend in the cultivation of the peach. Opinions concerning its cause and remedy are extremely different, not to say conflicting. Discussions are constantly taking place in all sections of country throughout the Union where this fruit is raised. It is not, however, in the midst of a heated argument, or when we are striving to demonstrate a pet theory, that we can arrive at satisfactory and lasting conclusions. It is not, in our opinion, any more logical to state that the disease known as consumption, in the human family, is caused by sitting near an open window, than it is to assert that curl-leaf is caused by wet soil. Consumption is sometimes hereditary, but its first causes are multitudinous—so with the curl-leaf. It would also be equally illogical to say that not to sit near an open window was the remedy for consumption as to say that planting in dry soil would cure the curl-leaf. We believe that in many cases, though not invariably, the cause to be a too great flow of sap at one time; more, in fact, than can be elaborated by the leaves; at other times a sudden check to the flow of the sap, owing to a cold wind or rainstorm. A slight modification of this theory—equally true in some instances—is that in dry weather evaporation of the leaves is rapid, and the surplus sap will be worked off in this way, while in cool, cloudy weather, it is but feeble, and the leaves are overcharged. Curl-leaf is also sometimes caused by insects, and in this case is not by any means confined to the peach.

A fungus is by some assigned as the cause, but this cannot be so, as was shown by Mr. Rivers, the Curator of Museum at Berkeley, in a communication to the RURAL PRESS.

The fungus often visible on the trees is, he shows us, but supplementary to various conditions necessary to its growth, viz.: "diseased matter and vapor." (RURAL PRESS, May 14, 1881.)

It is so difficult to particularize concerning the remedy for, as it is the cause of, this disease. We cannot give a list of varieties exempt from it, which would be applicable to the State, or even to a county, though some have presumed to do so. There are, it is true, many varieties less subject to it than others, among which we may mention Early Crawford, Hale's Early, Foster, Salway, Alexander, Snagheanna, and others, but we have noticed frequently that some which suffer from it almost every year in some localities, in others are invariably free from it. Seedlings are noticeably liable to curl, which may be from one of two causes, viz.: the early starting of the sap in the spring, or, if the tree has never been moved, the great moisture and possible sourness about the bottom of the tap root. We would recommend that orchardists buy no trees unless they are assured by the nurseryman, whom they know to be an honorable man, that they are worked on stock grown from good, selected seed, and would also suggest a more extensive trial of the hard-shell almond for a stock. Dr. Strentzel has had many years' experience with trees on this stock, and the results are most gratifying. I have myself budded the peach on the almond, and think very highly of it, finding no fault with it whatever, thus far.

In conclusion, we would ask that the peach be allowed to take a more prominent place among our marketable fruits. It is an abundant bearer, and if well cared for, and properly handled and marketed, will yield large returns to the acre. At three years old it will bear about 50 pounds to the tree, increasing enormously year by year, especially if given plenty of room, not less than 24 ft., instead of being overcrowded by being allowed only 16 ft. from tree to tree. In warm, interior valleys, it would be well to plant some early varieties for the San Francisco or local market. Amongst these the Alexandria ranks high, being a handsome, well-flavored fruit, and generally free from disease. I have fruited this season Brice's Early June and Gov. Garland, gathering the first in Napa valley on June 13th, the second four days later. This will make Brice's to be ten days earlier than Alexander or Amsden. The main varieties to be grown should, however, be the large, yellow freestones, which are mostly in demand at the canneries. Some good white peaches and a few varieties of the best clings should also be planted.

We would urge the starting of local canneries in every locality where sufficient fruit is raised. The concentration of these establishments in San Francisco or Oakland is greatly to be deprecated. If the canners will persist in putting up the unsalable, unripe, and over-ripe trash that accumulates in the San Francisco market, the glory that circles about the name of California fruits throughout the world will be dimmed—nay, it will be turned into a "hissing and a bye-word." It rests with the canners. Let them refuse to take, even at a gift, any fruit that is not in a proper condition; but this is with many fruits—the peach for instance—impossible where they have to be shipped a hundred or more miles. But the fraud ends not here. All kinds of plums—good, bad or indifferent—if of a green or yellow color, are labeled "yellow egg." Peaches of every description are canned and sent into market as "Morris Whites" or "Crawfords," and so on through the whole category of fruits and vegetables. Let us hope that this short-sighted policy will soon come to an end. No part of the globe can produce finer peaches than California; the large orchards of the Southwestern and Southern States are becoming incurably diseased, and the trees are dying out; our Golden State is looked to—may it not be looked to in vain!

### Plants Worth Trying in California.

The following is Part III of the report of H. Behr and W. G. Klee, to the State Horticultural Society, of plants mentioned in Baron Von Mneller's "Select Plants," and which are deemed worthy of trial in this State. This branch of the report was presented at the June meeting:

Bamboos: Under this head may be included all tree-like grasses, but especially those of a very hard and tough nature. Of the vast number of bamboos found in America, Africa and Asia, we find some 80 different species mentioned as likely to succeed in sub-tropical countries. We shall mention but a few, not because we think them little likely to succeed or of small importance; on the contrary we subscribe fully to the eloquent plea of Ferd. V. Mueller, wherein he calls attention to their great usefulness for a multitude of purposes, and we believe that their importance can hardly be overestimated for treeless countries, where along the irrigating ditches they should be planted in every available spot. Our reason for naming but few is that the botanical names are generally not known in the countries where they are mostly cultivated, except in botanical gardens and their immediate surroundings. This is shown by the fact that even the government importations of last year are wanting in correct names. To give, therefore, a number of botanical names, would be of little benefit to most people here who have no means of procuring bamboo except by getting them from the natives and under the local name of the country, be it Mexico, South America, China, Japan or India.

*Arundinaria falcata*: Is the Ringsel or Nigala bamboo; a native of the Himalaya mountains; found at an elevation of from 3,500 to 10,000 ft.; it rises to the height of 40 ft., with canes, however, of but four inches in diameter. The canes are strong and durable, and may be utilized for a variety of purposes. In the Garden of Economic Plants in Berkeley there is a plant of this species, raised from seed, but 18 months old that has in three weeks made canes nearly six ft. long, and that without much moisture. This bamboo is besides perfectly hardy, even where it is beaten down with snow every winter. It is, furthermore, easy to increase by division and cuttings.

*Dendrocalamus strictus*: Recommended as resisting great heat and cold; also for growing on dryer ground than bamboos generally; attaining a height of 100 ft. Its strength and solidity make it very valuable. It is found in India, especially in Bengal. Seeds, donated by Baron Ferd. V. Mueller to the University Gardens, seem to require great heat to germinate.

*Bambusa vulgaris*: Is the large unarmored bamboo of Bengal; grows to the height of 70 ft. It is, however, less hardy than any of the first named, though it will resist occasional frost, and might no doubt find many localities in the State to suit its requirements.

*Phyllostachys nigra*: From China and Japan; is a very hardy, black-stemmed species, growing to the height of 25 ft. It is utilized for chairs and walking-sticks, as the canes are nearly solid.

In connection with these few named species, we must mention that in the Gardens of Economic Plants in Berkeley are now growing five distinct species, derived from various sources, none of which we have been able to determine the botanical name of. Three of these were imported by the Agricultural Department, and named *Bambusa melake*, *B. moso*, *B. tadake*. None of these are real botanical names according to the best authority consulted on the subject (Gen. Mneller's Monograph of the Bamboos), except perhaps *B. melake*, which, however, does not answer to the specimen on hand. All these are doing well. A fourth kind is the so-called *moso*, a slender species of rapid growth in Japan, utilized as greens, like asparagus. A fifth is a direct importation from Choo-foo, China, planted right from a tub into the garden. It sent forth shoots that in less than three weeks have grown six ft. This species may possibly be *bambusa vulgaris*.

Before leaving the bamboos, we desire to repeat that we have the greatest appreciation of the importance of the bamboo for California, and would be very grateful for any information and local experience in regard to these plants.

*Bomarea nivea*: The ramie. Although no machine, as yet, has solved the difficulty in regard to the preparation of this fiber plant, it is gratifying to know that it is perfectly hardy and well adapted to a greater part of California, as experiments in various parts of California have proved. As a paper plant it might, perhaps, find favor, until the inventive genius of the Yankee has solved the difficult problem of constructing a ramie fiber machine.

*Bomarea tenacissima*: Is, according to French and German seedsmen, the most valuable fiber plant, much superior to *nivea*; this, however, is contradicted by the report of the Washington Agricultural Department, which says that the two are identical for all practical purposes.

*Buxus sempervirens*: The tree box. As the boxwood is in constant demand and its supply in Asia Minor becoming scanty, it is to be hoped that some one will undertake the planting of it, which, perhaps, will be an investment, slow in its returns, but likely to be a sure and profitable one in the end.

*Chrysanthemum* (Pyrethrum) Roseum and Carneum: The insect powder plants. As the cultivation of the *Pyrethrum cinerarifolium*, or Dalmation feverfew, has been started on a large scale, it deserves notice, that besides the named species, there are five others that are utilized for this purpose, viz.: *tenuifolium*, *Wildei*, *persicum*, *corymbosum*, *macrophyllum*; and though some have settled on the Dalmatian, others may be equal, or perhaps, better suited to some localities than others. The difficulty that has been experienced in getting seeds of the various kinds is now passed, as Prof. Riley has sent seeds of *roseum*, to several places in the State, and the Stockton firm have decided to sell their seed of *cinerarifolium*.

*Dioscorea*, Yam: *Dioscorea hastifolia* is native of Western Australia; is recommended as very hardy. *D. japonica*, the Japanese, and *D. glabra* (Batatas), deserve trial. The latter has lately been distributed by the San Francisco Bulletin. *Dioscorea alata*, the Uvi yam, is a species that hails from the South Sea islands, but has been grown successfully in New Zealand, and would most likely flourish in parts of California, where too early night frosts do not occur.

*Stillingia sebifera* (euphorbiaceae): The tallow tree of China; has been naturalized in some of the Southern States, and is probably perfectly hardy in the greater part of this State. A vegetable tallow is derived from the coating of the seeds; hence the name.

*Fatsia* (Aralia) papyrifera: Is planted for ornament, and seems perfectly hardy from San Francisco southward; as a source of the beautiful rice paper it might perhaps find more extensive use; it is the pith that is utilized.

*Fourcroya longueva*: Is a near relation of the Century plant (*Agave Americana*), from the high mountains of Mexico, at an elevation of 10,000 ft. It reaches gigantic size, with a stem 50 ft. high, and a panicle of flowers about 40 ft.



The fiber obtained from this, as well as from the perhaps less hardy *F. gigantea*, is very strong.

*Guizotia oleifera*: From India and perhaps Abyssinia, is the source of the Ramtil oil, utilized like the Bene oil (*sesamum*), for culinary purposes as well as in various industries. It is a yellow-flowered, coarse looking composite herb, that seems perfectly adapted to the bay climate, maturing in Berkeley good seed, where the season is too cold for the Bene. The seeds of this plant are also known as Niger seeds in the London market.

*Indigo*: The various species of Indigo, *Indigo perla*, *Anil* and *Tinctoria*, are doubtless well adapted to the southern part of the State as far as heat is concerned, but with irrigation and consequent additional labor it is perhaps a great question whether it could be produced at a figure low enough for competition.

*Jubaea spectabilis*: The Coquito of Chile, is one of the hardiest palms. In its native home it is utilized for the production of a syrup for which the tree is regularly tapped. It is said to be very productive. The young plant resembles closely the date-palm.

*Kentia sapida*: The Nika palm of New Zealand and Chatham islands, is a beautiful palm yet hardly known in this country. The unexpanded flower stalks are used as palm cabbage.

*Liquidambar Formosana*: From China, gives a species of sweet gum utilized for feeding a kind of silkworm.

*Liquidambar orientalis*: From Asia Minor, yields the vanilla-scented liquid storax, prized in perfumery.

*Maouttia Puya*: Is a stingless nettle like the Ramie, utilized for its fine fiber. It is an Indian plant found as high as 4,000 ft. elevation.

*Maranta arundinacea*: Is the true arrowroot of commerce. The culture of this plant is comparatively easy. It has, as far as we are aware, been cultivated with success in Fresno county.

*Nicotiana persica*: The shiraz tobacco, is recommended as adapted for more moist and cool climate.

*Plectocoma Himalayensi*: Is one of the hardiest rattan palms.

*Pogostemon patchouli*: A labiate (mint-like) herb that produces the patchouli so much used as a perfume. It deserves notice that the seeds of *Hibiscus Abelnoschus* (*Abelnoschus* by the Germans) has been introduced to this country, the Department of Agriculture having twice received seed of this from two different sources. The true patchouli is a native of the mountains of India.

*Quercus Aegilops* from S. Europe: Is a nearly evergreen oak, the fruit of which is available for drying and tanning; the cups are called valenia, while the unripe acorns are called camata; ripe, they may be eaten. The tree is furthermore a fine avenue tree.

*Pueraria tuberosa*: From S. Asia, is a tall, woody climber belonging to the pea family (*Leguminosae*), the tubers of which are long, and rich in starch; it is perhaps the same species as *P. Sieboldii*, that in Japan furnishes a superior starch. This plant has been tried with success in the Garden of Economic Plants, in Berkeley, where it grows without irrigation, sending out vines 12 to 15 ft. long in a few months.

*Quillaya Saponaria* (*Rosaceae*): The Spanish bark or soap-bark of Chile, is the product of this tree. It reaches an enormous size. Seeds are very light and apt to be abortive; due care should be taken to have them perfectly ripe for shipment, or they will not keep.

*Rhamnus chlorophorus* (*Rhamnaceae*) Buckthorn family: From the bark of this Chinese tree is a very superior green color derived, utilized particularly for silk. *R. utilis* is another species used for the same purpose. The dye from these trees is called Lokao.

*Rhus vernicifera terebinthaceae*: Is a medium size tree of Japan, yielding the true Japan varnish. This as well as its close relation *Rhus succedanea*, are both well adapted to the climate around the bay, as trees grown in Berkeley show.

*Rhus Coriaria*: The tanner's sumach, is a south European species, the foliage of which is extremely rich in tannin, and in great demand. This species can doubtless be grown with success on dry ground, as the plant not alone prefers it, but its product here is superior. The attention should be called to properties of the native California sumach that are very rich in tannin—*Rhus integrifolia* especially, an evergreen species abundant on the southern coast. The poison oak (*R. diversiloba*), might no doubt also produce a fine varnish, if the way of handling it with impunity was studied out.

*Salix purpurea*: From Europe and Asia; is one of the better Osier willows. This species, as well as the real Osier, *S. viminalis* and *S. triandra*, should be planted along water courses, instead of the native more or less brittle species. Cuttings of these could, in proper season, be shipped with the greatest safety.

*Stipa tenacissima*: A grass found in South Europe and North Africa, known as the *Esparto*, or *Atocha*. Its principal use, of late, has been for the manufacture of paper, but as it is content to live in dryest spots near the desert, it may prove valuable as a forage plant. The plant deserves special trial.

*Vahea florida*: A native of West Africa, but found up to 2,500 ft. elevation. Is a beautiful climber, with white, fragrant flowers, the plant yielding caoutchouc.

MAYOR KALLOCH has returned to San Francisco from his Eastern trip, and announces that he is a candidate for re-election.

## THE STOCK YARD.

### Short Horn Notes.

Among the recent sales of Short Horns in the U. S. are two to which we wish to give some particulars. A draft of 55 head from the Bow Park herd (Canada) was sold at Waukegan, Ill., on the 13th of April, when the 55 animals sold for an average of \$516.35. Although a few animals of Booth blood are bred at Bow Park, the greater portion of the herd is made up of animals of pure Bates blood and such as have several crosses of Bates bulls on pedigrees with a good sound foundation.

The highest-priced animal in the sale was "Duchess of Oxford, 21st," sold for \$4,200; "Duke of Oxford, 46th," sold for \$2,350. The next highest-priced cow was "Kirklevington Duchess, 26th," who sold for \$2,550 to H. L. Stout, Dubuque, Iowa, he being the purchaser of "Duke of Oxford, 46th," also of "Duchess of Barrington, 10th," at \$1,810.

The next highest prices paid were for two Kirklevington bulls, that sold for \$1,760 and \$1,000 respectively. "Duchess of Springfield, 6th" (of the Craggs family), sold for \$1,075 to H. L. Stout. The only other animal that sold as high as \$1,000—Mr. Stout being the purchaser at that figure—was the yearling heifer "Roan Duchess, 23d," of the family known by that name in this country, but, perhaps, better known in England as "Blanches," from being descendants of "Blanche," by "Belvedere" (1706). "Roan Duke, 7th" (of the same family), sold for \$510; "Dukes of Barrington, 11th and 12th," sold, respectively, for \$550 and \$475 each.

At the sale of Avery & Murphy, and others, held at Port Huron, Mich., on the 18th and 19th of May, 122 animals sold for \$72,010, an average of \$590.25. Of this sale, the *Live Stock Journal*, to which we are indebted for list of prices, remarks: "With the exception of the sale made by Messrs. Cochrane & Cannon, at Dexter Park, June 30, 1880, when the average was \$900, the Port Huron sale was the best since Messrs. Meredith & Son sold at Dexter Park, May 11, 1877, and made an average of \$612 on 38 animals."

As in the Bow Park sale, we shall merely enumerate a few of the leading prices, with the averages of some of the best families, as we prefer encouraging people to look upward and onward, at the best side of things rather than at the worst, to get the best they can, in cattle, to begin with, and keep on improving with the best bulls they can either breed or purchase.

At the Port Huron sale were four Duchesses, sold at an average of \$5,645, one being sold as a doubtful breeder for \$3,000. The two-year-old bull, "3d Grand Duke of Airdrie," sold for \$1,720, and the nine-year-old "23d Duke of Airdrie," for \$1,050. "Marquis of Oxford," four years old, brought \$1,500. "Wild Eyes of Vineyard" was purchased by T. C. Anderson for \$2,900, who also bought her yearling daughter for \$2,000, and her three-months-old heifer calf for \$710.

Two cows and two yearling heifers of the Kirklevington family sold for an average of \$1,134, and two bulls for \$710 and \$610 respectively. "Princess Maud 2d," and her C. C. (of the Place family), sold for \$1,305.

Nine Rose of Sharon cows and heifers made an average of \$592.50; one yearling bull \$600, and a bull calf \$300. Such cattle as the Rose of Sharon are not bad property to own, neither would a lot of Victorias, such as Mr. Sanborn sold nine head of, cows and heifers, for an average of \$390.50 each, and one bull, "Victoria Duke 4th," for \$400. We have named the highest prices realized at the above sales, and the number of animals sold to show that there was no large number of very high priced animals to make up the high averages obtained at both the sales.

This is a healthy outlook for Short Horn breeders, who are aiming at breeding for useful animals, rather than for making the appearance of a pedigree on paper the main object of their breeding. According to the information gathered from the most reliable sources, it is quite evident that the demand is more than ever for bulls of a useful character, strong, thick fleshed, robust animals, showing unmistakable signs of hardy constitution and great thriving qualities, good wrestlers, as T. L. Miller, or some other upholder of the Hereford breed, puts it; however, let us hope that Short Horn breeders have become fully alive to the necessities of the day, with a full determination that no other breed of cattle whatever, shall take the leading place already held by the Short Horn breed, for, has not the general farming community long ago declared that they are the best cattle for the general farmer? Herefore they have spread more rapidly than all other breeds put together, and we are quite confident that they will hereafter, if possible, even more than of old, maintain their well merited popularity for general usefulness, as a breed of cattle, by their real merits, as brought out and developed by the best and most successful breeders of their kind.

LARGE numbers of cattle have been starved to death in New Brunswick and northern Maine on account of scarcity of hay.

## SHEEP AND WOOL.

### Sheep in California and Elsewhere.

EDITORS PRESS:—I have to-day very pleasantly interviewed Mr. Jenkins, an ex-legislator from this district. He is an extensive rancher and sheep raiser. I learned of him several ideas concerning wool-growing in Nebraska, California and Australia, which I think cannot fail to interest at least a portion of your readers. He has traveled largely and is very observing and inquiring, remembering all he hears and sees. The sheep here are not as yet graded as finely as in California. This is accounted for from the fact that woolgrowing is a comparatively new vocation; the sheep have been brought from all parts of the Union, east, west, north and south. When sheep men will take the proper steps toward improving their grades, it is thought that just as fine a quality of wool can be grown here as in California.

A great share of the sheep raised in Nebraska are a mixture of the Cotswold and Leicester-shire, while farther south, in Kansas, Texas and New Mexico are the Spanish Merino and Mexican. The latter are better adapted to a warm climate, produce finer wool and are more valuable in every way. The climate of California is well adapted to a cross between the Spanish Merino and Mexicans. I should be much pleased if someone would speak more definitely than I am able in explanation of the fact that wool brings nearly 50% more in California than here although it must be shipped some 2,000 miles farther. The only causes which I am now able to give for it are as follows: The wool of California is of a somewhat finer grade, can be bought in larger quantities and at a consequent less expense.

For a man who wishes to engage quite extensively in sheep raising, California is the better country; for the same labor and capital will care for a much larger amount of sheep than a like investment in Nebraska. The winters are such that not more than one-half the labor and expense are required in caring for them. If a person is able to run but a small band, he may do as well here.

### Grading Wool in Australia.

Mr. Jenkins mentioned three or four points of particular interest in regard to wool-growing in Australia. There each wool-grower hires a wool-sorter to come to his ranch and sort his clip of wool, fleece by fleece. There is a regular system of grading established throughout the country. The wool-sorter, as soon as he has sorted the wool, bales it and marks upon each bale the grade to which it belongs. The buyers depend mostly upon this grading, in their purchases. There is such a difference in price that each man exerts himself in improving, as much as possible, his grade of wool. In Australia it is an acknowledged fact that the nature of the vegetation and also the composition of the soil have much to do in the production of coarse or fine wool. Reason leads me to judge that such must also be the case on the Pacific coast. If so, it is very important that one should assure himself, before procuring a range, that the herbage is of as fine and tender a nature as possible, and that the soil is of a volcanic or sandstone nature, rather than limestone.

### Treatment for Scab.

In regard to treatment for scab in Australia compared with California, there they trust to no wholesale preparation, but choose to prepare their own. They use the essence of tobacco, together with sulphur and carbolic acid, the quantity of each depending upon the condition of the sheep. In using any of the patent compounds, the ingredients are mixed in certain proportions, and it must be thus used notwithstanding the fact that the different stages of the disease require different proportions.

In Australia, there are "State Scab Inspectors," who are sent out among sheep ranches to see that the law in regard to this disease is fully carried out. This law requires that every man who discovers any indication of scab shall notify all wool-growers within a certain distance of him that the disease is gaining a footing among his sheep and that he shall post notices in public places, making known the fact. The same law requires that every sign of the disease shall be stamped out inside of 90 days. If it can be done in no other way, the sheep thus afflicted must be killed. The time is coming when such a law will necessarily be enacted in California. Wool-growers are, a great many of them, altogether too careless in this matter. The State Legislature, instead of spending the time allotted them for passing laws relating to this and other points of equal interest to the general welfare of the State, throw away their time in fighting over the Debris Bill, etc. The time, no doubt, is coming when California will wake more fully to the true interests of her producers and adopt every appliance for their success.

S. A. S.

Geneva, Nebraska.

WOOL SORTERS' DISEASE.—For some time past considerable discussion has arisen in the manufacturing districts of England over a malady called wool sorter's disease. Mr. Roberts, the medical officer of health for the district of the Keighley Local Board, treats at considerable length in

his annual report for 1880 of the nature and preventives of this disease. In summing up from the report it is recommended that the following precautions be taken without fail by wool sorters: "(1) Wool sorters not to sort dangerous wools when they have any sore places or cracks on their hands or fingers; (2) to be careful not to wipe or rub their faces with their hands while sorting, especially if they have any cracks or pimples on the face or lips; (3) to wash their hands before eating, and to take neither food nor drink into the room where the wool is being sorted." The sorting room, he adds, ought to be well ventilated, to be swept regularly, and to have the walls and ceilings whitewashed twice a year.

## PISCICULTURE.

### Trout Ponds.

EDITORS PRESS:—Within three miles of Nevada City an old-time miner is hard at work, utilizing the free waste water from springs and tunnels. The conformation of the ground favors the construction of lakelets and reservoirs, at trifling outlay of labor and money. The overflow passes by three gates through wire screens, falling upon rock, and at present is conducted away through side ditches into a natural water channel. About midway the length of the lakelet, a little island with young trees remains. Sometime it will have a rustic summer-house, and beds of bright flowers. This will create a desire to row, and necessitate a boat. This in turn will be a home attraction and amusement to each member of the family.

At one of the side gates the proprietor has constructed a feeding place 10 ft. in diameter, from which the water can be drawn. This he says will enable him at pleasure to assort, count or divide the fish. In this are little piles of smooth, white rocks. The baby fish were evidently familiar with the presence of their friend the owner, and in large numbers were waiting to be fed. He dropped clabbered milk into the still water upon the rock piles. Instantly, from the shady nooks they came by the thousand, until the water was thick with them. At our slightest movement, even at a shadow on the water, they would scatter, frightened away, as rapidly as they came. The banks about the feeding place are semi-circular and terraced one above the other. These are to have the sides sodded, and the walks graveled. To accommodate the friends who may, as we did, seek the place to learn the habits of the speckled beauties, benches are to be placed there. The stock is young, consisting of 2,000 land-locked salmon and 8,000 trout. The owner says that in three months those that came to the feeding places have grown from the length of a grain of barley to two inches. At sundown, small as they are, their leaping out of the water after insects is a lively and interesting sight.

As rapidly as possible the series of excavations will be continued to make room for the increasingly large family. The intention is to have nine of these narrow deep lakelets, fed by pure spring water. The capacity of each to be from 8,000 to 10,000 fish. These lakelets are independent of natural water courses and hence not liable to be washed out by spring floods. The gentleman has the help of two half-grown lads. The work is all done by hand, with aid of pick, shovel, and wheel-barrow.

There is a possibility of fountains and a deer park. A long side hill containing 40 or 50 acres overlooking this series of lakelets can easily be fenced for that purpose. Magnificent forest trees and clumps of lilacs are scattered over it. The sparkling waters can be conducted in an open ditch along the highest line of this hill, and then be piped across to the lower hill for domestic and irrigating purposes. To date, not a drop of water has been carried on to the garden, but young fruit trees and small fruits are growing thrifflily within a shadow length of pine trees 100 ft. high.

A four-roomed, two-story bouse last spring took the place of the miner's cabin. Wife and children, books and magazines and refinements have come from town to share the ambition and give light and love to the willing worker. These people have a U. S. title to the land, but have very little money. How they manage to make expenses we will tell in our next.

MRS. C. F. YOUNG.

Nevada City, Cal.

SUGAR FROM RAGS.—Brooklyn, N. Y., it seems, does not enjoy a monopoly in the manufacture of sugar from rags, as recently described in their columns. We learn from a European journal that this manufacture is now carried on upon a large scale in Germany. A German factory is regularly engaged in business, treating the rags first by sulphuric acid so as to convert them into dextrine. The dextrine is bleached, by means of milk of lime, and then submitted to a new sulphuric acid bath stronger than the first, after which, being transformed into crystals of glucose, it can be employed in jellies and confections. The glucose which is obtained by this process can be sold very cheaply, and it resembles chemically that which is derived from grapes. The attention of the German government has been called to the danger, in a hygienic point of view, which may arise from the use of this article.



## PATRONS OF HUSBANDRY.

### The Grange and Co-operation.

There exists now, and did at the time the Grange was organized, immense combinations, which, by a system of co-operation, are enabled to control the price paid for and sold for, and manipulate every minutia of trade, transportation and distribution of the world's products with perfect ease and harmony.

These are great examples of co-operation, to which no one would object if they did not digress from their own legitimate spheres of action. But all experience proves that where the power of co-operation is applied by one great class, all other classes in any way connected with them must apply the same power, or else the natural laws are subverted into personal uses.

The farmer, as a class, is connected with all other classes, while all classes but the farmers are applying this great power of co-operation, which as a natural sequence operates to their gain and the detriment of the farmer.

These combinations are dividing the profits on the farmer's labor among themselves as may suit their interests or fancy. This is co-operation used for oppression, but nevertheless proves that it possesses a power when applied to any enterprise. The founders of the Grange were fully aware the great natural law of "demand and supply" was crippled by the co-operation of boards of trade and corporate associations, and wisely determined to make the Grange the means of placing the producer on an equal footing with those who were controlling both consumption and production, by offering them an organization through which as perfect and complete a system of co-operation may be operated as has been by corporations and stock companies, boards of trade and exchanges, for many years.

The Grange, therefore, is a co-operative as well as a social institution. It could not be less and accomplish anything of importance. No social, educational, or business enterprise can be successfully prosecuted without co-operation. Aside from the Grange, to-day the farmers of America have absolutely no organization or means of applying the power of co-operation.

The benefits which have been and are being obtained in this way is no proportion of the zeal and fidelity to the principles as actually shown by our members. But enough has been accomplished that if the Grange was to be instantly exterminated, the farmers of the country would be amply repaid for all time and labor in the work.

### Bringing in the Youth.

A letter from Mrs. Frisbie to the *Patron* shows how the subordinate Granges can be built up by leading in the young men and maidens under the new provisions of the constitution. The lesson is applicable everywhere. We quote: At no time within the last five years has this Grange shown a greater degree of prosperity than at present. The first degree was conferred on a class of 10. No initiation has taken place for a period of two years. The well-filled hall of interested members testified to their keen relish of old-time ceremonies. Yuba City Grange was organized eight years ago, having at one time a membership of 175; but names have dropped from the list from various causes, until we number but 53, a faithful few, resolved to uphold the pledge to the last. But now the circle widens by the admission of the little ones of eight years ago, now upon the threshold of the active warfare with life, its duties and its responsibilities. Freshened by a genuine acquaintance with nature, equipped with energy and enthusiasm, our promising boys and girls will ably advance the interests and buoy the purposes of this ennobling cause; and however fortune may individualize their natural gifts, and their avocation incline to separate ways, they will always love the Order, and devotion will long linger with its hand of faithful adherents. We have uttered many a sensible protest that our meetings were uninteresting, very pointless and dull. To remedy this we have formed programmes to vary the exercises, including songs, essays, recitations and select reading. This soon awakens a warm interest. It seems to be the one touch needful to give zest to our meetings and to bring dilatory Grangers back into the fold.

### The Grange as an Educator.

The Grange is a silent but efficient educator, intellectually and otherwise. It gathers up for its members all of the stores of experience of its members in their agricultural line. The social amenities and the lessons of higher morals are taught in its deliberations. A profitable spirit of enterprise is fostered. Intellectual truths of the first magnitude are disseminated; social and political economy are made plain and familiar. The narrow limits of ordinary practical life are enlarged, while broader and healthier views are inculcated. The members are made familiar with the methods of legislation and prepared for the more important duties of life—the vital relations of producer and con-

sumer are more clearly defined, and farmers are to comprehend the fact, and rejoice in it that they are farmers. There is no one, who has for a few years been a true Patron, and attended faithfully to his obligation, but what will fully endorse what we say. The Grange is an educator and a thorough one. It has shown its students where agriculturists have suffered waste in time and substance, and teaches how to avoid them. Are you willing to abandon an institution which has done so much for you?—*Iowa Grange Visitor*.

### Resolutions of Respect.

GRAND ISLAND GRANGE, Colusa county, has adopted resolutions of respect to the memory of a beloved sister, Louisa M. Totman, wife of Bro. J. R. Totman.—(Mrs. H. D. Strother, Mrs. H. Davis, Mrs. P. Earp, Committee.)

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

NORTHERN ORANGES. *National*, June 25: Through the kindness of Mr. Ketchum, who keeps the toll-bridge at Bidwell's Bar, we were recently enabled to try the oranges from the celebrated orange tree in his garden. This tree was brought from Sacramento to the Bar in 1856, by Judge Lewis, and planted there, and is probably the oldest orange tree in the northern part of the State. The fruit is delicious, and proves that the foothills in that neighborhood will, in a few years, produce as fine oranges as can be found in the world.

#### COLUSA.

HO! FOR COLUSA PLAINS.—*Colusa Sun*, June 25: The threshing outfit of Messrs. Decker & King passed through town this morning, says the *Chico Record* of Wednesday, en route for the plains of Colusa county, to work in the vicinity of Willows. The engine and separator was accompanied by a dining car 30 ft. in length, with a store-room as a back action, and long rack and troughs mounted on a wagon, which will perform the office of a stable. The outfit is the most complete of any that will be put in the field this season, and has been arranged with all the conveniences that will add to the comfort of the attending workmen. The work on the plains will continue about three months.

THE GOOSE LAND.—There is a large body of land just south of Willows, so flat that the water did not drain off of it, and it became chilled and baked to such an extent as to be thought worthless. N. D. Rideout, of Marysville, purchased a large body of this land and put Mr. G. W. Hoag to farming it. To make a success he put exactly the right man ahead of it. Lige Hart, of the *Willows Journal*, took a ride over this land with Mr. Hoag, last week, and says of it: It always seemed a pity that so much land should be a waste and unfit for farming purposes. It has been but a few years ago, however, since nearly all the land within a radius of 20 miles of Willows was idle, and looked upon as unfit for agricultural purposes as the "goose land" above referred to, and upon which we found such a splendid crop of wheat last Monday. Land from which some of the best farms of Colusa county was selected, was, 15 or 20 years ago, regarded as absolutely worthless, and many of the early settlers, who could have made themselves independently rich by taking up large bodies of it, did not consider it worth the trouble of surveying. But now "old timers" see what a change time has wrought. Some of these very same lands are now worth \$50 per acre, about \$49.50 more than the pioneers would have given for it during the early settlements of the county. The same is true even to-day with many concerning the "goose land" which Mr. Hoag is farming. We have heard men—experienced agriculturists—say that farming this land was equal to throwing so much money into the river. It could never produce a crop, and any man who would farm it would be a bankrupt in a few years, it made no difference how much capital he had access to. This assertion will not by any means be borne out by the appearance of things on the "goose land" this year. On the contrary, a finer crop of wheat we have never seen than is now being harvested on this land. It is true that the straw is short, but the mass of well-filled heads is there, and heads are what are wanted.

#### CONTRA COSTA.

FAVORABLE WEATHER.—*Gazette*, June 25: The wheat is now reaching maturity through the central section of the county, and heading operations upon it have already commenced to some extent. The highly favorable weather of the past six weeks will greatly enhance the yield, but, for the section, it will hardly reach an aggregate of more than half the crop of last year, and, with the make up from the fine yield in the eastern section, it is doubtful if the entire crop of the county will go beyond half the measure of last year.

IN MIDST OF HARVEST.—*Antioch Ledger*, June 25: Headers, reapers, separators, steam threshers, horses and men are to be seen on all sides as one passes up the valley. The work of harvesting goes bravely on. As far as reported the yield of wheat will be fully as large as has been anticipated in this section of the county. The improved machinery and especially the culinary department which has now become a fixture to the best machines, is greatly appreciated by the house-wife who formerly was com-

pelled to prepare meals for a large number of men, and this over hot stoves during the warmest season of the year. Now the cook accompanies and becomes an important part of the outfit. The present price of wheat is not encouraging to the producer and hence all who are able, will make an effort to hold for a better market.

#### EL DORADO.

THE FAIR.—*Republican*, June 23: The Board of Directors and the various committees of the El Dorado Agricultural Association have at last completed every arrangement for the holding of the next annual fair, which takes place in this city on the 7th to 10th inclusive, of September. The premium list will be ready to place in the hands of those desiring within a week, and it is to be hoped that every farmer in the District will take sufficient interest in it to peruse it thoroughly, and make up his mind to be a competitor for some of the prizes.

#### LAKE.

EDITORS PRESS:—Farmers complain of prospective short crops. On much of the low, wet land in Big valley the season delayed planting. Farther up, grain is very thin on the ground, and heads are not generally fine. Considerable hay is cut which would not have paid for grain. Corn is good. Hops will be fine. Many grapes have been planted, and quite a number are expected to plant.—*Cor.*

#### LOS ANGELES.

STRAWBERRIES.—*Anaheim Gazette*, June 25: Mr. Hinde has given a great deal of attention to the culture of strawberries, with a view to ascertaining what varieties were best adapted to this climate. His experiments have led him to the conclusion that the varieties known as the Cumberland Triumph and Forest Rose grow to the greatest perfection, bear more profusely and withstand drouth better than other kinds. We saw samples of both kinds, and they are certainly larger and finer looking berries than any we ever saw in this country. The plants are now blooming for the third time this year, and by keeping the runners pinched off it is possible they can be made to bear throughout the year. Those who intend to cultivate strawberries should investigate the merits of the varieties named.

IMPORTING STOCK.—*Express*: Mr. William Niles, during his recent visit to the northern part of the State, purchased five thoroughbred Jersey cows, a bull of the same breed and a Durham cow, which he has brought to Los Angeles.

#### SACRAMENTO.

FRUIT SHIPMENTS.—*Bee*: Large quantities of fruit are at present being shipped from Sacramento to the East, and the several dealers in the city are kept busy night and day preparing it for transportation. A large number of boys are employed in wrapping the fruit with papers, to keep it from bruising while in transit, and the industry is far in excess of last year at a corresponding time. Lyon & Co. to-day shipped a carload of assorted fruit put up in what is known as the Dietz packing, a recently patented preparation which is said to be a success. M. T. Brewer & Co. sent forward some eight carloads during the past week.

#### SANTA BARBARA.

BEE NOTES.—*C. La Salle in Lompoc Record*: The weather in the early part of the season was cold and unfavorable for the honey crop. Weather warm and pleasant to-day; extracted 800 lbs. honey. The bees made a grand rush for the mountain shrubbery, twelve thousand strong, creating a solid roar, which sounded like business. They are working on sage, bearberry and alfalfa, all of which are excellent honey plants. The alfalfa is a small mountain shrub, covered with little yellow flowers, and produces a good quality of honey for three months in the year. Quite a number of new apiaries are starting this season. I am glad to see it, for the day is not far distant when Lompoc and vicinity will have two or three hundred apiaries, which, in a good year will produce a larger income than all her hogs and grain. Think of it. The land which produces nearly all of the best honey in California is not worth two cents an acre for anything else. San Diego with her timberless mountains covered for miles with white sage, was a dreary waste until Harbison set a few swarms of bees at their feet. To-day his honey is known in almost every market in the world. He buys lumber by the cargo to carry on the business. White sage is an annual quite different to the button sage we have here, although honey from both are of about the same quality.

MAMMOTH STRAWBERRIES.—*Press*: From Messrs. Shepard Bros. we are in receipt of some of the largest and finest strawberries we have seen in Santa Barbara county. Twenty berries fill an ordinary box, more than full. They were raised near the Rincon canyon, Carpinteria, and are known as Monarch of the West. The half acre of vines from which they were produced were set out only last fall, and yet they yield 300 boxes per week. These he will readily retail at 20 cents a box, which makes them average almost a cent a piece. Next year the Shepard Bros. propose to set out some four or five acres of this variety of strawberry, and will be able to fully supply the demand. The flavor is apparently as delicate and delicious as that of any to be found in the market.

GRAIN.—*Gilroy Advocate*, June 25: We have traveled over this end of Santa Clara valley and talked with judges who have nothing to gain by misrepresentation on the crop prospect. The general opinion is that we shall not have more

than half of an average crop. The deluge at the early part of the season drowned the prospect of an ordinary harvest. We are pleased however that the kernel is well filled, the heads large, although the straw is light, the quality of the grain will be exceptionally good. It is rather a hard matter for a farmer to meet the caprices of nature in the diversity of seasons, but this year many have well filled barns from the abundance of the former season.

#### SAN BERNARDINO.

SUCCESS WITHOUT WATER.—*Riverside Press*, June 25: Mr. A. M. Aplin has a large orchard of 4,000 trees on the north fork of the Santa Ana river ditch near the head of the ditch, and owns an abundant water right. His soil is composed of decomposed granite and is therefore loose. He has 1,000 peach, apricot and nectarine trees now in bearing. Although he has an abundant supply of water he uses none. He finds that his vines and stone fruit all do well without irrigation, but that apples, pears and citrus fruits need some irrigation. He claims to have a very dry soil so far as surface water is concerned, as none would probably be found under 100 ft. and it might be several hundred ft. below the surface.

THE HONEY CROP.—Mr. A. M. Aplin has just completed the examination of the principal apiaries of this valley, examining 2,400 hives. He finds that the surplus honey crop at the present time is a fraction less than 25 lbs. to the hive, while the yield ought to amount to 200 lbs. to the hive. This shows but one-eighth of a crop, which is selling at hut five to six cents per pound.

#### SANTA CLARA.

EDITORS PRESS: One has to go from home to learn how highly the *RURAL PRESS* is appreciated. Here, in this farming community, we find it is thoroughly read and greatly prized. The articles on silk culture are read with interest. The unexpected rains in the early part of this month, though injurious to the hay, were beneficial to the grapevines, which are largely cultivated here. The South Pacific railroad has opened a rich agricultural portion of our State, and farmers of means are settling here bringing with them the wealth and culture of our older Eastern States. The price of land is rapidly increasing. The mountain sides abound with beautiful ferns, among which are the *Aspidium rigidum*, *Pteris* and *Gymnogramme triangularis*. Sulphur and soda springs are found, but thus far nothing of value in these mountains ridges to entice adventurers. "Good honest toil," and bountiful crops are the pass-words here.—*Andre, Alma*.

THE SAN JOSE CANNERIES.—*Herald*: There are two factories in which are employed in the busiest season about 600 hands—men, women and girls. For apricots, they pay from \$70 to \$80 per ton; cherries, \$100 to \$120 per ton; peaches, \$40 to \$60 per ton; pears, \$40 to \$50; plums, \$40 to \$60; grapes, \$30 to \$40; strawberries, about \$120 per ton. These fruits are brought from all parts of the State. The greater part comes from Alameda county. They obtain about one-fifth of their fruit in Santa Clara county. Much of it is obtained from Vacaville and the Sacramento valley. Last year the San Jose Fruit Packing factory put up 1,000,000 cans of fruit; 150 tons of jelly, and 150 tons of preserves, besides jams, dried fruit and vegetables, etc. The principal market for all this fruit is in Europe and the large cities of the Eastern States. The fruits most desirable for canning are the early and late yellow Crawford and white and yellow clingstone peaches; the Moorpark and Royal apricots; the Bartlett pear; Greengage and Egg plums; the Napoleon and Great Bigreau cherries; Black cherries are not desirable to can. Of the grapes used, the Muscat is the principal variety for canning. It takes 40,000 lbs of fruit to run this factory one day, and the proprietors say there is no danger of over-stocking with fruit if orchardists will raise the kinds used for canning. This factory has taken gold medals in London and in the World's exhibition in Australia. The Golden Gate factory employs from 250 to 400 hands, and last year put up 500,000 cans of fruit, although this year they expect to double the amount. They use daily 15 barrels of sugar of the best brand for making syrup. The tin shop where their cans are made is connected with the factory.

HORTICULTURAL COMMISSIONERS.—*Herald*, June 20: The Board of Horticultural Commissioners met Saturday at 10 A. M. S. F. Chapin was elected President, and D. C. Vestal Secretary. Lota were drawn and D. C. Vestal drew for the short term, Horace Wilson for the middle term, and S. F. Chapin for the long term. On motion, the county was districted thus: Drawing a line east of the Twelve Mile House, on the Monterey road, all south of that line forming District No. 3; then taking the Alvia road along First street, and the Monterey road to the Twelve Mile House, all east of that line being District No. 1, and all west, District No. 2. D. C. Vestal was named for No. 1, Chapin for No. 2, and Wilson for No. 3. Adjourned until next Saturday at 10 A. M.

#### SOLANO.

HEALD'S GRAPESTEMMER.—*Vallejo Chronicle*: The grape crusher and stemmer for which John L. Heald has recently secured a patent, is principally useful in preparing grapes for wine making. It consists of a pair of corrugated or fluted crushing rollers, which run together and are driven by suitable gearing; these rollers being provided with an attachment, by which they are separated and thrown out of gear when-



ever any hard substance or body which could injure them passes through. Below these rollers is a cylindrical case having its lower part perforated, and having a shaft extending longitudinally through it, so as to form a spiral extending from end to end, the object of which is to press the grape pomace through the perforated bottom of the cylinder, and to carry the stems and worthless portion out of the cylinder. Below this cylinder is an inclined grating, upon which the pomace falls, and from the lower end of which it is delivered into the cars, to be carried to the press, a binged, movable gate controlling its discharge. The grapes, either loose or in boxes, are placed upon a peculiarly constructed elevator, the whole forming a very effective apparatus for the purpose.

**DIETZ'S FRUIT PRESERVER.**—Solano Republican: George A. Dietz, the inventor and patentee of a new process for preserving fresh fruit from decay, so that it can be shipped east by slow freight and sold off as the demand is made for it, without being compelled to sacrifice it for fear of loss, has associated Messrs. Lyons and Korns, of Vacaville, with him in the enterprise, and they have put up a small packing house, including a furnace, for making the carbonized bran, which is the preservative agent. They have made experimental shipments of small quantities to various points in the East, and Saturday they will send a carload.

#### SONOMA.

**WHITE AUSTRALIAN WHEAT.**—Santa Rosa Democrat: Mention has heretofore been made of the extra fine wheat raised this season by Mr. W. G. Arnold, on his farm two miles above Mark West Springs. But samples of his White Australian wheat now to be seen in the Democrat office, are well worthy of more special mention. Some of the heads are seven inches in length and bear 113 grains of sound wheat. The average in the bunch is 93 grains per head, and the yield per acre is likely to be not less than 45 bushels—in portions up to 50.

**OUTLOOK.**—Peteluma Courier, June 22: The late sown grain is still promising, especially so between this city and the coast. The yield generally will not be large, but considerably more than was anticipated prior to the recent rains. The potato, corn and other vegetable crops are looking fine. The fruit prospects are very bright. There will be an abundance of grapes, apples, plums and other fruit grown in this section, excepting pears. The dairy season, one of the best we have ever had, is about over. Extra cows for next season are already being inquired for, and stock-buyers say the dairy business will be largely increased. Our farmers are beginning to learn that grain alone is wearing out their lands, and does not pay. They will, in future, raise more stock and have a greater variety of marketable produce. The raising of horses, mules, cattle, sheep, hogs and children will all pay, provided they are of the best stock and well fed and taken care of. The wool clip has been extra good and the sheep are in fine condition. With our corn, wool, wine, bay, good stock, poultry, eggs, butter, cheese, potatoes and fine crop of fruits, Sonoma county has no reason to complain for a partial failure of the small grain crops.

**EDITORS PRESS:**—Grain crops are very light. On some fields the yield is estimated as about one-fourth of last year. All grain is poor, and fears are entertained that corn will prove sick also. Hops are looking well and promise a good yield. Very many grapes have been set this season, but are growing only passably well. Too large a number of would-be vineyardists delayed setting till almost too late, and the weather has not been favorable for good growth. Still the acreage has been daily increased, and will probably be still further augmented next fall and spring. The owner of 140 acres near Sonoma states that he cleared over \$10,000 last season by manufacturing wine at 25 cents per gallon. Another cleared \$4,600 from 30 acres.—COR.

#### STANISLAUS.

**COMBINED HARVESTER.**—News, June 24: On Saturday last we accepted another invitation of Mr. F. H. Ross to visit the harvest fields. Our mission this time was to see the Hawsier combined beader and thrasher. The machine was at Mr. David Curtiss' farm, some eight miles from town. We found Mr. Curtiss hard at work, just about ready to make a trial in the field. He had at the time but 10 head of animals attached to the machine, but expects, when regularly engaged, to work 16. The Hawsier is different from the Centennial or Rice combined beader-thresher. In the Hawsier the borses work in front with the heading part of the machine in the grain. The grain separator is immediately to the rear of the draft, and rests on two low rudders or flange wheels at the front, with a large iron master wheel farther back, and to which is attached the motive power of the separator. A similar, but much lighter wheel in construction, holds up and controls the beader. The axle, or main shaft, of the main wheel is about 2½ inches in diameter. The master wheel is about 16 inches in width, the better to keep it from settling too deep into the plowed ground, and is probably four ft. in height. The flange wheels at front resting slightly on the ground, together with lighter V-shaped flanges on the large wheels, prevent the machine from sliding sideways while in motion. The grain, after being cut by the header, is carried by means of drapers to the cylinder of the separator, and then conveyed to the side to the sacking spout. This last part of

the machine, the conveying of the grain after its separation from the straw to the sack holder, had not been properly adjusted, and from this simple defect the machine was compelled to lay up for repairs. We understand that Mr. Hawsier is successfully running one of those machines on his own farm. There are also two at work on the West Side. The gentlemen who have purchased them in this vicinity are practical farmers and feel sanguine that they will prove successful.

#### NEVADA.

**FLORICULTURE IN VIRGINIA CITY.**—Chronicle: The cultivation of shrubs, plants and flowers in this city has turned out to be a grand success. Every woman, by the judicious expenditure of at least \$1.50 in springtime, can convert her domicile for the whole summer into an earthly paradise. Outdoor plants, and even exotics, thrive marvelously along the base of Mount Davidson, formerly only a land upon which Nature never smiled, and whose only outlook was upon rugged peaks and barren wastes. All of the transformation is due to the presence of the gracious water from the Sierras. Pass through whatever quarter of the city you will, the same delightful surroundings are beheld. From the window of every house where resides a lady of refined feelings, you will see the geraniums, fuchsias and petunias blossoming in the greatest profusion. One lady on North C street has a rose bush climbing up the side of her house, which it is estimated will produce at least 20,000 roses. Far down Washington street, on the north side, is a small plot of ground in front of a residence covered with low bush roses that make one's eyes ache with envy to behold. Coming up the street as far as Gus Ash's, the same delightful spectacle is repeated. And, in like manner, all over this city there is to be seen the same glorious manifestation of the beautiful in nature. Those who take the pains to produce these gratifying results, are entitled to the heartiest thanks, even of the nameless passer-by, who, perhaps, has no home or cottage roof to shelter his head.

#### A Californian in Texas.

**EDITORS PRESS:**—Having been interested in lands and stock in this State for six years, I have become sufficiently acquainted with the country to unhesitatingly say that the advantages now offered in Texas cannot be equalled on the American continent. The soil is varied, and like in California, varies from a deep black loam and adobe to a rich chocolate or red sandy loam, all of which is carpeted with a spontaneous growth of nutritious and perennial grasses, only equalled by the far-famed Kentucky blue grass, upon which hundreds of thousands of cattle and sheep range and fatten for all the markets of the United States and even Europe, without any extra feeding save what nature provides, winter and summer. While this may be the present paradise for stock men, it is also offering immense inducements to the tiller of the soil. It has been already well demonstrated that all the small grains can be grown here to good profit, and it is a matter of statistical history that Texas now produces about one-fifth of all the cotton produced in the United States. Grapes of several different kinds and of immense size grow spontaneously, some along the streams and others out on the high dry prairies amongst the post oaks—being conclusive evidence that the cultivated varieties need only to be tried to be a success. Indeed there is scarcely any product grown in California with success but what, I think, can be produced to a profit here if the same energy and ability be applied.

To-day there are more railroads building in Texas than any State of the Union, and the rich virgin lands that are now on the market at 50 cts. to \$5 per acre (owing to location and improvement), will as surely advance to \$20, \$50, and \$100 per acre as they have done in California during the past 15 or 20 years, and now is the time to invest. Law and order, life and property, are as much respected here as in any of the Western States, and notwithstanding you hear it from all parts of the country that Texas is the most insecure place to live on earth, such statements are only made by persons who do not know what they are talking about, and if they will lay prejudice aside, and take a "Palace car" and ride into San Antonio, and then look the country over, they will be satisfied that life and property are more respected here than in any town in the State of California, or any other State.

Owing to the immense drives of cattle, and shipping by rail of all kinds of stock, the supply is short, and there being so many new comers, who are stocking either purchased or leased lands, the price has been kept very high. Dry cows are scarce at \$14 to \$16, and cows with calves by their side range from \$15 to \$20 per head. Sheep range from \$1.50 to \$1.75 for Mexican ewes to \$2.75 and \$4 for graded and fine Merino ewes. Muttons \$1.50 to \$2.50 with fleece off.

To all persons wishing to invest in Texas land, I would advise them to come and see for themselves. There are a vast amount of land warrants or land certificates on the market, and can be bought here or at Austin, of reliable agents or bankers, at \$35 to \$45 for a 640 acre certificate, or warrant, but the public domain is so near all located, that but little desirable land can be had now, and when one counts the expense and trouble of getting these warrants located, he will always do better to purchase the land already located, and for which he can get good title.

But, Mr. Editor, I must stop, not but what there is much more to say in favor of this heretofore much abused State, but I may have a word or two to say hereafter. I will enclose you a brief advertisement of lands that I can sell, and trust some of our clear-headed and far-seeing Californians will invest some of their surplus means and reap the reward. Letters addressed either to San Antonio or Frio Town, Texas, will reach me.

JAMES M. THOMPSON.

[Mr. Thompson is a well-known resident of Napa county, and he writes that a large delegation of Napa people, including George Linn, Henry Fowler, W. J. A. Trubody, A. D. Engsby & Bro., John Clyman, Mr. Booth, Mr. Nordhoff, A. G. Clark and others, have visited him on his Texas land.—EDS. PRESS.]

**THE SPRINGS IN LAKE COUNTY,** and elsewhere generally, are well patronized this year. A pleasant party, as usual at this season, are enjoying themselves at Anderson Springs. A new log cabin, neatly and uniquely constructed and finished, by Mr. Partriquin, one of the proprietors, is an improvement added to the place during the year. The puffing geyser steam baths and the refreshing cold sulphur spring are still leading attractions.

#### Steam Wagons.

Steam wagons are slowly gaining entrance to industrial use on this coast. In Nevada, they are employed for heavy freighting, and in this State they are being urged as well fitted for hauling grain to the river landings. There are many favorable conditions for the use of steam wagons on this coast. The long, dry season, during which most of the hauling has to be done, ensures a hard road bed and none of the vexation of mud, as in countries where summer showers are frequent. Another great advantage is the almost dead level and exceedingly easy grades which characterize our valley roadways. True there is high fuel and sometimes scarcity of water which must be counted on the other side of the equation. However, the steam wagons are going to have thorough trial, in hands of those who believe in them, and this will demonstrate their success or failure. The Colusa Sun, which has an open eye for all improvements likely to advance the producing interests, says:

After all his experiments, Captain Roberts, of the San Joaquin Co., is still an enthusiast about his steam wagon enterprise. We had a conversation with him sometime ago, and he thinks that roads suitable for his wagon can be built very cheaply. While the wagons run, and pull very heavy loads on common roads, he thinks of digging two small graded ditches and filling with gravel, which will pack as hard as iron, and give a solid road for each of the broad wheels, and for the wagon wheels that follow with the loads. The Chico Enterprise, of Tuesday, has an item to the effect that this "steam wagon" has been thoroughly overhauled and improved at the Union Iron Works, Sacramento, and on a recent trial worked satisfactorily. Its weight is 17 or 18 tons, and it is calculated to haul 50 tons of grain at each trip. It will be taken to the Upper Sacramento valley in a day or two, and will engage in grain hauling between Riceville and McIntosh's Landing." Capt. Roberts will, if this one shall prove the success he anticipates, put on wagons to run to all the principal landings on the river, and thus cross-section the entire Sacramento valley. He will have in effect a freight railroad across the valley, from foothill to river, every 8 or 10 miles. We sincerely hope that the wagons may prove successful, as it would be one of the grandest things for the Sacramento valley that could be imagined; that is, always provided we can keep the navigation of the river from being destroyed.

Yes; and the last proviso is most important. We can ill afford to be mud our rivers or neglect our ocean facilities. Our prosperity depends upon keeping all avenues open and then pushing our varied products into all parts of the world.

#### Mt. Diablo.

**EDITORS PRESS:** To the lover of nature there is probably not another place in the vicinity of San Francisco which offers more inducements to visit than Mt. Diablo. This famous mountain, about which so much has been told and written, is within easy reach of the people of this city, and is gradually becoming one of the most popular and desirable resorts offered to those in search of rest or pleasure. There are two regular stage lines to the mountain—one from Oakland, and the other from Haywards. The distance being so short, it makes just a pretty drive to start from Oakland with a horse and buggy about midday, drive along leisurely through Lafayette, Walnut Creek, Alamo and Danville to the foot of the mountain, passing through the celebrated Colton ranch, up a beautiful winding road to the hotel near the summit, arriving there in time for supper.

One of the most interesting features to witness is the sunrise, a scene far beyond description in the limited space here occupied, but when once viewed almost causes the heart to cease beating, and the mind receives such an impression as will last the remainder of a lifetime. To see old Sol get up from behind the high barricade formed by the snow-capped Sierra Nevada is really a grand affair. As the day grows brighter, the surrounding country comes into view like a splendid panorama. After looking at the towns, rivers, foothills and distant mountains until the feeling of wonder has somewhat abated, the attention of the visitor becomes fully occupied with the many attractions found about the mountain. Curious natural formations may be seen in abundance, some of which are worthy of the most attentive study. For the geologist and botanist no better field could be found, and no one can visit the place without feeling well repaid for the time so very pleasantly passed.

Before closing this sketch a word of praise can be sincerely expressed in favor of Mr. E. K. Wood, the proprietor of the Mt. Diablo hotel. This gentleman, assisted by his son, Mr. E. F. Wood, does everything to make a stay at the mountain agreeable, and they are both remembered by all visitors as being among the most genial and hospitable hotel-keepers on the Pacific coast.

F. A. B.

San Francisco, June 27, 1881.

**TO TEST QUALITY OF GLUE.**—Dry glue steeped in cold water absorbs different quantities of water, according to the quality of the glue. From careful experiments with dry glue immersed for 24 hours in water, at 60° Fahr., and thereby transformed into a jelly, it was found that the finest ordinary glue, or that made from white bones, absorbs 12 times its weight of water in 24 hours; from dark bones, the glue absorbs nine times its weight of water, while the ordinary glue, made from animal refuse, absorbs but three to five times its weight of water.

#### News in Brief.

THE emigration from Denmark this year is estimated at 70,000.

THE iron foundry and machine shop at Yreka were destroyed by fire Saturday.

THE track of the Southern Pacific is now laid 22 miles east of El Paso, Texas.

THERE is a prospect that a Signal Service station will be placed on Mount San Bernardino.

THE troubles between the Italians and French still continue, and serious results are not improbable.

THE Richmond and Alleghany, Atlantic and Northwestern and Ohio Central railroads have consolidated.

AT rifle practice the regulars of the Presidio defeated a picked team, Saturday, at 200, 500 and 600 yards.

AN investigation into the affairs of the State Prison at San Quentin is to be had, at the request of Warden Ames.

REV. FATHER HUDSON, of Gilroy, was attacked by a shark while bathing at Santa Cruz, Saturday, and severely bitten.

A FIRE occurred in the San Quentin prison in the California Door Co.'s dry-house on the 25th ult. Not much damage was done.

SOME tribes in Tunis, near Sfax, have cut the telegraph lines and assumed a defiant attitude against the Bey. Europeans are panic-stricken.

CAREFUL inquiry by *The Age of Steel*, published in St. Louis, refutes the statement that there is an over-production of pig iron in this country.

THE Sonora railway, Mexico, resumes track-laying on the 1st of July. There are now about 20,000 ties on hand, and 40,000 more are shortly expected.

THE Great Eastern, after having caused heavy loss to every one who owned her, is to be offered for sale at auction. It is worse than a white elephant.

SATURDAY evening a heavy storm of wind, rain and hail wrecked the Union Pacific round house at North Platte, Neb., badly damaging four engines and killing one man.

TWO HUNDRED men and 40 teams are engaged grading on the narrow-gauge railroad south of Brownsville, Oregon. A party of engineers are now locating a road south toward Coburg.

COUNT IGNATIEFF, Russian Minister of the Interior, will propose to the Council of the Emperor a reduction of between 150,000,000 and 200,000,000 roubles in the military expenditures.

F. J. M. Braga, Secretary of the Portuguese Benevolent Society, has absconded with \$100,000 of money not his. He had been a trusted depositary, evidently; in all, some 250 people had given him money and valuables.

THE case of Architect Clifford against Architect Drake, to recover \$50,000 for derogatory statements, by which Clifford claims he lost his position as architect of the new City Hall at San Francisco, is now on trial at Chicago.

THE new wharf at Pismo has been commenced. All the material necessary is now on the ground, and the contractor claims that he will be able to load vessels at it by the 15th of August. The length of the wharf is to be 1,450 ft.

THE Veterans' Home Association is making active exertions to establish a substantial and comfortable home for the wounded and disabled veterans of the Mexican and Union wars. A suitable location will be selected for a permanent institution.

LAST Friday night a whole train on the Morels Railroad, Mexico, tumbled down into the San Antonio river, near Cuantla, on account of the downfall of a stone bridge. Nearly 200 persons were killed and a great many wounded, most of the victims being soldiers.

THE latest news from the scene of the *Dotorel* catastrophe is, that the diver who examined the wreck has been shipped to England to make a verbal report to the authorities. There were persons in England who, two months ago, believed that the explosion was the result of a Fenian plot.

VICE PRESIDENT HUNTINGTON, Manager Towne and Freight Agent Stubbs, of the Southern Pacific, have held a conference with President Coolidge and the directors of the Santa Fe road, to try to prevail on the latter not to build through Southeastern Arizona to a junction with the Sonora road.

COL. HURLBURT'S railroad surveying party are engaged in surveying around Big Bend, Cow creek, Jackson county, Oregon. The best grade that could be found through the canyon was 110 ft. to the mile, and one bridge to be built on the route will have to be 615 ft. high, or it will be necessary to make a number of tunnels.

THERE are a number of styles of combined barvesters now at work in the San Joaquin valley. Some of them we have mentioned and described in former issues of the PRESS. The reader will find still another described this week in our "Agricultural Notes" under Merced county.

THE tapping of Eagle lake is an enterprise that bids fair now to become accomplished, and will be one of vast interest to Lassen county. This enterprise, which will require the running of some 9,000 ft. of tunnel, or open a cut and a flume 17 miles long, will irrigate and open up for settlement about 100,000 acres of as fine agricultural lands as there is in this valley, but which now is almost worthless, being covered with a growth of sagebrush.





### Our Country.

I dreamed the spirit of the Century  
Lifted her face and form above the mists  
That long had hid her cradled infancy;  
And, like a summer sun no cloud resists,  
Smiled on America, and said:  
"The errors of the past are dying or are dead.  
I see them trooping, a funeral train  
Of shadows, into Chaos, whence they came.  
Let there be light!" Then morn began to flane  
In rose and gold on mountain and on plain;  
And in the soul of man another morn  
Of faith, of knowledge, and of hope seemed born,  
That stilled the tumult of thought's weary strife  
With prophecy of all-pervading life.

Then, as I marveled at this vision strange  
And mused upon these strong, prophetic words,  
Methought the winter passed with sudden change,  
And all the air was full of summer birds.  
Yet, as when one is roused too soon from sleep,  
A drowsy mood did o'er my senses creep;  
And step by step into a shifting throng  
Of dreams I slid again, and slumbered deep and long.

Then, once again that voice of calm command  
And hope still seemed to speak to all the land:  
"The evil of the Past shall pass away,  
Of all that was, the good alone shall stay.  
Yet, step by step, its kingdom shall be built,  
And slowly, step by step, retreating guilt  
And misery shall move outward from the heart  
That beats at the firm center of the race;  
And that grand truth therein secures it place  
Beyond all accident and flaw—  
The immutable reality of law,  
Through whose bright revelation man shall see  
One bond eternal bind all things that he  
In earth and Heaven, in Nature and the soul,  
In one divine, indissoluble whole.  
Then shall the true, the beautiful, the good,  
Unite the world in human brotherhood;  
And science and religion, clasping hands,  
Rule, of their natural right, the enfranchised lands."

I woke, and knew alas! 'twas but a dream.  
A dream; and yet, ye mighty Powers that sway  
The ideas of life, may not some little stream  
From loftier regions of the soul to-day  
On our beloved land descend?  
Some guardian spirit, on her steps attend?  
Some vision from the ideal life,  
Whose beauty and whose truth shall shame the base  
And sordid aims that threaten our disgrace?  
Shall lift America above the strife  
Of faction and the groveling tricks  
Of party passion, and its politics?

Shall we not hope upon this glorious day  
That called our Country into birth  
And placed her, by the prophecies of earth,  
Freest and foremost in the proud array  
Of nations, that on her a light may fall  
That shall direct her steps when duties call,  
And honor bids her stand erect  
In well-earned plumes and armor decked—  
Her starry flag as in the old time unfurled  
Without a stain before the gazing world?

Aye, not in vain hath been our bitter trial,  
Our dear bought victories, that our land might be  
Forever One—united, strong, and free.  
Not now shall we behold the base denial  
Of all she was and all she yet may be.  
Thine, O my Country! thine a grand career  
The age to come shall see!  
We trust thee as we have trusted thee  
On this thy bright and joyous jubilee.  
How can we look upon thy face and fear?  
We see alone thy glorious destiny!

—C. P. Cranch.

### A Woman's Victory.

Across the river there lives a woman who has been twice married but is now a widow. She has one child of her first husband and two of her second husband to support. When the latter died he was in debt by an endorsement for \$1,000, and among his assets was a second mortgage on a small farm which it would not pay to take owing to the size of the first mortgage. How the wife managed to work things when thrown on her own resources makes quite a story of feminine New England enterprise. Take, for example, the case of the worthless second mortgage. The owner of the farm had abandoned the property, and the holder of the first mortgage, realizing that some day he would get it, thought it wise to begin early, and so planted a crop on the land in the spring. The plucky widow, however, finding it would take him several months to foreclose, got from the owner a deed of the land. Then she went and ploughed under the first mortgage man's crop and set the fields herself to tobacco. The other party was powerless until the machinery of the law had foreclosed his bond, and, before that time, the widow had cut and removed her tobacco, and was just so much in. By pluck and activity, working hard herself, she got along, supported herself and family, and, little by little, reduced the face of the \$1,000 debt, which was in the form of a mortgage on her farm, and was held by a trustee, and so could not morally be compromised by him. Finally by her own labors she cleared the whole farm of debt and wiped the mortgage all off. This perhaps all answers the question whether farms can be made to pay in Connecticut. To finish the story it may be added that the husband left no will, and consequently the farm, now that she has paid for it, does not belong to her, but his children, and for all her labor she has no ownership. The law is rather queer in its working some times.

—Hartford Letter to Springfield Republican.

### The New Declaration.

That is a critical hour for any country or nation when the people become so absorbed in money-making or money-getting as to tire of keeping e'en liberty's feast, and to insist that they are persecuted if compelled to merely listen to their forefathers' declaration of rights. It is time for earnest action on the part of patriots when such conditions exist—time for mothers to re-consecrate their sons to liberty and to teach their daughters anew the significance of the words freedom and native land.

With the ocean's broad highway an utter with the white wings of the fleets hurrying into this free haven with the thousands of earth's oppressed, it is time for action on the part of patriots. Schools must be organized, the press re-consecrated, a love of liberty and loyalty developed, or we cannot successfully solve the intricate problem awaiting solution. And if American men, with all their splendid powers, deliberately choose to ignore this royal opportunity and continue their wrangle for official honors and spoils, then, in the sacred name of liberty, I call upon the mothers and daughters "to speak to the people that they go forward."

Colonel T. W. Higginson, one of the knightly heroes of this present, thus voiced a text for us on Decoration day:

Courage is first and last of what we need,  
To mold a nation for triumphal sway;  
All else is empty air,  
A promise vainly fair,  
Like the bright beauty of the ocean spray,  
Tossed up toward heaven, but never reaching there.  
Not in the past, but in the future, we  
Must seek the mastery  
Of fate and fortune, thought and word and deed.  
The past is on its starry track,  
We would not win it back.  
Gone, gone for aye, the little Puritan homes;  
Gone the beleaguered town, from out whose spires  
Flashed forth the warning fires,  
Telling the Cambridge rustics "Percy comes;"  
And gone those later days of grief and shame,  
When slavery changed our courthouse to a jail,  
And blood drops stained its threshold. Now we hail,  
After the long affray,  
A time of calmer order, wider aim,  
More mingled races, manhood's larger fame,  
A city's broader sweep, the Boston of to-day.  
Or, to change the last line,  
A country's broader sweep, the Union of to-day.

Yes, we hail this time of calmer order as the fitting hour of woman's era—the time for the warrior to stand with lance at rest, and reverently watch the teacher complete the work already well begun.

The holy mother hour in the national home-stand, when the children shall forget the friction of the day, and ask for guidance and instruction from mother.

Would that in every hamlet, village, and neighborhood some representative woman would arrange that the grown-up boys should receive at least one hour's instruction from their mothers, so that the approaching national fête day should receive universal recognition. Let the hosts of foreigners crowding to our shores be met at the threshold with a welcome, and also an earnest lesson from the newer catechism of liberty. Oh, that the blindly selfish world might he taught one lesson of the unity of humanity. Made to comprehend that no one can obtain complete freedom, so long as there is one weary, oppressed, tempted, or wronged human being crouching neath our flag. Neither will the theory of a republican form of government ever be tested until every human being of mature age and sound judgment has a right to self-government and self-protection.

Truly, courage is what we need. The highest, loftiest courage known to the weak, the courage of devotion to an abstract idea, courage to face the ridicule of friends, to face the treacherous fire of prejudice, courage to speak truth to a world that is an unwilling and impatient listener.

Aye, courage to be often misjudged and misunderstood by the very people one would die for. Aye, the courage of a sensitive, loving soul to brave the loneliness of greatness. Aye, but would it not require greater courage for a truly royal soul, to be untrue to one's self, false to the truth, traitor to the world's peerless possibility—a noble character?

Hence if the recreant sons of a patriot ancestry protest against the old-fashioned declaration of independence of the forefathers, let the mothers give to the world a new declaration.—Mrs. Harbert, in *Inter-Ocean*.

DISCOURAGING BOYS SMOKING.—Since the ordinance prohibiting smoking by boys on the streets, and selling of tobacco to those under 16 years of age, has been enforced in Santa Cruz, cigarette smoking has almost entirely disappeared from view. It is a fact that many youngsters smoke just for the "manliness" of the act, and do so publicly, with a pride, so long as the old man ain't in sight. The ordinance nips this youthful pride and incentive, and when banished to the rear to smoke, the boy can't see the "manliness" of the act so clearly, and so cares much less about it. This town should have just such an ordinance, and parents should ask for it. The boys themselves will be very thankful for the interference in a few years, if not now, and will then recognize the wisdom of the act.—San Mateo Journal.

### Ourselves and Self-control.

[Written for the RURAL PRESS by FLELOYD.]

Sound the trumpet long and loud, bid reason act. Enough, enough of troubles dire, raise the standard higher, higher. Mind is lazy, weak and foolish; mind is slothful dull and mulish. Mind was made for noble work; mind, thou must no longer shrink.

There's much to do, and much thou'lt rue, unless thou wake and from thee shake those clogs that pull thee down into the mire.

Work; man, woman, and make the most of boly talents trusted to thee.

This is an age of high ambition that must not be smothered; but let your will, or reason, sternly guide your aspirations.

Wife, do not think you must be weak, because for man you are only help-mate. Be strong, grow strong, and with God's help, show to the world that now the time has come when passions dark and inclinations strong must bow to thine own will. Not worldly self; but thy immortal nature, which is a dim reflex of God the Father. The possibilities of the human mind have never yet been fathomed. We do not cease to grow (if well), until we cease to act. Our intellects do not grow strong, and quick, and grasping, 'cept by continued practice. Shake off all clogs. Face facts, small or great, and your mind will see the truth, then act as you know you ought to act.

Watch, look and never rest content. The mind so easy slips into old ruts. Do not trust your inclination or desire. If ever you know that strong feeling is overcoming reason, then stop—you are in danger. Wait till you are master of the situation. Oh, this work of ruling self—the hardest work we find to do—but it can be done. Shall we not all try?

Self, down, down, down! I'm master now.  
I'll chide thee, annoy thee, and fret thee;  
I'll worry, despise, and reject thee,  
Unless to my will thou humbly bow.  
Self, thou art mine—  
I am not thine;  
My Will is king,  
Let poets sing  
That a beautiful time is near,  
That a peaceful time will soon be here  
If one and all  
Will bid self fall  
And crown the Will or Reason  
Monarch of the season.

Sequel, Santa Cruz Co., Cal., June 13, 1881.

### The Words of Washington.

At the laying of the corner stone of the Capitol at Washington, by Washington himself, he used the following grand words that should be heard and heeded in these days: "Ye men of this generation, I rejoice and thank God for being able to see that our labors and toils and sacrifices were not in vain. You are prosperous, you are grateful, the fire of liberty burns brightly and steadily in your hearts, while DUTY and LAW restrain it from bursting forth in wild destructive conflagration. Cherish liberty as you love it; cherish its securities as you wish to preserve it. Maintain the Constitution which we labored so painfully to establish, and which has been to you such a source of inestimable blessings. Preserve the union of the States, cemented as it was by our prayers, our tears and our blood. Be true to God, to your country and to your duty. So shall the whole Eastern world follow the morning sun to contemplate you as a nation; so shall all generations honor you as they honor us; so shall that Almighty Power which so graciously protected us, and which now protects you, shower its everlasting blessings upon you and your posterity."

THE RURAL IN NEW YORK STATE.—There are many Californians who subscribe for the RURAL PRESS and have the paper sent directly to their old homes at the East, to keep the good people informed of the progress of California agriculture, etc. Among these is a prominent resident of San Francisco, whose old home was in Onondaga county, New York. The paper was stopped by a mistake for a time and then renewed, and its re-arrival called forth the following allusion to the PRESS, which we are proud to reproduce:

"I want to express to you our thanks for that which we have missed these past months—our table guest from the Pacific side. A quartette of these longed-for visitors came to us last month, which received a very warm welcome. Eagerly, and I may say exultingly, did I bid them occupy the front of reading table. Father had said we would be minus the RURAL this year, while I had kept up the looking and real longing, hoping their coming would soon appear. Here they now are, with their peaceful, quiet, rare literary attainment, greeting us with an added luster of good things, as the pages are larger and more of them. Thanks, for the papers we missed so much, with more for those to come, as we are sure of a year's reception."

GIRLS AT FOOTBALL.—Twenty-two young women, eleven of them English and eleven Scotch, played an international game of football in England. The teams appeared in a costume essentially similar to that worn by male football players, consisting of jerseys, knickerbockers, stockings, hoots, and a "cow!" with a sort of sash depending from the waist—the Scotch teams wearing blue jerseys and red sashes, and the English, red jerseys and blue sashes. Most of the players were well built, athletic looking girls, and the teams looked exceedingly picturesque in their bright and tastefully arranged costumes. Some retained such feminine ornaments as frilling, bracelets, etc., but others, with arms bare to the shoulder, entered into the game with all the enthusiasm of boys. The Scotch lassies won.

### "Going to California."

The glamour about going to California is still something like it was in '49. Staid old fellows back yonder are pulling up stakes and severing the ties of a lifetime to come here; some for a milder climate; others because they adventured in the mines in flush times, and foolishly think they will somehow find their lost youth and strength of long ago. Ex-Congressmen, ex-members of the Legislatures of their States, and ex-county officers, are thick as leaves in Val-lambross. We just met one who was County Recorder and Sheriff in Iowa. He owned the best farm in his county and a fine house in town. Then he pulled out and landed here where he purchased a nice farm which, in an evil hour, he traded for mining stock. Others more lucky, and less confiding, are content to refrain from such investments, and accommodate themselves to the order of things prevailing. Another who made a fortune sufficient for his old age in milling; who was often honored by his people in being sent to the Assembly and Senate as their representative, is enjoying the quiet evening of a long life in Santa Rosa. One more ex-member of the Legislature of a Western State may, at times, be seen hauling gravel, wood, or jobbing around with a team. Another prominent business man in an Eastern city removed here a few years ago, bringing ample capital to maintain him and his family in comfort the rest of his days, but thinking he saw a chance to increase it by mining stock investments he hazarded it with that den of thieves, the San Francisco Stock Board, and lost. He is now a poor man unable to take care of his family, though living in the hope of better days coming, when fortune, with a turn of the wheel, may bring some of his ventures uppermost.

It is a favorite spot for professional men. The longing for something new, the hunger for excitement, fed by many a glowing story, sounding like Sinbad, the Sailor, and the fabulous riches gathered, in the stories of the Arabian Nights, contributed toward bringing all classes here, long after the gold mines ceased to yield more than the slenderest returns for daily labor. Men, eminent in all the walks of life, have found by sad experience, that the means for living are as hard to gather here as anywhere else. We know a retired army officer who thought \$40,000 fortune enough to warrant him, in time of peace, to settle down in San Francisco for the enjoyment of his future days. He has neither wife nor child, and his wants are few and simple. But five years passed amid the whirl and excitement of booming stocks and the devices of cappers, let him down to bed rock. He is now drudging at poor pay to earn his bread. And yet this is as good a country as any for a man, with means enough to buy land, to make a livelihood, if he will work and beware of speculation.—Santa Rosa Republican.

### Floral Exchange.

EDITORS PRESS:—I would like to enter the Floral Exchange. I have, to exchange, seeds of double variegated pink, phlox (pink, red and rosy lilac), hollyhock (pink, white and red), mignonette (Parson's new white), sweet peas (two colors), pansy and violet, Madeira vine, flags, myrtle (variegated and common), bop vine, white moss and monthly rose.—KATE M. BROWN, San Benito, Cal.

THE MISTAKE OF MOTHERS.—Thousands of mothers slave, grow prematurely old, forget and neglect their own accomplishments, and drag themselves about as mere appendages, something between a nurse and a housekeeper to a daughter too young to realize or appreciate the sacrifices made for her. It is every person's business to make morally, mentally, physically, all of themselves possible, and this settling down at 35 and 40 into an old woman and taking a hack seat that the daughters may shine is a mistake, and defeats the very end sought. There's often altogether too much done for children, and the chief result is that of making them helpless, dependent creatures. Mothers to-day are saying, "I don't care for myself now, so that Effie or Nettie get their full quota of accomplishments," when, if that mother went on building herself up on the basis of her own matured experience, and ceased to sink and absorb herself so completely in Effie and Nettie the world with which she came in contact might be profited. Society needs matured women as live, potent factors, and the shining should not be left entirely to fledglings. Were there time and space a word would be said here in this matter for the old man, too, though he is more apt to take care of himself.

LIGHT AND LIFE.—This is the name of a collection of new hymns and tunes for Sundays school meetings, prayer meetings, praise meetings and revival meetings, edited by R. M. McIntosh, published by Oliver Ditson & Co. Mr. McIntosh announces himself as editor of this pretty collection, of which he furnishes quite a number of the tunes, the rest being contributions from writers of well approved musical and poetic talent. The publishers have ventured on very light-colored paper for the covers, which finely sets off the neat picture title; this representing a stirring scene in the South Seas, where the missionary ship, which seems to come out of the rising sun, is bringing all sorts of good things, and among them, the Sunday school, to the eager islanders among their palm trees.



## Young Folks' Column.

### The Fifer of Lexington.

#### A Fourth of July Sketch.

Lexington! Concord! What American boy or girl has not heard of these two little villages in Massachusetts, where the first blow was struck for Independence, and where the hot flames of the Revolution first burst out, on the 19th, of April, 1776! One of my first pilgrimages was to these villages.

It was a bright, sunny morning in October, 1848, when I traveled by railway from Boston to Concord, a distance of 17 miles northwest of the New England capital. There I spent an hour with Maj. Barrett and his wife, who "saw the British scampers," and had lived together almost 60 years. The Major was hale at 87, and his wife, almost as old, seemed as nimble of foot as a matron in middle life. She was a vivacious little woman, well formed, and retained traces of the beauty of her girlhood.

After visiting the place of the skirmish at Concord, I rode in a private vehicle to Lexington, six miles eastward, though a picturesque and fertile country, and entered the famous village at the Green, whereon that skirmish occurred, and where a commemorative monument now stands. After a brief interview with two or three aged persons there, we drove to the house of Jonathan Harrington in East Lexington, who, a lad 17 years old, had opened the ball of the Revolution on the memorable April morning with the war-notes of the shrill fife.

As we halted before the house of Mr. Harrington, at a little past noon, we saw an old man wielding an axe vigorously in splitting firewood in his yard. I entered the gate and introduced myself and my errand. The old man was the venerable fifer.

"Come in and rest yourself," he said kindly, as he led the way into the house.

Although he was then past 90 years of age, he appeared no older than many men at 70. His form was nearly erect, his voice was firm, his complexion was fair, his placid face was lighted by mild blue eyes and had but few deep wrinkles, and his hair, not all white, was very abundant. I took a seat on a chintz-covered lounge, and he sat in a rocking-chair.

"I have come," I said, "to make some inquiries about the battle of Lexington."

"It wasn't a battle," he answered; "only a skirmish."

"It was a sharp one," I said.

"Yes, pretty sharp, pretty sharp," he replied, thoughtfully. "Eight fine young men out of a hundred men were killed; two of them my blood-relations."

"I understand you played the fife on that morning," I said.

"As well as I could," he replied. "I taught myself to play the year before, when the minute-men were training; and I was the only person in Lexington who knew how to fife. That ain't saying much, though, for then there were only eight or ten houses in the village besides the meeting-house."

"Did you belong to the minute-men?" I asked.

"I was a minute-boy. They asked me to fife, to help Joe Burton make music with his drum for Capt. Parker's company. Poor Joe! his drumhead was smashed, and he lost a little finger in the fight. Captain Parker's company was drilled the night before the fight, for Sol Brown, our nearest neighbor, came from Boston at sunset, and said he had seen nine British soldiers in overcoats walking toward Lexington. Sam Adams and John Hancock were at Parson Clark's house, where Dorothy Quincy, Hancock's sweetheart was staying. Gage wanted to catch and hang 'em, and it was believed the soldiers Sol had seen had been sent out to catch 'em that night. A guard of eight men, under Sergeant Munroe (who kept a tavern here) was stationed around Parson Clark's house. A little past midnight, Paul Revere—you've heard of Paul Revere—came riding like mad from Cambridge, his horse all afoam, for the weather was uncommonly warm. He told Munroe he wanted to see Hancock. 'He didn't want to be disturbed by noise,' said the sergeant. 'Noise!' said Revere; 'you'll have noise enough soon, for the regulars are coming!' Hancock heard him, and opening a window, called out, 'Revere, I know you; come in.' He went into the house a moment, then came out, mounted his horse, and started on a gallop toward Concord. Very soon everybody in Lexington was astir."

"Were you on duty then?" I inquired.

"No," he said. "I went to bed at 11 o'clock, and, as all boys should do, slept soundly. My mother (who was a Dunster, and one of the most patriotic women of the time) called out to me at 3 o'clock: 'Johnathan! Johnathan! get up! The regulars are coming, and something must be done!' I dressed quickly, slung my light gun over my shoulder, took my fife from a chair, and hurried to the parade near the meeting-house, where about 50 men had gathered, and others were arriving every minute. By 4 o'clock a 100 men were there. We did not wait long wondering whether the regulars were really coming, for a man dashed up to Captain Parker and told him they were close by. The Captain immediately ordered Joe to beat the drum, and I fified with all my might. Alarm guns were instantly fired to call distant minute-men to duty. Lights were now seen moving in all the houses. Daylight came at half-past four o'clock. Just then the regulars,

who had heard the drum-beat, rushed toward us, and their leader shouted, 'Disperse, you rebels!' We stood still. He repeated the order with an oath, fired his pistol, and ordered his men to shoot. Only a few obeyed. Nobody was hurt, and we supposed their guns were loaded only with powder. We had been ordered not to fire first, and so we stood still. The angry leader of the regulars then gave another order for them to fire, when a volley killed or wounded several of our company. Seeing the regulars endeavoring to surround us, Captain Parker ordered us to retreat. As we fled, some shots were sent back. Joe and I climbed a fence near by. Climbing over, Joe fell upon a heap of stones and crushed in his drum-head. His hand was bleeding badly, and he found a bullet had carried off a part of his little finger. Eight of our men had lost their lives."

"Where were Adams and Hancock all this time?" I inquired.

"Not far off," he replied. "When the first shots were heard, they were advised to fly to a place of safety, for their lives were too valuable to the public to be lost. At first they refused to go, but were finally persuaded, and retired to a thick-wooded hill not far off. Dorothy Quincy went with her lover. They were married in the fall. It is said Sam Adams, hearing the firing on the Green, exclaimed: 'What a glorious morning for America is this!' I have no doubt he said so, for it was just like him."

"You said two of your blood relations perished in that fight," I observed.

"Yes," he replied; "they were Jonathan and Caleb Harrington. Caleb, and Joe Comer, who lived a mile from Lexington, had gone into the meeting-house to get some powder stored in the loft. They had taken it to the gallery when the British reached the meeting-house. They flew to the door, and started on a run for the

Concord, the quicksilver was 85° in the shade, and the door-yards were bright with dandelions. The minute-men made it hotter than that—full 100 in the shade—for the British before they got back to Cambridge that evening."

"Did you serve in the army afterward?" I inquired.

"No," he said; "father went to the war, and I staid at home to help mother take care of things, for I was the oldest boy. I played the fife sometimes after that when the young men in the neighborhood were training for the fight."

By permission of Mr. Harrington I drew a likeness of him sitting in his rocking-chair; and under it he wrote, with a trembling hand, which he attributed to the use of the ax that morning:

JONATHAN HARRINGTON,

Aged 90, the 8th July, 1848.

His brother Charles, two years younger than he, came in before I had finished the sketch. I could not but look with wonder and reverence upon these strong old men—children of one mother, who had borne three sons and five daughters—who were nearly grown to manhood when the old war for Independence broke out. I bade them farewell, received from the old fifer the benediction "God bless you!" went back to the village green, sketched the monument, and called upon their kinsman, Abijah Harrington, who was a lad 14 years of age at the time of the skirmish. He saw nearly all of the fight. He had two brothers in it, and had been sent by his mother, trembling on account of her sons, to watch the fray at a safe distance, and obtain for her information concerning her brave boys.

From Mr. Harrington's I went to the house of Parson Clark, where I found Mrs. Margaret Chandler, a remarkably intelligent old lady,



HOW THE FARM BOYS CELEBRATED.

company. Caleb was shot dead at the west end of the meeting-house, but Joe, though wounded, escaped. Jonathan had stood his ground with the rest. His house was near the meeting-house. He was in front of his own house when the regulars fired the third time. He was shot in the breast and fell. His wife, Ruth, stood looking out of the window, with their only child, nine years old, by her side. She saw her husband fall and ran out to help him. He raised up, stretched his arms toward her, fell again, and was dead before she could get to him. Oh! it was too cruel, too cruel!"

"There were brave men in that little band of patriots," I remarked.

"Brave men!" said the old man, his mild eyes beaming with unusual luster, "braver men never lived. Not one of them left his post until Captain Parker, seeing it was useless to fight against so many regulars, told them to disperse. There was one man who wouldn't go even then. It was Jonas Parker of this town. He lived near Parson Clark's. He had said he would never run from an enemy, and he didn't. He had loaded his musket, put his hat, containing powder, wadding and bullets, between his feet, and so faced the regulars. At the second fire he was wounded and fell on his knees. Then he fired his gun; and though he was dying, he reached for another charge in his hat, when a big red-coat killed him with a bayonet on the very spot where Jonas first stood. Wasn't that pluck?"

"Rare pluck," I answered. "The names of such men should never be forgotten."

"They never will be," replied the old patriot, excitedly. "Their names are cut deep in marble on the little monument down yonder on the Green—Robert Munroe, Jonas Parker, Samuel Hadley, Jonathan Harrington, Jr., Isaac Muzzy, Caleb Harrington, John Brown and Asahel Porter. Should the marble perish, their names are cut deeper in the memory of Americans."

"You said it was a warm night when Paul Revere rode from Cambridge to Lexington," I said.

"Yes," he replied; "it was a very early spring. Young leaves appeared on the 1st of April. The grass on the village green was so tall on the morning of the 19th that it waved in the light wind that was blowing. At noon that day, when the British were driven from

then 83 years of age. She had lived in that house ever since the Revolution, had a clear recollection of events at Lexington on the memorable April morning, and gave me a version of the escape of Adams and Hancock somewhat different from that given me by the venerable fifer. A few more words about the latter:

On the 75th anniversary of the affair at Lexington and Concord (1850) Jonathan Harrington was invited to participate with his fellow-citizens in the proceedings of the day. In the procession was a carriage containing Jonathan, aged 92; his brother Charles, aged 90; Amos Baker, aged 94; Thomas Hill, aged 92, and Dr. Preston, aged 84. Jonathan gave as a toast at dinner: "The 19th of April, 1775. All who remember that day will support the Constitution of the United States."

The Hon. Edward Everett made a speech on the occasion, in which he remarked that "it pleased his heart to see these venerable men beside him, and he was very much pleased to assist Mr. Jonathan Harrington to put on his top coat a few minutes ago. In doing so he was ready to say with David, 'Very pleasant art thou to me, my brother Jonathan!'"

Late in March, 1854, when he was almost 96 years of age, Jonathan Harrington died, and was buried with public honors. In the funeral procession was a large body of military as an escort, and the hearse was followed by the committee of arrangements, the Governor of Massachusetts, the Lieutenant-Governor and Council, and a vast multitude of citizens gathered from the neighboring towns. After impressive religious services in the church at Lexington, his remains were deposited in the family tomb.

Sacred be the memory of the Fifer of Lexington!—B. J. Lossing, in *Harper's Young People*.

VIBRATIONS FROM MACHINERY.—The French society for the encouragement of national industry, which offered a prize of \$400 for the invention of a means for deadening the shocks and vibrations to buildings caused by steam hammers and other heavy machinery, awarded one-fourth the amount for a device which consisted of introducing India rubber plates between the foundation of the machine and the floor.

## Domestic Economy.

### Healthfulness of Fruit.

Fresh, ripe, perfect, raw fruit is safe and healthful at all seasons of the year, and amid the ravages of disease, whether epidemic, endemic or sporadic, general, special or local. Under proper restrictions as to quantity, such fruit as named will cure a diarrhoea, aid in removing a cold, colic, fever or any other disease whose treatment requires the bowels to be kept freely open; for this effect, fresh, ripe fruit is acknowledged to have; but to be used advantageously in health and disease, the following rules are imperative:

1. Fruit should be eaten ripe, raw, fresh and perfect.
2. It should be eaten in moderation.
3. It should be eaten not later than four o'clock in the afternoon.
4. No water or fluid of any description should be swallowed within an hour after eating fruit.
5. To have its full beneficial effect, nothing else should be eaten at the time the fruit is taken.

It is to the neglect of these observances that erroneous impressions prevail in many families, and to an extent, too, in some instances, that the most luscious peach, or apple, or bunch of grapes, is regarded as that much embodied cholera and death. When will men learn to be observant and reflective?—*Journal of Health*.

BUTTERMILK AS SUMMER FOOD, DRINK AND MEDICINE.—A Detroit physician asserts that for a hot-weather drink nothing equals buttermilk. It is, he says, "both drink and food, and for the laborer is the best known. It supports the system, and even in fever will cool the stomach admirably. It is also a most valuable domestic remedy. It will cure dysentery as well and more quickly than any other remedy known. Dysentery is really a constipation, and is the opposite of diarrhoea. It is inflammation of the bowels with congestion of the 'portal circulation'—the circulation of blood through the bowels and liver. It is a disease always prevalent in the summer and autumn. From considerable observation I feel warranted in saying that buttermilk, drunk moderately, will cure every case of it—certainly when taken in the early stages."

FINE SWEET RUSKS.—Soften two tablespoonfuls of butter in a bowl, whisk two tablespoonfuls of sugar, three eggs and flavoring to your taste (lemon generally), together with a pint of milk, add to your butter in the bowl two quarts of flour with four teaspoonfuls of baking powder sifted in it, then add milk, eggs, etc., and mix, adding a little more milk if required to make it of the desired consistency. Bake in balls the size of large walnuts, place together on buttered pans with sides to them. Moderate oven.

STUFFED POTATOES.—Bake some large potatoes in their skins; when quite done, scoop out the insides, and mash them well with a little butter or milk; mix some finely minced beef or mutton with the mashed potatoes, adding pepper and salt to taste; refill the empty skins with the mixture, and place them in the oven again till thoroughly hot, putting a small lump of butter on the top of each to prevent their becoming too dry. Serve in a cloth. This is always a favorite dish with children.

ASPARAGUS ROLLS.—Boil the asparagus as usual in boiling salted water; when tender cut up the tops and all that is eatable, and warm over in milk, butter rubbed in flour, yolks of raw eggs beaten, a grate of nutmeg, and a small pinch of mace—quantities regulated by the amount of asparagus; have some rolls with the crumbs scooped out, having taken off the top crust, fill the cavity with the boiling asparagus, and place the top crust on at once; it must be managed quickly so as to send to table very hot.

BEEF STEW.—Select from the cheapest cut of beef about three lbs. of the lean, and put into an iron pot, cover it with water, and one quart of sliced tomatoes, and one-half pint sliced okra, three onions cut fine, and half a dozen ears of corn cut from the cob. Let the whole stew gently for three hours, or until the vegetables make a jelly with the meat. Season with salt and pepper before removing from the first. If desired, add two ounces of butter.

DRIED PEACH PUDDING.—Three-quarters of a pound of flour, one pint dried peaches, three gills beef suet, one teaspoonful of salt. Chop the peaches and suet, mix them with the flour and salt; add cold water enough to mix the ingredients together in a stiff dough as can be made with a spoon, tie it in a cloth, leaving room to swell, and steam or boil it three hours or longer. The rule for a batter pudding is half an hour to every pint of pudding.

FROSTED APPLE PIE.—Line a pie plate with a puff paste. Slice in apples, sugar them and add a little butter, no water, and a little lemon essence or juice. Bake, and when done spread a thick frosting of beaten egg and sugar over it, return to the oven till the frosting is warmed through.





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G. H. STRONG

SAN FRANCISCO:  
Saturday, July 2, 1881.

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DOMESTIC ECONOMY.—Healthfulness of Fruit; Buttermilk as Summer Food; Drink and Medicine; Fine Sweet Rusks; Stuffed Potatoes; Asparagus Rolls; Beef Stew; Dried Peach Pudding; Frosted Apple Pie, 7.

## Business Announcements.

Bain Wagons—Baker & Hamilton, S. F.  
Nursery—Isaac Collins, Haywards, Cal.  
St. Augustine College—Benicia Cal.  
Texas Lands—James Thompson, San Antonio, Texas.  
Hay Presses, Etc.—Jackson & Truman, S. F.  
Dividend Notice—San Francisco Savings Union.  
Dividend Notice—German Savings and Loan Society.  
Assessment Notice—Grangers' Business Association.  
Wagons—A. W. Sanborn & Co., S. F.  
Boarding and Day School—Miss S. B. Bisbee, Oakland.

## The Week.

The week precedes the "Glorious Fourth," and urban and rural minds are occupied with plans for celebration. Already the premonitory pops of toy pistol and fire-cracker betoken the forethought of Young America, and arrangements for systematic racket and display of bunting, the imposing parade and the essentials of oratory, poetry and the one hundred and fifth reading of the declaration, are all being planned and will be duly executed for the diversion and entertainment of the people. In this city there will be the usual military demonstrations, festoons of flags will bridge the streets, and other decorations will not be wanting. Those who enjoy the excitement, tumult and spectacle of a city celebration will no doubt be gratified by a visit to San Francisco next Monday.

In the interior towns, and at the pleasure resorts where thousands are now congregated, there will be quieter observations of the day, and the patriotic spirit will rise as high as in the more imposing demonstrations. The patriotic idea in the day should not be lost sight of, and the young should be well informed of the stirring events of the last century, which culminated in 1776, and opened the way for a nation which now leads the world in freedom and enlightenment. Do not let the national birthday be looked upon merely as the occasion for sport or recreation, but let its higher significance shine forth above the conventional celebrations. In this way the principles upon which the nation rests may be kept fresh in mind, and perchance they will lead the thoughts and lift the lives of men above the sordid aims and ambitions which are now-a-days becoming too prevalent. Observe the national holiday by all means, and honor the day by an observance which shall enforce its highest, deepest meaning.

The sensation of the week has been the comet which may be seen a little west of north during the early part of the night, and in the northeast before sunrise. At first, people were startled by the idea that there were two comets, but its nearness to the polar star makes its apparent circle very small, and enables it to frighten timid people at both ends of the night.

## Discouraging the Ships.

We have several times commented upon the hardship which our importers of merchandise of all kinds would bring upon the productive interests of the State by deeds which would discourage the coming of ships to this port. It was shown that the merchants were making contracts with the railway, which obligated them to send all their goods by rail or by the isthmus—the latter route being under the control of the railways. The effect of such contracts is to take away business from ships coming around the Horn, and consequently ships coming to take away our grain must come in ballast and must get pay for both voyages out of the farmers' grain. Of course fewer ships will come under such an outlook than would come if they could get cargo enough to pay the expenses of the trip hither, and the result must be few ships and much grain, a condition of affairs which means high charter rates, which are death to our grain-producing interest.

This is a matter in which one cannot find much fault with the railroads. It might be expected that they would do what they could to get patronage. But it is plain that importers should have more concern for the prosperity of their customers than to deliberately depress the price of products which furnish the means of purchase to our great consuming population. Whatever momentary advantage there may be to merchants to enter contracts with the railways, and thus turn their backs wholly upon the ships, it is plain that it is an exceedingly shortsighted policy, and will result ere long in the aggregation of goods which the people cannot buy, and trade will of course be dull and profitless.

Eastern people are perceiving this folly of San Francisco importers, and are commenting upon it in forcible terms. The New York *Shipping List*, which is of course in the interest of the ship owners, and yet proves its propositions so as to commend them to the acceptance of all disinterested persons, has the following review of the subject:

The combination of different railroad lines forming the through route to San Francisco and manipulated in San Francisco by the agent of the Central Pacific railroad and its connections, and in New York by the agent of the Union Pacific railroad, have been working earnestly and with great success to kill off the shipping business via Cape Horn. They first subsidized the Pacific Mail Steamship Co., and by paying them a certain amount monthly, succeeded in controlling all the California freight going by that route via the Isthmus, and making all rates therefor. This arrangement still continues. The only other opponent they could have was the sailing ships, via Cape Horn. If they could block up the Straits of Le Maire, and other channels around Cape Horn by sinking old vessels stone loaded, as was done in Charleston harbor during the war, it would probably have been done; but this was impossible. So they enlisted the assistance of many of the leading houses in San Francisco—importers and exporters of dry goods, groceries, canned goods, etc., and in consideration of an agreement not to receive, not to ship, and not to sell or handle any goods, via Cape Horn, give a reduced railroad rate to all who will sign such an agreement. The California papers are expatiating on the tremendous increase in the products of the soil, notably of wheat and barley. The products of the mines are now a secondary consideration. Of wheat, the larger part goes to Europe. Of barley, some to Australia and some to New York—when prices admit. Both these cereals are properly sail vessel freight. To secure the requisite amount of tonnage by sail for so large a grain crop as California now produces, vessels should be encouraged to proceed in that direction. How old Californians, who have been always identified with the development of their home interest, should assist any movement that keeps ships away from San Francisco and restricts their opportunities for marketing the products of their State by binding themselves to the railroads by a cast-iron contract, is beyond comprehension.

We commend these weighty sentences to the attention of our importers. They cannot afford to shut their eyes to the issues involved.

## A Bag Ring Again.

We were not as wise as we thought last week when we remarked that the bag business would probably run without a combination this year. The ring was welded almost before our ink was dry and our conclusion that recent experience with combinations was not such as to lead dealers into more of them seems to have been incorrect. So far as we can learn, however, there is not nearly so much heart and confidence in the combination this year as there has been heretofore, and we should not be surprised to hear of its collapse. In this, however, we may be mistaken. Ordinarily there is no reason why a wheat grower should be much harmed by a bag combination made at the end of June. There are exceptional cases, of course, but generally a wheat grower should have his bags engaged before this time in the season. For two months at least, bags have run along from week to week at a fraction over 8 cents each on large lots. This price is so near the cost of production that the bag-buyer need not expect to do better, and if he does not buy at that rate, but postpones procuring his supply, he will, in most cases, put himself at the mercy of a corner. It is true that a crop is an uncertain quantity and may be destroyed by fire or blasted by rust or northers. In this way, a calculation as to the bags required may be all awry. Yet it is quite a safe investment to buy what bags you expect to need, for if the crop fail, the bags can be re-sold without loss when they are bought low, and there is a chance of turning a penny on them if they be not required for home use, for the combination will put up the price temporarily just about the time that the crop shows its final features.

We do not expect the combination will succeed in maintaining very high prices this year. According to all authorities the supply is ample and the corner will be a difficult one to maintain. It is not desirable to hold over bags, and some nervous side of the corner may fall in for the sake of unloading. Unless this occurs, it is possible that wheat growers who need bags, may have to pay about 2 cents each more than they could have bought them for at any date since last September.

In the *RURAL* of June 18th, we printed a table of bag prices for the last 10 years, which may be consulted with interest in view of the present advance. The only lesson to be drawn from the situation is that when bags are purchasable low before harvest, it is not wise to wait until the dealers get their heads together and pinch those who postpone their purchases until the last moment. There is less excuse for delay in purchasing now than there once was, as it has been possible at any time since last harvest to get bags bought and held until harvest, at a small margin and a low rate of interest.

## Jersey Values.

We have had several paragraphs of late alluding to the rise in Jersey values at the East. The subject is of course one which interests many of our readers, for the Jersey stock is widely distributed and the handsome animals are delighting their owners both in the large dairy and in the suburban barn-yard. As there has been reached an area of high prices, and as the United States has led in the advance, it is interesting to note what evidence there is that the rise in value is not a mere sensation but likely to endure, for this is the secret of safety in any property whether it be live stock, or bonds, or lands, or merchandise.

The *Bulletin* of the Jersey Cattle Club takes up this subject in its May issue, and it must be acknowledged that it adduces much strong evidence on the affirmative side of the proposition. As the subject is of present interest in California as elsewhere, we shall summarize this review for the information of our readers.

In the first flush of excitement there were not wanting some who saw in the competition for certain animals nothing but "gambling in pedigrees," injury to dairymen and eventual ruin to all. But let us make some comparisons. Do we pay any more for beef to-day because certain Short Horns have sold for \$25,000? Is the price of a good roaster higher since "Kentucky Prince" fetched over \$10,000 at auction? Has the sale of some prize fowls at \$150 per trio advanced the price of eggs? As yet the extreme prices reached by Jerseys are about 10 times the average of the common run, whilst some of the Duchesses were sold at 100 times the price of an average good Short Horn, and horses at 50 times the value of a decent hack.

If breeders of Jerseys had gone so fast that a poor man was mortgaging his homestead to pay for a heifer, there would be cause for alarm; but as the buyers of these costly animals are men of affairs who are not given to losing their heads in daily transactions of a magnitude that make these purchases a mere recreation, we need not make ourselves unhappy on their account. This good we think it safe to expect for dairymen; the present buyers have paid enough to show that their interest and ambition are kindled to a degree that will ensure the most careful breeding from the best foundation stock that money can command, and systematic feeding and testing such as men of slender means cannot accomplish.

It is not possible for great improvement to be made in breeding by those most capable and best equipped without beneficial effect among less favored herds. With the interest now awakened there is no fear of the blighting effects of indifference. We must breed for years yet before the supply can meet the growing demand. Even the East is but slenderly stocked, and we have barely touched the edge of an immense country at the far West adapted to dairying, and only waiting for the needed stock.

The journal from which we have quoted then proceeds to enumerate the results of a number of sales held this spring at the East, to show how values stand at present. On page 449 of last week's *RURAL* the most significant of these sales were mentioned, and we refer the reader to that statement. We count it fortunate for the whole dairy interest, that the rich men of the country are turning their fancy and their coin into the development of dairy cattle. The present excitement in Jerseys, so far as we can see, rests upon the actual past performances of certain cows, and this is the sovereign utility test by which all dairy cattle should be judged. That some of our citizens have plenty of money to take up this idea and vie with each other to work it out for all there may be in it. We count it fortunate for the productive interests of the country. Meantime, while these rich men are gratifying their tastes for excellence in stock, the whole race of cattle is being elevated, and each small farmer or suburban resident who owns a few Jerseys, will find his property advanced, if it be the true article. Back of all this lies the wide fact that the milk-yielding ability of all cattle will be more carefully observed, those only will be kept which make good use of their feed and the margin of profit in dairying will be widened. We own that we are gratified by the Jersey boom. We do not see that it can harm anyone, and the prospect is, that in the end all will be benefited.

FRUIT FOR THE FRUIT-LESS.—Our fruit growing readers who have a surplus of fruit which will not pay for marketing may do a good thing with it by boxing it up and sending it to the Fruit and Flower Mission, 713 Mission street, S. F. It will be delivered free by Wells, Fargo & Co., and the local expresses. The mission, as is known by many, is composed of kind hearted and enterprising young ladies who give part of their time to the alleviation of pain and distress by the distribution of fruit and flowers to the inmates of the city hospitals. They would be thankful if the fruit growers would give of their abundance for this praiseworthy object. The fruit should be sent so as to reach the city on Wednesday or Thursday of each week.

## ENTOMOLOGICAL.

## The Plum Aphid in Florida.

EDITORS PRESS:—In your issue of May 28th, Mr. Edward Berwick gives an account of the depredation done his plum trees by the plum aphid. He also asks you for information in regard to it, and says: "Perhaps, also, some kind reader will give his experience." As I have made the *Aphididae* of Florida a special study for the past two years, possibly my investigations on the plum aphid here will prove of value to your correspondent, and others of your readers.

In Europe there are several aphides that attack the plum. The most common are, *Aphis pruni*, Koch; *Phorodon mahaleb*, Fonscolomb, and *Phorodon humuli*, Schrank. These have undoubtedly been imported into America on nursery stock, or otherwise, and are now pretty generally distributed throughout the country.

Dr. Asa Fitch, in his "Report on Noxious, Beneficial and other Insects of the State of New York" (*vide* Trans. N. Y. State Agricultural Society, 1855, page 826), describes another species, under the name of *Aphis prunifoliae*, which Prof. Thomas, an authority on this family, thinks identical with *Aphis pruni*, Koch. This is probably the species referred to by Mr. Berwick. Prof. Thomas says:

This species appears to be quite variable, but the following taken chiefly from the original description by the author of the species, will probably enable the reader to identify it: The winged specimens measure about one-seventh of an inch to the tip of the wings; the body is of a shining black color except the abdomen, which is pale green with a black dot on each side of the two or three anterior segments; a large dusky spot rather behind the middle tip of the abdomen, acuminate; honey-tubes cylindrical, reaching to the tip of the abdomen. The legs are pale, dull yellowish, antennae black, except the rib-vein. The venation does not appear to be as uniform as is usually the case in this genus. The larvae are more or less of a greenish white color, varying according to age. The wingless specimens are broadly oval in form, the average length about one-sixteenth of an inch.

Besides the above, I have detected another species affecting a native plum here, which occurs in countless thousands on the twigs and leaves early in the spring (March and April). This is apparently undescribed, and I submit the following description:

*Aphis prunicolae*, N. sp.: Wingless female; length, .08 inch. Broadly ovate, and maroon brown. Beak short and thick, reaching to middle coxae; brown, excepting in the middle, which is reddish; antennae reaching to honey tubes, basal joints black, third and fourth greenish white, tip of fourth and balance black. Honey-tubes reaching to tip of abdomen, black, or dark brownish black; style, long and white; all coxae and femora black, tibiae to near the tip, white; balance, including tarsi, black.

Although thousands of the apterous individuals occurred on the trees, no male or winged ones could be found. In my studies on this family, although all are more or less injurious to vegetation, I find comparatively few really do any great damage, as there are numerous bugs, beetles, flies, etc., which prey upon them externally, besides being destroyed internally by numerous parasitic ichneumon and chalcid flies, which hold them in check. Among some of their enemies, either bred or observed by me here, are the following: The blood-red lady-bug, *Cycloneda sanguinea*; the twice-stabbed lady-bug, *Chilocorus biulveneris*; the golden-eyed chrysopa, *Chrysopa plorobunda*; aphidius flies, *Trioxys testaceipes* and *T. citrifer*; hemipterous bugs, *Leptoglossus phyllorhiza* and *Zelus longipes*, caught with beaks inserted into the aphids, sucking their juices and thus killing them. I have also bred several minute flies belonging to the *Chalcididae* family; also two larvae of some Carabid beetle which had gorged themselves to repletion; and also last, but not least, the important larvae of the *Syrphus* flies, which destroy so many of these pests, although they themselves are preyed upon by two internal parasites, *Pteromalus l-maculatus* and *Spalangia syrii*, nobis. Thus we see nature has provided abundant natural foes to contend with them for existence, and although they are the most prolific insects known to us, a single aphid having been known to generate several thousand millions of offspring in five or six generations, yet it is seldom that the aid of man is required to keep them under control.

From a few orange twigs affected with aphides, I bred nearly 500 ichneumon flies, and although my trees were badly affected with these pests, early in the season, I did nothing for their removal, and at present, not one can be found. These parasites undoubtedly did the work for me, by effectually ridding my trees of them. Mr. Berwick need feel no alarm about his plum trees, for these parasites no doubt exist in California as elsewhere, and I trust will have, by this time, effectually destroyed the aphides. Should this, however, not be the case, a strong wash made from steamed tobacco stems syringed upon his trees, will prove efficacious.—WM. H. ASHMEAD, Jacksonville, Florida.

## Bisulphide for Phylloxera.

A Napa county exchange says that Mr. Weinberger is making the third and last application of bisulphide. The ground is very hard, necessitating vastly increased labor over former applications, but the effect is good and he is satisfied with his trouble.

A HUNDRED AND TEN hands are employed in picking fruit on Gen. Bidwell's ranch, at Chico. Over 30,000 lbs. of blackberries were shipped one day last week.



## The Olive in Italy.—No. 3.

[Translated for the RURAL PRESS from *L'Italia Agricola*, by Dr. J. I. BLEASDALE.]

## Management of the Olive Grove.

The olive tree requires much care and no trifling expense. Every year it should be cultivated twice; once rather deep in the winter, the other slight, as with a scarifier. Every third year the manuring has to be renewed. Then, the young plants have to be grafted; an operation which may be effected in any one of three ways—by cuttings (*spacco*), or ring (*anello*), or by hudding (*occhio*). Then comes pruning as soon as the young tree has arrived at a reasonable development of foliage. By this means the cultivator regulates the balance between the roots and the tops, to prevent an overgrowth of wood and to secure a larger yield of olives. The pruning needs to be done with much accuracy so as to be truly beneficial to the tree, and possibly every year instead of every three, so as to cut always the useless new sprouts and respect the adult branches a little more. The pruning instrument should be the usual gardener's pruning knife, or scissors, and no rougher tool.

The following are some hints about pruning an olive tree:

- That the vertical branches bear always less fruit than the horizontal ones and those that hang down.
- That suckers rarely bear fruit.
- When the head of the olive tree is too dense, the fruit, besides being small, contains less oil.
- When the tree is in full bloom, air and sunlight should constantly have free access to all parts; hence it is desirable to remove little twigs and leaves which cause shade.
- That an olive tree may be said to be well pruned when its fruit can be collected without moving the stools or step-ladders (*ciocche*), as also when the branches have not been robbed too much of their young wood.

## Diseases and Insects.

The care necessary to be bestowed on the olive tree does not stop at this point. The intelligent farmer ought still to keep a constant supervision over his olive groves, in order to discover, on their first appearance, the diseases to which the trees are subject, and the insect pests which do so much damage; to subdue them by appropriate means. We will point out the principal diseases, and species of destructive insects:

The Knot (*zogna*):—This shows itself upon the branches of the tree, in the form of a knobby excrescence of different sizes. This disease is caused by collections of moisture and sap settling in one spot, especially on the more tender branches and by absorbing the nourishment needed by the plant, render it sickly and almost destroy the fruit. The remedy is to cut off the affected branches.

The Mosses and Lichens:—These form a kind of greenish parasitic vegetation which not unfrequently manifests itself upon the bark of the stem of the tree, and is caused by moisture and dampness. Quicklime is the most reliable remedy for these complaints.

The Cochineal (*Coccus kermes*):—An insect which lives on the tender portion of thicker branches, sucks the sap, penetrates into the bark, promotes the leakage of the sap, blackens the plant and ere long kills it.

The Psilla (*Psylla olivina*):—A winged insect which causes a kind of white wooliness about the axils of the leaves and covers the branches, when the tree is in bloom. We can only advise to cut off the leaves and attacked branches; but if the invasion is but just visible a dressing of diluted petroleum might suffice.

Tignola (*Tinea oleella*): An insect which has four generations; the first in the leaves; the second upon the buds; the third in the flowers, and the fourth in the fruit of the olive tree; but the two last are the worst, because its attack on the flowers kills most of them, and by getting inside the fruit causes it to drop off before its time. We advise to gather and burn the leaves, because in them we find the nests of the larva.

La Mosca (*Bacus olea*): Another insect, which punctures the olives and deposits in each an egg, from which is hatched the little grub which feeds on the pulp of the olive, boring into even the core; hence the falling off of the fruit before it comes to maturity. The best method of getting rid of the insect is to gather the olives while the grub is still in them.

The Punterolo (*Pholcotribus olea*): Another small creature, which is extremely injurious in the larva state, because it nibbles the young branches of the olive tree which bear the flowers, and causes them to dry up. To destroy it these dry branches should be cut off the tree, because it is under them that it attaches itself during its lifetime.

## Productiveness.

There is an established belief in various parts of these provinces that the olive bears a full crop only every second year, while, on the other hand, we are assured by competent cultivators that when the pruning is done in a rational manner every year, instead of every two or three years, a crop may be obtained every year.

In confirmation of the above we are pleased to notify those cultivators who live in that belief, that M. Pascal Cesare, director of the sericultural establishment of S. Leucio, near Caserta, gets a crop from his own olive trees every year, because he takes care to prune them regularly, to manure them as they ought

to be, and to spare no pains nor care in employing all the best means known in that branch of agriculture.

There exists an inveterate habit of associating together Ceres and Minerva, wheat with olive trees; and however this practice may be reprobated by certain writers, for the reason that, though the tree sends out many and strong roots, which, while some grow downward into the ground, others spread themselves out to a great distance at a little depth from the surface, and may be injured by the plow and harrow, not by the long roots of the wheat; still the friends of the association declare, that when the tree is educated from infancy to this kind of cultivation of the ground, the roots are compelled to strike downward, without the tree itself sustaining any injury, or diminution of its products. Leaving the decision, however, of this matter to the judgment of the experienced in this branch of agriculture, we will confine our attention to supplying the following information:

Olives may be gathered at any time from the end of November until May. In case of trees reared from seed we recommend hand-picking; for those reared in other ways, the fruit may be left to fall of its own accord, or lightly beaten off with canes; but this last method we hardly care to recommend, because the tree might be damaged by the breaking off of its slender branches. By some it is recommended to gather before the commencement of spring, so to secure a better tasted oil, one that will keep better, and run less risk of losing the fruit.

The yield of the olive tree being very variable, according to its age, we will give an approximate view of the quantitative yield of olives; and of the amount of oil they will yield for every age of the tree from 5 to 40 years—or, till



CHINESE CELEBRATING FOURTH OF JULY IN THE EARLY DAYS.

the tree may be said to have arrived at full maturity.

AGE OF OLIVE TREES.	QUANTITY OF OLIVES FROM EACH TREE.	QUANTITY OF OIL FROM EACH TREE.
From 2 to 5 yrs.	2.50 Kilograms.	.200 Grams.
From 6 to 10 yrs.	3.50 Kilograms.	.300 Grams.
From 11 to 15 yrs.	6.50 Kilograms.	.550 Grams.
From 16 to 20 yrs.	11.50 Kilograms.	.950 Grams.
From 21 to 25 yrs.	16.50 Kilograms.	1.300 Kilograms.
From 26 to 30 yrs.	24.00 Kilograms.	1.900 Kilograms.
From 31 to 35 yrs.	26.50 Kilograms.	2.100 Kilograms.
From 36 to 40 yrs.	23.50 Kilograms.	2.300 Kilograms.

\* Nearly.

NOTE.—We may increase these amounts by 1.50% of oil if the washings of the crushed olive seeds be added.

From the above figures we perceive that the average yield of oil by the olives is about 8%.

The lowest and highest yield of the olive tree may vary as 3 to 7—and that on account of the quality of the land, the character of the climate, the nature of the manures employed, and all the rest of the cultural attention which the tree requires. A number of cultivators are, however, of opinion that by carrying cultivation as high as it can reasonably be brought; and applying every year as much as 65 kilograms of manure to each tree it is possible to reach nearly double the above average of productiveness.

M. Cuppari gives as the normal production of one acre (*ettaro*) 600 kilograms of oil; and this seems near the truth, for by calculating 240 adult olive trees to the acre, each of which will produce an average of 2.30 kilograms of oil we shall have 552 kilograms without counting the quantity obtainable by washing the crushed kernels.

The value of the produce of the olive tree in Italy two or three years ago amounted to 250,000,000 of lire of which 160,000,000 represented the amount of home consumption, and 90,000,000 that of export.

THE VALUE OF THE RURAL.—A. K. Gregg, proprietor of the Soda Bay hotel, Lake county, is interested in horticulture, and finds the RURAL PRESS of much value to him. In renewing his subscription, Mr. Gregg writes:

Your paper is a valuable publication, and should be in the hands of every one who tills the soil or raises stock. Even in my business I have derived information from the RURAL PRESS of many times the value of my subscription. Success to you.

A COMPANY has been formed in New York called the Central Northern Pacific and Oregon River Navigation Co. Villard is President of it. Its capital stock is \$50,000,000.

## Grain Field Fires.

The season for these dread visitations has already shown its presence by several ruinous conflagrations. In spite of precautions the flame is communicated to the combustible material, the smoke rolls before the wind, a community is aroused, and heroic work is done—but the labor of months is swept away in an hour, and unless the owner has been fortunate enough to ensure he has nothing but vexation of spirit, and in many cases a year of hardship before him. The instances have been so frequent that the danger cannot be overlooked. It is a duty to ensure a crop, and there should also be something done to break the sweep of the fire by barriers of plowed ground, by arranging strips of summer fallow alternate with the land under crop, or by some other arrangement which will stay the progress of the flames.

The accounts of field fires are dismal reading and yet they are of interest and sometimes contain instructive points. We take from our interior exchanges items of several fires which occurred during last week. The largest was in Merced county, and the *Valley Argus* gives the following account of it:

A fire started on the farm of C. Healy on Wednesday last about 1 o'clock P. M., and was not got under control until about 2,000 or 2,500 acres of grain had burned, involving a loss of from \$30,000 to \$40,000 to the farmers. The losers, so far as we have been able to ascertain, are Crittenden, from 600 to 800 acres on the Healy farm; E. T. Givens, 700 acres; C. C. Nelson, 160 acres; Fay, from 900 to 1,100 acres; Russell, 160 acres. There are others who lost more or less grain, but we cannot ascertain how

much. A header and two wagons were burned. When the fire broke out farmers from the surrounding country for 7 or 8 miles rushed to the fields in danger with their teams, plows, wagons, mowers, water-carts, etc., and their united efforts saved the valley from a general conflagration. A strong breeze was blowing from the north-west, driving the flames toward the great grain farms around Plainsburg and further south on the Deadman creeks, and had the farmers not have worked rapidly and judiciously to confine the destroying element within a small area the whole of the great grain-growing region of the southeastern corner of the county would have suffered a tremendous loss. But by cutting the standing grain with mowers, raking the straw aside and plowing the ground and burning ahead of the advancing fire the people succeeded in keeping the flames within comparatively narrow bounds until the railroad track was reached, where the fire was subdued. We are informed that several men, active workers, got their hair and whiskers badly singed, by being enveloped in sheets of flame borne upon the wind, but luckily none of them were badly burned. This fire was a most frightful one, the line of burning grain appearing from our standpoint—the top of the El Capitan hotel—to be several miles in extent, and the flame and smoke arising to an elevation of hundreds of feet made the sight a most fearful one. How the fire originated is not positively known.

Another fire, of a different character in that it started from a threshing engine and resulted in a loss of machinery as well as standing grain, is reported by the Contra Costa county *Gazette* of June 25, as follows:

Quite a disastrous field fire occurred on Friday last week at the Point of Timber, in which nearly 300 acres of heavy summer-fallowed grain, a separator and Jackson elevator were burned. The fire is reported to have been caused by a strong puff of wind blowing down the smoke-stack of the engine and throwing the fire out into the high stubble. The wind was blowing freshly, and in the heavier gust swept the fire with frightful fury through the high grain; and it was only in the lulls that anything could be done to check or turn its course, though, before it was extinguished, hundreds of men from all the surrounding neighborhood were gathered and working with every available appliance of water wagons and wet sacks to subdue it. This was finally accomplished by flanking so that it burned out on an alfalfa field on one side and the public road on the other. J. M. Baldwin was the owner of about 170 acres of the wheat burned, and C. J. Preston of about 125 acres, and Mr. Netherton of a few acres. The separator and elevator belonged to M. J. Christenson. Mr. Preston's wheat was insured, as we understand, at the rate of \$10 per acre.

ALUM WATER FOR VERMIN.—Millers and others, who are troubled with bugs and worms infesting crevices in the holting chests and other machinery, are recommended to try hot alum water, which is suggested by high scientific authority, as a good method of destroying creeping things. Take two pounds of alum and place it in three quarts of warm water (or in that proportion), and let it stand on the stove until the alum disappears. Apply while hot with a brush to the crevices and other places that conceal the insects, or use it as the exigencies of the case demand.

## Orange Wine.

Last week we had an item showing the low figure to which oranges had fallen when brought into competition with the peaches, cherries, etc., which are now in season. A day or two after the item was printed the price improved, owing to the short supply, until the heat were sold at \$2.50 per box. This was a gratifying advance for those growers who had choice fruit then in the merchants' hands. It does not, however, greatly ameliorate the situation of the large amount of small fruit which is grown, and which, as this year, will sometimes be so late as to conflict with the early stone fruits and berries grown in the central valleys of the State. It is a fact recognized by all, that it would be a great thing for all growers if some way could be devised for using the small fruit at home, for this would give shipments of choice fruit just as the markets here and at the East demanded it, and the return to growers would be much larger.

The subject of orange wine has been mooted. Some months ago we gave the experience of a Florida orange grower in making orange wine, and the high estimation in which the liquor was held by a connoisseur. It is reported that in Louisiana also there is something satisfactory done with oranges in this direction. Back of all this is the orange wine industry of Smyrna, the product of which has figured in the exports into New York city and was sold there at a high price. All these things seem to suggest that our southern friends who have oranges which the market may not take at a profitable figure, would do well to try the orange wine to see what there may be in it. If the small fruit could be banished wholly from the trade the good and choice lots would bring a much better price.

A correspondent of the Los Angeles *Herald* has been experimenting with orange wine in an amateur way. Procuring an ordinary hand "squeezer," he commenced operations, with the following result: From three bushels of wind-shaken oranges he expressed six gallons of juice, which he placed in a keg to undergo fermentation. After the expiration of 30 days, he drew it off, bottled it and put it away in a cool place. It is now about 60 days old, and promises to make a very fine wine. It is not necessary either to wash or pare the fruit. He simply cut the larger ones in two and the end off the smaller ones. From his experience, he is satisfied that one man can make 10 gallons per day, or what will make 50 bottles of wine.

This experimenter believes that the most profitable disposition we can make of orange crops is to make them into wine. In doing so the entire crop can be used, large and small. Nor does it matter if the orange has commenced to spoil—it is just as good as when taken from the tree. He says: "If orange wine, at one year old, can be sold at wholesale so as to net \$1 per bottle—and it surely will command a larger price and a ready sale—then the producer will realize a much larger profit from his crop than from the sale of the marketable fruit at the highest price ever obtained."

As we have said, this may open a way for the profitable disposition of the oranges surplus. We do not look upon it for anything more than that, if as much. Orange wine will probably always be a fancy article to meet a comparatively limited demand. With the chief end wine-making, in view, one had far better plant grapevines.

## A Fourth of July Reminiscence.

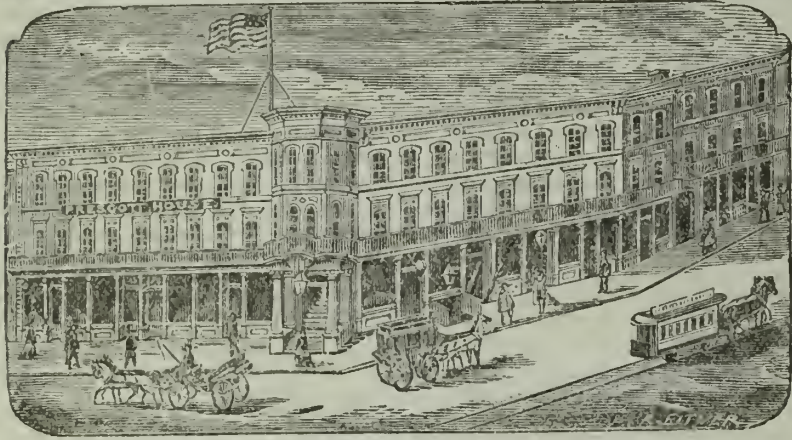
As one is discussing present preparations for celebrating "the fourth," it will be interesting to call to mind a feature of one of the early celebrations in this city. Although a procession of the Chinese residents of the city through the principal streets would now be looked upon mainly as an indication that the Celestials were treading on the corns of the Caucasian in another branch, time was when the moon-eyed foreigner was invited to participate with his more enlightened "fellow citizens" in a march through the public streets on our national holiday. Not more than a quarter of a century ago, the most unique and noticeable feature of one of the Fourth of July processions of San Francisco, was the throng of gaily dressed Mongols in their then strange and outlandish looking costumes, their wagons decked with artificial flowers, and hearing aloft banners and streamers emblazoned with flaming colors and embroidered with the grotesque figures of their national dragon. Our engraving, made from a drawing taken at the time, represents the scene. The Chinamen appeared to enjoy the procession heartily, laughing, chatting and shouting, to the great scandal of the native born, whose custom it is, on such festive occasions, to maintain a preternaturally solemn air and visage.

UNIVERSITY OFFICERS.—At the meeting of the Board of Regents on Tuesday W. T. Reids who has been principal of a boy's school in this city, was elected President of the University, and Rev. J. H. C. Bonte was chosen Secretary of the Board of Regents.

THE Porte has ordered the authorities of Syria and Tripoli to prevent the entrance of French political agitators.



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S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House.

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FOR FAMILIES, INVALIDS, CAMPERS  
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Children under 6 years, and Servants, Half Rates.Direct route by steamer "Donahue" to Donahue Land-  
ing, connecting with S. F. & N. P. R. R. to Cloverdale,  
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above sea level; and for natural beauty of scenery, health-  
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State. The surrounding forests and valley are particu-  
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thriving towns of Davisville, Woodland and Cacheville,  
changing cars at Davisville. Stage from Williams to Springs  
over a beautiful road of 28 miles.GREEN BARTLETT & T. S. McMAHON, Proprietors.  
To be under the supervision of JOHN CRIGLER, of  
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will spare no effort in making guests comfortable. Hotel  
has been refitted and refurnished throughout.**AMERICAN EXCHANGE HOTEL.**Sansome Street, (Opposite Wells, Fargo  
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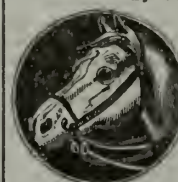
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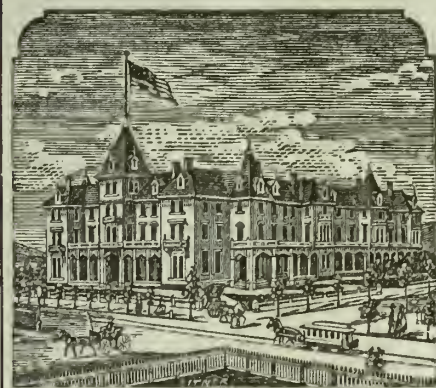
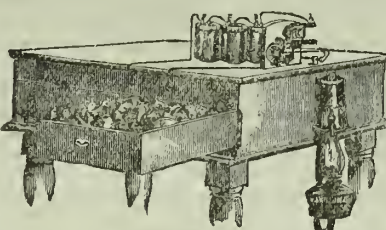
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## PATENTS AND INVENTIONS.

### List of U. S. Patents for Pacific Coast Inventors.

From Official Reports for the "Mining and Scientific Press," U. S. and Foreign Patent Agents.

FOR THE WEEK ENDING JUNE 14, 1881.

242,733.—DOOR CHECK—Isaac N. Arment, Dayton, Washington Territory.  
242,863.—HEADER—J. W. Blevin, Yuba City, Cal.  
242,893.—NITRO DEXTRINE—G. S. Dean, S. F.  
242,933.—THRUST BEARING FOR PROPELLER SHAFTS—John Gordon, S. F.  
242,941.—SOFA BED—F. Laerebans, S. F.  
242,850.—RAILWAY CROSS TIE—Hans Thielens, Walla Walla, W. T.  
243,015.—HYDRAULIC BORING APPARATUS—Vaughn & Vincent, Stockton, Cal.  
242,922.—DOOR KNOB ATTACHMENT—Adam Good, S. F.  
242,778.—BILLIARD CHALK HOLDERS—L. B. Holmes, Woodland, Cal.  
242,746.—SAFETY CAGE—C. D. Brown, Prescott, A. T.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign, Patent Agency, the following are worthy of special mention:

**HYDRAULIC BORING APPARATUS.**—Walter W. Vaughn & George Vincent, San Francisco. Assignor one-half to Asa Clark, of Stockton, and Caleb Dorsey, Oakdale, Cal. Dated June 14th. No. 243,015. This invention relates to a hydraulic boring or sinking apparatus, the principle of which is to employ the pressure of water upon the bottom of the pipe to force it into the ground, so that they are enabled to work the pipes or casings for artesian wells by means of a power applied to the bottom of the pipe instead of the top. It consists of an upright framework of posts or pillars supporting the shaft, and fly-wheel operating a series of force pumps, whereby the pressure of water is obtained. An upright, stationary hollow pipe, supported by steadying dogs fastened to the pillars, is fastened to the nozzle of the pump pressure-chamber and extends to the ground. Fitting around this hollow pipe is a hydraulic pipe, to the upper end of which a stuffing box and collar is screwed, while to the lower end is screwed a solid metal point, having a steel tip to penetrate the earth. The upper end of this point presents a resisting surface to the water which is forced down through the central stationary pipe. Around this hydraulic pipe fits another pipe, or outside casing, the top of which fits under the collar of the stuffing box, and is pressed down by it. This outside casing, or pipe, extends about half way down the point, and has a flange, or collar, on which a corresponding projection on the point rests. The supporting framework or pillars are braced and strengthened by truss braces and anchor rods, and appropriate pawls support the pipe when hoisting. But the hydraulic pipe and the outside casing pipe are forced down outside the stationary pipe, and are forced into the ground their entire length, after which another length of each may be screwed on and forced down; and when the well or hole is of the required depth, the hydraulic pipe with its point is hoisted out, leaving the outside casing in the ground.

**BILLIARD CHALK HOLDERS.**—Lyle B. Holmes, Woodland, Yolo county. Dated June 14, 1881. No. 242,776. This is a novel device for holding the chalk which is used for billiard cues. The holder is so adjusted that the chalk may be easily brought to the point where it is to be used, and then returned to a position where it will be out of the way. The chalk holder is attached to a cord having a counter-poise or weight, so when the user lets go the handle or holder it will fly back to its place beside the table. A spring in the holder forces the chalk forward as it wears away.

**NITRO-DEXTRINE.**—Gilbert S. Dean, S. F. Dated June 14, 1881. No. 242,893. The object of this invention is the preparation of a new variety of nitro-dextrine. Briefly stated, the manner of its accomplishment consists in treating vegetable fiber with dilute acid whereby its structure is destroyed and dextrination commences, and afterward nitrating the same with cold nitro-sulphuric acid. We shall more fully describe this patent in a future number of the Press.

**HEADER.**—J. W. Blevin, Yuba City, Cal. Assignor one-half to J. E. Dempsey, same place. Dated June 14, 1881. No. 242,863. This invention relates to certain improvements in that class of machines for cutting grain and delivering into wagons, known as headers, and consists in certain details of construction and operation, and certain combinations, which improve the header materially, but which it would be very difficult to describe without the aid of suitable engravings.

### Storage of Electricity.

#### A Wonderful Alleged Discovery.

A correspondent of the London *Times* makes an announcement which, if fully borne out by the facts, is of the highest possible importance. He states that M. Camille Faure, a noted French scientist, has discovered a practical means of storing electricity and rendering it portable. It is almost unnecessary to remark that nothing of the kind has been possible hitherto, and that it has been regarded as being impossible to store up electric energy in a practical manner. At a recent public seance of the Societe d'Encouragement pour l'Industrie, presided over by the president of the French Academy of Science and attended by many leading English scientists, the success of the discovery is said to have been demonstrated beyond the possibility of a doubt. A Faure battery was charged with the electric fluid direct from the ordinary Grove battery. The receptacle consisted of four Faure batteries, each about five inches diameter and 10 inches high, forming a cylindrical leaden vessel, and containing alternate sheets of metallic lead and minimum wrapped in felt and rolled into a spiral wetted with acidulated water, and the whole placed in a square wooden box, measuring about 1 cubic foot and weighing some 75 lbs. This was protected by a loose wooden cover, through which the electrodes (in lead) protruded, and were flattened down for convenience of transport. This box was handed to the writer of the letter in question, who left Paris on Tuesday night, arrived in London on Wednesday, and finally reached Glasgow, where the box was presented to Sir William Thompson.

That eminent man is now experimenting with the box in the laboratory of the Glasgow University, and will no doubt give the world the benefit of the results of his tests at an early date. There the matter rests at present, but if all this be true there is no doubt that we are on the eve of changes which will completely revolutionize many of our existing appliances and processes, especially as regards lighting and heating. This small box, measuring about one cu. ft., is said to contain a power equivalent to nearly 1,000,000 foot-pounds—a force, of which we can only speak comparatively, and without adequate knowledge of the resources of the plan on a larger scale. It is plain, however, that if electricity really could be stored and safely conveyed from place to place we might look upon the future of illumination, by that means, as being thoroughly and completely assured.

At present the great drawback lies in the circumstances that the generation of the electric force and the production of the light are quite simultaneous. When the machine stops, the light disappears, and vice versa. If, then, some means be devised to intercept and store up a portion of the whole of this force for subsequent use, the difficulty would disappear, and electricity will take rank as a handy, manageable and unequalled means of illumination. The mere supposition opens out a vista which cannot be successfully thought out or described, seeing that, for domestic, railway, mining, manufacturing and scientific purposes, the electric current would indubitably replace gas and all other illuminating media. Before counting these as accomplished facts, however, many economic and other points must be satisfactorily explained. The outcome of Sir Wm. Thompson's investigations will be awaited, therefore, with more than ordinary interest.—*Ironmonger, May 21st.*

#### Later Advances.

A London special to the New York *Times* of June 11th, and written nearly three weeks after Mr. Thompson's attention was first called to the matter, says:—The matter of storage of electricity by the use of the Faure battery has attracted the universal attention of the scientific men of Europe. As has been previously stated, William Thompson, the eminent scientist of Glasgow, lately took from Paris to Glasgow a Faure battery, supposed to contain a power to the amount of 1,000,000 lbs. to the cubic foot. After some weeks, Thompson makes a report, in which he announces the perfect success of the effort to store and transport the electric power. He has already ascertained enough regarding the qualities of the Faure reservoir to make it quite certain that it solves the problem of storing electric energy in a manner and upon a scale to render it useful in many important practical applications. Among others, enough can be stored to give light in a house for several hours without an additional supply. The reservoir can be moved easily and used where the dynamo-electric machines are unavailable. One great advantage to be found is in the fact that when this energy is supplied from a Faure reservoir it is always steady in delivery, thus preventing fitful oscillations in the light, experienced from the unequal action of the ordinary dynamo machines.

**ANIMAL DIGESTION.**—It is well known that certain fowls fill their digestive apparatus with gravel and pebbles, which act as millstones in grinding up their food. Recent investigations show that other animals are addicted to similar habits on a larger scale. Seals swallow stones weighing from one to two and even three pounds each; while one investigator found, not long since, 10 lbs. of these boulders in the stomach of a sea-lion.

**COLLEGE OF ST. AUGUSTINE.**—We have received a copy of the Official Register of the College of St. Augustine, at Benicia, Cal., which shows the institution to be in a flourishing condition, with a large list of students, and an able faculty, of which Bishop Wingfield is president. Concerning the situation of the college and the aims thereof, the Register says:

The buildings occupy an elevated site, and command an extensive view of the straits of Carquinez and the beautiful hills beyond, with Mount Diablo on the left and San Pablo bay on the right. The grounds are 60 acres in extent, a portion of which is tastefully laid out and decorated with flowers, ornamental trees and shrubbery. Having been erected expressly for academical purposes, the buildings are strictly adapted to the needs of the students, being commodious and inviting, well ventilated and heated. In the domestic arrangements every care is taken to make the culture and comfort of a Christian home with the strict discipline of a school. Attention is paid to the personal habits and manners of the cadets. They sleep in single alcoves, in dormitories, under the charge of teachers and military officers. The teachers and cadets meet as one family in a commodious dining hall, and attend divine service daily in the college chapel. It is designed in this institution to combine with moral and mental education a thorough course of military instruction. This military discipline, by its thoroughness and impartiality, is eminently fitted to perfect the physical man, and to give habits of quick obedience, order, politeness and manliness.

**PRESERVING WOOD.**—The improved French method of preserving wood by the application of lime is said to work well. The plan is to pile the planks in a tank, and to put over all a layer of quick-lime, which is gradually slaked with water. Timber for mines require about a week to be thoroughly impregnated, and other wood more or less time according to the thickness. The material acquires remarkable consistence and hardness, it is stated, on being subjected to this simple process, and the assertion is made that it will never rot. Beechwood prepared in this way for hammers and other tools for iron works is found to acquire the hardness of oak, without parting with any of its well-known elasticity and toughness, and it also lasts longer.—*Am. Manufacturer.*

The fishing at Lake Tahoe is better now than it has been for many seasons past. Hundreds of trout weighing from 5 to 10 lbs. are being caught daily.

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OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

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J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
JAMES C. HOAG—California.  
B. W. CROWELL—Yuba and Sutter counties.  
D. W. KELLER—Solano and Sacramento counties.  
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### Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on, or address H. F. D., this office.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

**ANDERSON SPRINGS,** in Lake county, 19 miles from Calis toga (over a grand, picturesque route, via Mt. St. Helena) are among the best in this State. They are situated in the midst of a natural park, full of beauty and interest to the naturalist. Good home-like accommodations at reasonable rates are invariably furnished by the Anderson family.

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## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, June 29, 1881.

Wheat is still firmly held, owing to the prevalent belief in a moderate surplus for export from the new crop, and there is an indisposition to sell because lower freights are expected when the ships now due or coming due shall arrive. Some few sales are made, higher figures being realized for the choicest lots. The latest news from abroad is as follows:

**LIVERPOOL, June 28.**—Good to choice California Wheat, 9s 6d @ 9s 9d. The markets are quiet and steady, with not much demand for floating cargoes. Receipts for the past three days, 263,000 cts, including 158,000 American.

#### The Foreign Review.

**LONDON, June 27.**—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says:

New white frosts have unfavorably influenced the Wheat blossom, which is now general. There are now no prospects of an abundant harvest. Whether an average yield is possible is a question upon which grave doubts are entertained. The deliveries of native Wheat are very restricted, and rates improved 1s 2d in the provinces and 1s in London. Notwithstanding higher rates trade was unimpaired and very limited. Foreign trade was inactive. American Red Winter and White Michigan was scarce, and Australian being in good demand. All advanced 1s. Friday other descriptions improved 6d; off coast American Red Winter reached 49s and California 49s 6d. Speculation in American failed to elicit the faintest response. The supply of American is small. Flour is in moderate supply and inanimate, but improved to 6s on account of its scarcity. The same may be said of foreign Barley, though trade is nominal. The scarcity of grinding samples has maintained the prices of foreign unchanged. For Oats there was a better feeling, and values remained firm and a shade better. Foreign was firmer and improved. American Maize is in small supply, and a shade dearer. Sales of English Wheat the past week were 24,119 quarters, at 45s per quarter, against 23,325 quarters, at 44s 8d, during the corresponding week last year.

#### Freights and Charters.

British ship, *City of Florence*, 1,200 tons, Wheat to Liverpool direct, £3 17s 6d.

#### Eastern Grain and Provision Markets.

**NEW YORK, June 28.**—Wheat, unsettled, \$1.25 @ 1.29. Flour, quiet.

**CHICAGO, June 28.**—Wheat, weak and lower, at \$1.15 1/2 cash, \$1.12 for July, \$1.12 1/2 for August, \$1.11 1/2 for September. Corn, 45 1/2 for August, 45 1/2 for September. Oats, easier, at 33 1/2 cash, 33 1/2 for July, 37 1/2 for July, 28 for August, 27 for September. Rye, 96 1/2. Barley, higher, at \$1. Pork, firm, at \$16 50 cash and July, \$16 40 for August. Lard, firmer, at \$11 30 cash, \$11 32 1/2 bid for July, \$11 25 for August. Bulk Meats, firmer; Shoulders, \$5.99; Short Ribs, \$5.60; short clear, \$5.55. Coffee, steady.

#### Eastern Wool Markets.

**Boston, June 28.**—The excitement in the Wool market continues without much, if any, abatement. Transactions of the week have been large, amounting to nearly 2,000,000 lbs. all grades and qualities, but there was a disposition to hold up a little at the close, on account of extreme views of holders in Pennsylvania and Ohio, and other points West. Sales of Ohio and Pennsylvania fleeces have been made to some extent, and include X, 42 1/2 @ 43c, XX and above, 42 1/2 @ 45c, the latter price being paid for very choice, and medium, and No. 1 at 44 1/2 @ 45c. Michigan and Wisconsin fleeces have been held at 40 @ 42c—firm at these prices. Combing and delaine fleeces are selling at 43 @ 45c, for fine delaine, up to 43c for choice combing, and considerable new Kentucky combing has sold at 32 @ 33c. Unwashed fleeces have been selling quite freely at full prices. Fine, ranges from 25 @ 32c; medium, 27 @ 35c, up to 34 @ 36c for Georgia; California Wool has been in demand, and some 700,000 lbs. have been sold, mostly Spring clip, from 25 @ 40c; several lots of fancy commanding the latter price, including the Whitney clip of 500,000 lbs. Other lots of good choice Western have been sold at 32 @ 33c. Pulled Wools are in demand and command full prices. Australian Wool has been sold at 42 1/2 @ 45c; Montevideo, at 33 @ 35c. There is a firm feeling for all kinds, but any further advance would be likely to check the demand.

**PHILADELPHIA, June 25.**—Wool is in improved demand; Oregon line, 30 @ 35c; medium, 23 @ 35c; coarse, 27 @ 28c; New Mexican and Colorado fine, 13 @ 25c; medium, 26 @ 30c.

**NEW YORK, June 28.**—There continues to be a good demand for Wool from manufacturers. Prices are firm, and the stock of fleeces is moderate. New Wool is now coming forward quite freely, and there will soon be a good assortment of all kinds to select from. Sales of Ohio and Pennsylvania fleeces have been made at 42 1/2 @ 43c for X and 43 @ 45c for XX and above, and a better price for choice. Michigan and Wisconsin fleeces have been selling at 42 @ 43c, with fair demand; medium and No. 1 Ohio have been selling at 45 @ 48c. Combing and delaine fleeces continue scarce and firm, at 43 @ 45c for fine and No. 1 combing. For coarse grades of combing there is very little inquiry. For unwashed Wools there is a steady demand, with sales of medium at 27 @ 35c; fine, 25 @ 35c; low and carpet, 15 @ 23c. California Spring clip continues in demand, particularly for choice, the sales ranging from 25 @ 33c. The recent sales of choice clips of California at 40c shows what material that State can furnish if an effort is made to bring up the standard, and the manufacturers are always ready to help by paying a high price for choice Wool in good condition and of uniform quality. Pulled Wool continues in good demand, prices are firm, and stocks sold up close. In foreign Wool, no movement of any importance is noted, but full prices continue to be obtained for Montevideo and Australian. The stocks are considerably reduced, but are held quite firm.

#### The London Wool Sales.

**LONDON, June 25.**—At Wool sales to-day, 2,700 bales were sold, chiefly New Zealand and Port Philip. The market was firm and prices unchanged.

**BAGS.**—Since our last note a combination has sprung up in Bags. At first the wholesale price was run up to 10 1/2c, but to-day this market is not so firm as it has been, and quotations to-day were 9 1/2 @ 10c for all kinds in wholesale lots, although small sales were said to have been made at 10 1/2c. The decline is said to be due to a falling off in the demand, as Bags are not wanted so badly as to bring 10 1/2c for Calcutta.

**BARLEY.**—Barley is unchanged, most trade being in Feed lots. We note sales: 300 and 220 sds good Coast, Feed, 93c; and 800, 400 and 250 sds do, 92c.

**BEANS.**—Several kinds are lower, as shown in our list.

**BUCKWHEAT.**—The best has again reached \$1.75 @ ctl.

**CORN.**—Sales have been more frequent. Large White is a shade lower and large Yellow doing a little better. We note sales: 1,000 sds large Yellow at \$1.02 1/2, and 250 sds small at \$1.07 1/2; 250 sds small round Yellow at \$1.07 1/2, and 68 sds poor large White at \$1.07 1/2.

**DAIRY PRODUCE.**—Butter prices have run along evenly. The market is well supplied. Cheese has taken a higher range, going from 11 1/2c to 12 1/2c, according to quality.

**EGGS.**—California fresh Eggs are 2c higher per dozen, selling at 22 @ 24c. Some Duck Eggs go at 19c if the shipments happen to be large; otherwise they bring 20c.

**FEED.**—Hay has gained 50c per ton for the choicest Wheat. The range, according to quality, is as follows: Wheat, old, \$10 @ 12.50; do new, \$8.50 @ 9; Barley, \$7 @ 9; Wild Oat, new, \$7.50 @ 9.50; do old, \$10 @ 11.50; stock, \$7 @ 8; stable, \$8 @ 10.50 @ ton.

**FRESH MEAT.**—Our list shows a general change, Beef, Mutton and Lamb being cheapened; Pork and Veal advancing.

**FRUIT.**—The Peach season is well under way and large quantities are being used. Apples are very low. Other Fruits are priced in our list. California Oranges and Lemons have sold better this week.

**HOPS.**—There are but few left, and as Beer is now being freely used, holders of Hops will wait for the local brewers to come to their figures. It is reported that good California Hops are being held at 25c per lb.

**OATS.**—Oats have sold at an advance, some choice Surplus going to \$1.85 per ctl; 450 sds fair Oregon sold at \$1.65.



ONIONS—Both Red and Silverskins are cheaper. POTATOES—There is a large supply of splendid Potatoes now in and prices are low. They range from 50 to 90 in sacks and 75c to \$1 in boxes.

PROVISIONS—Prices of California Bacon and Lard are advanced. Eastern Hams have reached 16c per lb. The trade is active.

POULTRY AND GAME—Hens, Roosters and Broilers are again abundant and sell lower than last week. Turkeys are much higher for the time being.

VEGETABLES—Our list shows many changes this week. There are wide fluctuations in Tomatoes; small boxes of Vacaville have sold at 40c one day and \$1 the next.

WHEAT—The market is quiet and firm, at the prices named: 60 tons and 500 sks No. 1, \$1.42; 250 and 100 tons do, \$1.40; 500 sks No. 2, \$1.38; 54 tons do, Vallejo delivery, \$1.36, and 175 tons off grade, \$1.33.

WOOL—Light Oregon Wools sell readily, also the Choice Northern county Wools. Choice San Joaquin is in good demand, but the stock is nearly cleaned out, as is also the Foothill Wool. Anything off quality is slow and dull. The price for Sonoma and neighboring counties is a fraction higher than last week.

### Fruits and Vegetables.

[WHOLESALE.]

FRUIT MARKET.	
Apples, bsk.	15 @ 25
do, Astracan, bx	35 @ 50
Apricots	75 @ 1 00
Bananas, bch.	2 00 @ 4 00
Cantaloupes, crt.	2 50 @ 3 00
Cherries, chest.	9 00 @ 10 00
Citronets, lb.	6 00 @ 7 00
Cranberries, bbl.	— @ —
Currents, chest.	4 00 @ 4 50
Figs, bx.	25 @ 40
Gooseberries	— @ —
do, English	— @ —
Grapes	75 @ 1 25
Limes, Mex.	8 00 @ 9 00
do, Cal, box	5 00 @ 6 00
Lemons, Cal, bx	2 00 @ 3 00
Sicily, box	8 50 @ 9 00
Australians	— @ —
Oranges, Cal, bx	1 00 @ 1 50
do, Tahiti, 12	10 @ 15
do, Mexican	2 00 @ 3 00
do, Loreto	— @ —
Peaches, bx.	30 @ 40
do, bsk.	25 @ 35
do, Crawford	— @ —
Pears, bsk.	20 @ 40
do, bx.	20 @ 40
Appleapples, doz	6 00 @ 8 00
Plums, bx.	25 @ 75
Prunes, German	— @ —
Quinces, bx.	— @ —
Blackberries, ch't	4 00 @ 7 00
Raspberries, ch't	6 00 @ 7 00
Strawberries, ch't	5 00 @ 6 00
Sugar Cane, bbl.	1 50 @ 3 50
Watermelons, dz	1 50 @ 3 50
DRIED FRUIT.	
Apples, sliced, lb.	6 @ 6 1/2
do, quartered	5 @ 6
Apricots	18 @ 20
Blackberries	12 @ 15
Citron	28 @ 30
Dates	9 @ 10
General Merchandise.	
WHOLESALE.	
WEDNESDAY M., June 29, 1881.	
Candles.	16 @ 18
Paraffine	20 @ 22
Patent Sperm	25 @ 28
CANNED GOODS.	
Assorted Pie Fruits	2 1/2 @ 2 3/4
Table do.	3 50 @ 4
Jams and Jellies	3 75 @ 4
Pickles, hf gal.	3 25 @ 4
Sardines, qr box.	1 67 @ 2
Hf Boxes	2 50 @ 2 90
Merry, Faul & Co's	— @ —
Preserved Beef	3 25 @ 3 50
2 lb, doz.	6 50 @ 6
do 4 lb doz.	6 50 @ 6
Preserved Mutton	3 25 @ 3 50
2 lb, doz.	5 50 @ 5 60
Dried Ham, 1 lb.	3 00 @ 3 50
do 2 lb, doz.	2 50 @ 3
Boneless Pig Feet	— @ —
3 lbs.	3 50 @ 3 75
2 lbs.	2 75 @ 3
Sliced Fillets 2 lbs	3 50 @ 4
Head Chees 3 lbs	3 50 @ 4
COAL—Jobbing.	
Australian, ton.	6 50 @ 7 00
Bellingham Bay	— @ —
Seattle	7 50 @ 8
Cumberland	— @ 13 00
Mt Diablo	— @ —
Lehigh	— @ —
Liverpool	— @ —
West Hartley	— @ 9 00
Scotch	— @ 8 50
Scranton	— @ —
Vancouver Id.	— @ —
Wellington	— @ 9 00
Charcoal, sack.	— @ —
Coke, bush	— @ —
COFFEE.	
Sandwich Id lb.	— @ —
Costa Rica	13 1/2 @ 14
Guatemala	13 1/2 @ 14
Java	24 @ 25
Manilla	15 @ 16
Ground, in cr.	22 @ 25
FISH.	
Sac'to Dry Cod	— @ 5
do in cases	— @ 5 1/2
Eastern Cod	7 @ 7 1/2
Salmon, bbl.	7 00 @ 7 50
Hf bbls.	3 50 @ 4 00
1 lb cans	1 12 1/2 @ 1 22 1/2
Pk'd Cod, bbls.	— @ —
Hf bbls.	— @ —
Mackerel, No. 1	9 50 @ 10 00
In Kits	1 75 @ 1 85
Ex Mess	3 50 @ 4 00
Pickled Herring	3 00 @ 3 50
Boston Smoked	— @ —
Herring	65 @ 70
LIME, etc.	
Plaster, Colden	3 00 @ 3 25
Land Plaster	— @ —
ton.	10 00 @ 12 50
Lime, Santa Cruz	1 25 @ 1 50

### Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, June 29, 3 P. M.

SILVER, 1/2. GOLD BARS, 890 @ 910. SILVER BARS, 10 @ 18 1/2 cent. discount. EXCHANGE ON NEW YORK, par; London, 49 1/2 @ 49 3/4; Paris, 5.20 francs @ dollar; Mexican dollars, 90 @ 91 1/2. NEW YORK (4 per cent), 117 1/2 @ 117 3/4.

### Domestic Produce.

WHOLESALE.]

WEDNESDAY M., June 29, 1881.

BEANS & PEAS.	
Bayo, ctn.	1 00 @ 1 15
Butter, 1 lb.	10 @ 11
Castor, 1 lb.	3 00 @ 3 50
Pea, 1 lb.	2 00 @ 2 40
Pink, 1 lb.	85 @ 87 1/2
Small White, 1 lb.	2 00 @ 2 30
Lima, 1 lb.	2 25 @ 2 40
Field Peas, 1 lb.	40 @ 50
do, green, 1 lb.	35 @ 40
BROOM CORN.	
Southern, 1 lb.	3 @ 3 1/2
Northern, 1 lb.	4 @ 6
CHICKEN.	
California, 1 lb.	4 @ 4 1/2
German, 1 lb.	6 1/2 @ 7
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb.	25 @ 27
do, Fancy Brands	— @ 27 1/2
Pickle Roll, 1 lb.	26 @ 27 1/2
Firkin, new, 1 lb.	25 @ 26
Western, 1 lb.	18 @ 21
New York, 1 lb.	— @ —
CHEESE.	
Cheese, Cal, lb.	11 1/2 @ 12 1/2
do, boxed, 1 lb.	— @ 13
EGGS.	
Cal. Fresh, doz.	22 1/2 @ 24
Ducks, 1 doz.	19 @ 20
Oregon, 1 doz.	— @ —
Eastern, by expr's	17 @ 18
Picked here, 1 doz.	18 @ 19
FEED.	
Bran, ton.	— @ 14 00
Corn Meal, 24 00	@ 25 00
Hay, 1 ton.	6 50 @ 12 50
Middlings, 1 ton.	— @ 19 00
Old Cake Meal, 1 ton.	— @ 45
Straw, bale.	40 @ 45
FLOUR.	
Extra, City Mills, 4 87 1/2	@ 50 00
do, Country Mills, 4 25	@ 47 1/2
do, Oregon, 3 75	@ 37 1/2
do, Walla Walla, 4 00	@ 45 25
Superfine, 2 50	@ 35 25
FRESH MEAT.	
Beef, 1st quality, lb.	5 1/2 @ 6
Second, 1 lb.	4 1/2 @ 4 3/4
Third, 1 lb.	— @ 4
Mutton, 1 lb.	3 1/2 @ 3 3/4
Spring Lamb, 1 lb.	4 @ 4 1/2
Pork, undressed, 1 lb.	5 1/2 @ 5 3/4
Dressed, 1 lb.	7 1/2 @ 7 3/4
Rye, 1 lb.	3 1/2 @ 4
Milk Calves, 1 lb.	7 1/2 @ 8
do, choice, 1 lb.	8 1/2 @ 9
GRAIN, ETC.	
Barley, feed, 1 lb.	80 @ 95
do, Brewing, 1 lb.	10 @ 12
Chevalier, 1 lb.	15 @ 20
do, Coast, 1 lb.	85 @ 90
Buckwheat, 1 lb.	1 60 @ 1 75
Corn, White, 1 lb.	1 07 @ 1 15
Yellow, 1 lb.	1 02 1/2 @ 1 07 1/2
Small Round, 1 lb.	1 07 1/2 @ 1 10
Oats, 1 lb.	1 40 @ 1 60
Milling, 1 lb.	1 70 @ 1 85
Rye, 1 lb.	1 75 @ 1 85
Wheat, No. 1, 1 lb.	1 40 @ 1 45
do, No. 2, 1 lb.	1 35 @ 1 37 1/2
do, No. 3, 1 lb.	1 10 @ 1 20
Choice Milling, 1 lb.	— @ 45
HIDES.	
Hides, dry, 1 lb.	9 @ 10
Wet, 1 lb.	— @ 10
HONEY, ETC.	
Beeswax, lb.	20 @ 24
Honey in comb, 1 lb.	11 @ 13
do, No. 2, 1 lb.	8 @ 10
Dark, 1 lb.	5 @ 6
Extracted, 1 lb.	6 @ 7
HOPS.	
Oregon, 1 lb.	15 @ 17
California, new, 1 lb.	20 @ 25
Wash, Ter, 1 lb.	15 @ 17
Old Hops, 1 lb.	— @ —
NUTS—Jobbing.	
Walnuts, Cal, 1 lb.	8 @ 9
do, Chile, 1 lb.	7 1/2 @ 8
Almonds, hd sh lb	12 @ 14
Soft shell, 1 lb.	— @ 11 1/2
BRAZIL.	
Brazil, 1 lb.	12 @ 14
Pecans, 1 lb.	13 @ 16
Peanuts, 1 lb.	4 @ 5
Filberts, 1 lb.	15 @ 16
ONIONS.	
Red, 1 lb.	70 @ 75
Silver Skin, 1 lb.	75 @ 80
Oregon, 1 lb.	— @ —
POTATOES.	
New, 1 lb.	50 @ 60
Petaluma, 1 lb.	— @ —
Humboldt, 1 lb.	— @ —
Kidney, 1 lb.	— @ —
Peasblow, 1 lb.	— @ —
Jersey Blue, 1 lb.	— @ —
Cuffey Cove, 1 lb.	— @ —
River, red, 1 lb.	— @ —
Sweet, 1 lb.	— @ —
POULTRY & GAME.	
Hens, doz.	5 50 @ 7 00
Roosters, 6 00	@ 6 50
Broilers, 2 50	@ 4 50
Ducks, tame, doz.	3 50 @ 4 50
Mallard, 1 lb.	— @ —
Spring, 1 lb.	— @ —
Wild, 1 lb.	— @ —
Widegame, 1 lb.	— @ —
Geese, pair, 1 lb.	1 00 @ 1 50
Wild Gray, doz.	— @ —
White do., 15 @ 18	
Turkeys, 1 lb.	— @ —
do, Dressed, 1 lb.	— @ —
Singe, 1 lb.	50 @ 60
do, Common, 1 lb.	10 @ 25
Quail, doz.	— @ —
Rabbits, 1 lb.	25 @ 50
Hare, 1 lb.	2 00 @ 2 50
Venison, 1 lb.	— @ —
PROVISIONS.	
Cal. Bacon, extra, 1 lb.	13 1/2 @ 13 3/4
clear, 1 lb.	12 1/2 @ 13
Medium, 1 lb.	— @ 12 1/2
Light, 1 lb.	— @ 12 1/2
Lard, 1 lb.	12 1/2 @ 13 1/2
Cal. Smoked Beef, 1 lb.	10 @ 10 1/2
Shoulders, 8 1/2 @ 8 3/4	
Hams, Cal, 1 lb.	11 @ 12
do, Common, 1 lb.	— @ 16
Whitaker, 1 lb.	— @ 16
Royal, 1 lb.	— @ 16
SEEDS.	
Alfalfa, 1 lb.	15 @ 17
do, Chile, 1 lb.	— @ 5
Canary, 1 lb.	4 @ 5
Clow, Red, 1 lb.	14 @ 15
White, 1 lb.	45 @ 50
Cotton, 1 lb.	— @ 20
Flaxseed, 1 lb.	2 1/2 @ 3
Hemp, 1 lb.	7 @ 8
Italian Rye Grass, 1 lb.	25 @ 28
Perennial, 1 lb.	25 @ 28
Mill, German, 1 lb.	10 @ 12
do, Common, 1 lb.	— @ 10
Mustard, White, 1 lb.	3 @ 4
Brown, 1 lb.	1 1/2 @ 2
Rape, 1 lb.	3 @ 8
Ky Blue Grass, 1 lb.	20 @ 25
2d quality, 1 lb.	16 @ 18
Sweet V Grass, 1 lb.	— @ 75
Orchard, 1 lb.	20 @ 25
Red Top, 1 lb.	— @ 15
Hungarian, 1 lb.	8 @ 10
Lawn, 1 lb.	30 @ 40
Mesquit, 1 lb.	10 @ 12
Timothy, 1 lb.	10 @ 11
TALLOW.	
Crude, 1 lb.	6 1/2 @ 6 3/4
Refined, 1 lb.	7 1/2 @ 7 3/4
WOOL—1880.	
SPRING—1880.	
Oregon, Eastern, 1 lb.	24 @ 27
do, fine, heavy, 1 lb.	21 @ 24
SPRING—1881.	
San Joaquin, choice, 1 lb.	19 @ 21
do, fair, 1 lb.	17 @ 18 1/2
Southern Coast, 1 lb.	20 @ 21
Slightly Burry, 1 lb.	18 1/2 @ 20
Burry and Seedy, 1 lb.	17 @ 18
Northern choice, 1 lb.	25 @ 30
Burry or Seedy, 1 lb.	22 @ 25
Sonoma, Mendocino, Humboldt, fancy, 1 lb.	31 @ 32 1/2

### Signal Service Meteorological Report.

SIGNAL SERVICE METEOROLOGICAL REPORT.	
SAN FRANCISCO.—Week ending June 28, 1881.	
HIGHEST AND LOWEST BAROMETER.	
June 22	June 23
30.044	29.978
29.941	29.928
MAXIMUM AND MINIMUM THERMOMETER.	
63	61
51	50
MEAN DAILY HUMIDITY.	
74.7	73
85	80.3
67.3	79
79.3	79.3
PREVAILING WIND.	
SW	W
W	W
SW	SW
W	W
WIND—MILES TRAVELED.	
315	389
534	287
253	347
390	390
STATE OF WEATHER.	
Clear.	Clear.
Foggy.	Fair.
Fair.	Clear.
Fair.	Foggy.
RAINFALL IN TWENTY-FOUR HOURS.	
Total rain during the season, from July 1, 1880, 29.85 inches.	

### Commission Merchants.

MILLER & CO.

J. P. HULME.

### Wool and Grain

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

Liberal advances made on all consignments, and prompt personal attention given to all sales.

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### WOOL and GRAIN

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SAN FRANCISCO.

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LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

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Special attention given to country traders.

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Grain and Wool Brokers.

OFFICE—28 California St., San Francisco.

REFERENCE—LAZARD FRERES, BANKERS.

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Commission Merchants

And Wholesale Dealers in all kinds of

Country Produce, Fruits, Etc.

404 and 406 Davis St.,

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CONSIGNMENTS SOLICITED.

Send your Consignments to







The Capital of this old and favorite company has been increased to

**\$600,000.00,**

All of which has now been fully paid up in U. S. Gold Coin, and invested in such securities as are not liable to loss by fire, and are readily convertible into coin.

**Assets, \$840,004.43.**

Having but a very limited amount exposed to loss in this city, and its business being so conducted as to be free from serious loss by conflagration anywhere, the "Old" California is now prepared to offer a quality of indemnity second to that offered by no other insurance institution, whether domestic or foreign.

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L. L. BROWNE, Vice President.  
ZENAS CROWELL, Secretary.  
E. T. BARNES, Asst. Secretary.

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**IMPROVED, GALVANIZED IRON,  
PORTABLE, FIRE-PROOF,  
Fruit and Vegetable Drier,**

SIMPLE IN CONSTRUCTION, ECONOMICAL  
IN FUEL CURES THE FRUIT IN  
FROM 2 TO 8 HOURS.

It has the approval and hearty indorsement of nearly all the leading Fruit and Agricultural Journals of this country.

**Over 13,000 in Successful Operation!**

Awarded a Silver Medal by the Mechanics' Institute, San Francisco, September, 1880. Send for Illustrated Catalogue with Testimonials to

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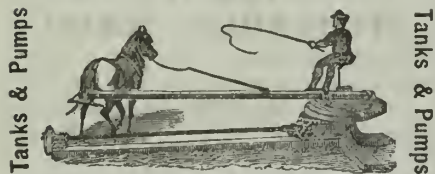
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"EUREKAS," the new fowl. Now all the rage in the Eastern States. Destined to become the fowl of this country. Beautiful in plumage! Hardy in constitution. Cocks average nine pounds, Hens six. Small Rose Comb, clean Yellow Legs; contented in disposition, and as layers they have no superior on earth. For further information send stamp for Illustrated Circular to

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GUARANTEED TO KEEP ROOMS CLEAR OF FLIES,  
MOSQUITOES, ETC. ONLY PRACTICAL AND  
MOST DURABLE WINDOW SCREEN IN USE.

They are applicable to Top and Bottom of the Window, No Swelling or Shrinking, as the frames are made of the best Charcoal Galvanized Iron, and work between the inside blinds and sash, on the inside stops. All sizes. Prices from \$2.00. In sending orders, send size and number of lights in sash.

ADAMS & REARDON.

MANUFACTORY—115 Mission St., San Francisco.

### THRASHING ENGINES FOR SALE.

For Sale, one second hand Rice Straw-burner, 8x10, one 7x10 Headley, one 7x10 Ames, nearly new, also 3-horse power Engine and Boiler. Pair of Derrick Spools, 24-inch Circular Saw and Frame. Marston's Self Feeder for \$50

J. W. RILEY,

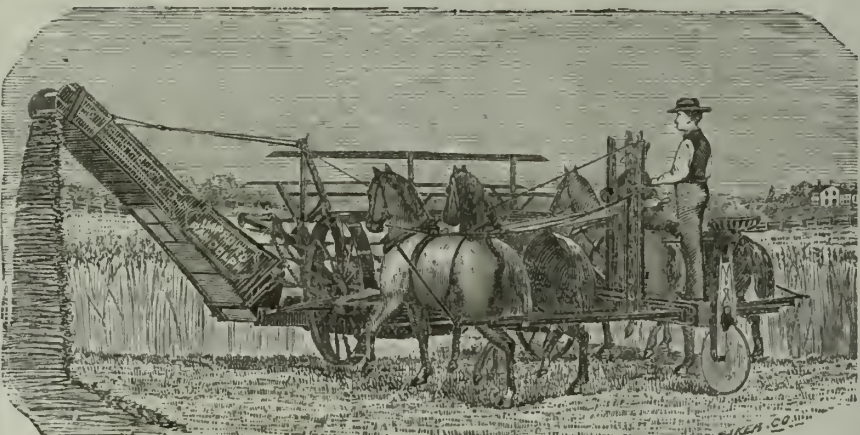
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### To Fish Raisers.

I am now ready to sell Carp which were imported from Germany in 1872, in lots to suit. Address

J. A. POPPE, Sonoma, Cal.

## The Randolph Header Improved for 1881. 8, 10, 12 and 14 FOOT.



Two of these Machines were sold on this Coast in 1878; 25 in 1879; 150 in 1880 and in the same year over 800 East of the Rocky Mountains.

Great care has been taken by the Manufacturers to remedy any imperfection that may have existed in these Machines in previous years, and it now stands unequalled.

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**A Complete Stock of Agricultural Implements.**

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1878-AWARDED

J. H. STROBRIDGE,  
First Premiums:

Pen 5—Breeding Ewes.....\$22.50  
Pen 5—Yearling Ewes.....22.50  
Pen 5—Ewe Lambs.....22.50  
Pen 3—Ram Lambs.....22.50  
Yearling Ram (1st and 2d).....38.50  
Two-year-old Ram.....22.50  
Ram and 5 of his Lambs.....30.00

Sweepstakes:

For best Ram of any age or breed,  
and 5 of his lambs.....\$75.00



1879-AWARDED

J. H. STROBRIDGE,  
First Premiums:

Pen 5—Breeding Ewes.....\$22.50  
Pen 5—Yearling Ewes.....22.50  
Pen 5—Ewe Lambs.....22.50  
Two-year-old Ram.....22.50  
Yearling Ram.....22.50  
Ram and five of his lambs.....30.00  
Pen of 3 Ram lambs.....22.50

Sweepstakes:

For best Ram of any age or breed.....\$75.00

### THOROUGHbred SPANISH MERINO SHEEP.

We offer for sale this season 200 head Superior Rams, Yearlings and two-year-olds. Also 100 head Yearling Ewes and 50 head aged Ewes. These sheep are all free from disease. Are LONG STAPLED, WHITE WOOLED and HEAVY SHEARERS. Have a faultless constitution. Are larger and in better condition than any flock of Thoroughbred Spanish Merino Sheep in the State. Orders by mail promptly filled. Our ranch is only 14 miles from Oakland, by rail. Trains running each way every few hours.

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The above Engine is the safest and most powerful in the market, lighter than other Engines, and no danger of explosions. An explosion of Heald's boiler has never occurred. Two sizes are made; either size will run the largest separator. All the latest improvements have been added to the boiler and engine. Is ready to stand a test any time. Is guaranteed perfect in all its parts, and will do the same work with less water and fuel than any other engine in the market. With one of

### HEALD'S BARLEY MILLS,

It will thresh and grind at the same time, all the separator can thresh. For further particulars, Address

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Engine can be seen at D. M. OSBORNE & CO., 33 Market St., S. F.

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FIVE HUNDRED ACRES, all rich Valley Land, 1 mile from Kelseyville, and 1 1/2 miles from Clear Lake in Big Valley, Lake county. Good Schools and Churches near by. Place well watered, well improved and all under cultivation. Price, \$27 per acre. Terms, one-half cash and balance on time. And the whole or one-half sold to suit the purchaser.

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1,600 Graded Angora Goats for Sale.

Apply to

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### Thoroughbred Spanish Merino Sheep.



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There is not only a constant demand for improved stock, but among intelligent sheep farmers is the demand equally constant for purity of blood and reliability of pedigree. We aim to meet this requirement, and in our importations have secured the best pedigreed Rams to be found on the Vermont State Register. It is this blood and quality we are offering, and upon these have been awarded First Premiums from the State Board of Agriculture at Sacramento for the past two years, and we were awarded by the same Board a majority of all premiums in 1880, viz.: 1st Premium on Best Stock Ram of 2 years of age and upward; 1st Premium on Best Buck Lambs; 1st Premium on Best Ewe Lambs; 1st Premium on Best Ram and Fire Lambs. We were also awarded three First Premiums and the Sweepstakes at the Golden Gate District Fair of 1880. We will simply state that for length and beauty of staple, weight of fleece, with vigor of constitution our sheep cannot be excelled. We shall welcome our patrons at the ranch or orders by mail. City Address 418 California St., San Francisco.

This space will be used by H.

D. NASH & CO., 906 K street,

Sacramento, Cal., Manufacturer

of "The Improved Nash & Cutts

Grain Cleaner," giving a full de-

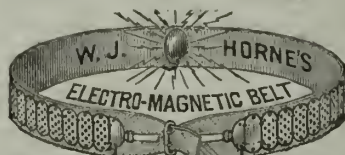
scription of their new combina-

tion Gang of Seives, for separa-

ting Barley, Oats and Cheat from

Wheat.

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Patent, Nov. 11, 1879,

Patent, Nov. 9, 1880.

Medical Electricity.

HORNE'S ELECTRO-MAGNETIC BELT.

(The Only Genuine.) Received 1st Premium State Fair.

Electro-Magnetic Belt, New Style, 8 ft.; Electro-Magnetic Belt,

Extra Appliances, \$15; Electro-Magnetic Belt, 9 ft. improvement, \$20

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Will positively cure without medicine—Rheumatism, Paralysis,

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**CLINTON CUTTINGS (PHYLOXERA PROOF.)**

\$10.00 PER 1,000 AT

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Send for Catalogue of Fruit and Ornamental Trees.  
All free from disease and grown without irrigation.  
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Catalogues mailed to all applicants. Address

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Established in 1858.

For sale, all kinds of Fruit Trees, Vines and Fruiting  
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**COTTON SEED**

For sale in quantities to suit, by **McAfee Brothers,**  
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**TURKISH RUG PATTERNS**

A Pleasant and Profitable Fancy Work. Patterns  
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San Francisco, Cal.

65,000 tons capacity. Storage at lowest rates.

**CHAS. H. SINCLAIR, Supt.**

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Office—318 California Street, Room 3.

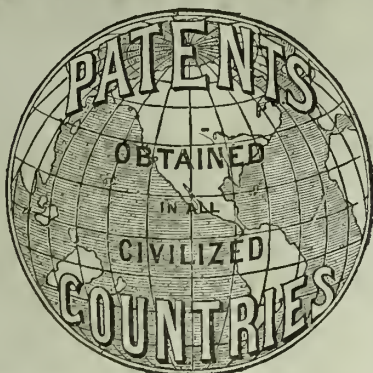
**JOHN JENNINGS.**

Hooper's South End Grain Warehouses,

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First-class Fire-proof Brick Building. Capacity, 10,000  
tons. Goods taken from the Dock and the Cars of the O. P.  
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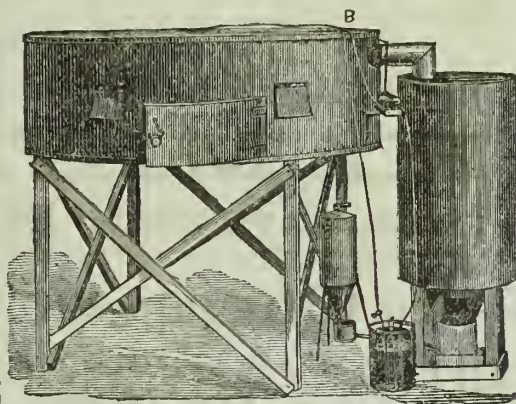
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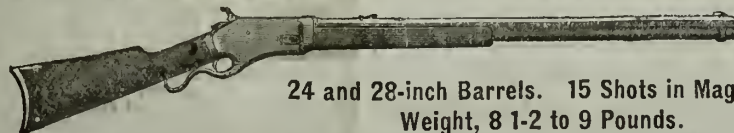
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**SHEEP WASH.**  
\$2 per Gallon.

After dipping the Sheep, is use-  
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Price reduced to \$1.00 per gallon. For directions and tes-  
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A complete  
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"BAIN" Wagon, with "Double Box Bed."

Price of "BAIN" Wagon, with Double Box Bed, California Roller Brake, Double Trees, Stay Chain and Neck Yoke.

No.	Size of Thimble Skein.	Capacity.	Price for Extra Heavy Wagons with wide Tires and High Wheels.
14...	2 3/4 inch	1200 to 1800 lbs.	Weight with 10 ft. Box, 1035 lbs. \$115.00
15...	3 "	1500 to 2200 "	" " 10 " 1040 " 120.00
16...	3 1/4 "	2500 to 3500 "	" " 12 " 1350 " 145.00
17...	3 1/2 "	3500 to 4000 "	" " 12 " 1470 " 155.00
18...	3 3/4 "	4000 to 5000 "	" " 12 " 1750 " 180.00
19...	4 "	5000 to 6000 "	" " 1875 " 200.00
20...	4 1/4 "	7000 to 7500 "	" " 1975 " 225.00

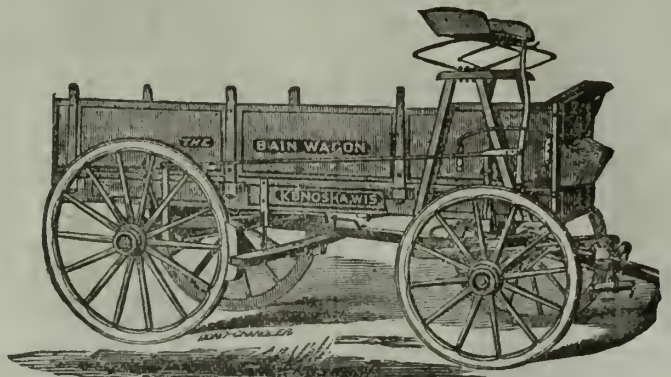
Bain Wagons, with Box Beds, as above, and Iron Axles, Gears, Solid Collars, all Wrought Axles.

21a...	1 1/2 inch	1500 to 2000 lbs.	Weight with 10 ft. Box, 1105 lbs. \$135.00
21...	1 3/4 "	2500 to 3500 "	" " 10 " 1190 " 140.00
22...	1 3/4 "	3500 to 4000 "	" " 12 " 1380 " 160.00
23...	1 7/8 "	4000 to 4500 "	" " 12 " 1435 " 170.00
24...	2 "	4500 to 5000 "	" " 12 " 1525 " 180.00
25...	2 1/4 "	5000 to 6000 "	" " 1850 " 220.00
26...	2 1/2 "	7000 to 7500 "	" " 2110 " 260.00

We guarantee the BAIN Wagons to be well made, and of good material; and if, with fair usage, any breakages occur within one year, from the defects in material or workmanship, we will, on application, stating date of purchase, size of wagon and cause of breakage, furnish new parts, or order them replaced without cost to the purchaser. Unless these conditions are complied with, claims for breakages, etc., will not be allowed.

The "BAIN" Wagons are acknowledged to be the best Farm and Freighting Wagons in the United States. They are built by the day's work, and each workman is responsible for any defects, either in material or construction.

## BAIN WAGONS.



Celebrated "BAIN" Wagon, with California Stake Rack.

Price List of Bain Wagons, with California Stake Rack Beds, Roller Brake, Double Trees, Stay Chains and Neck Yoke.

No.	Size of Thimble Skein.	Capacity.	Price for Extra Heavy Wagons with wide Tires and High Wheels.
27...	2 3/4 inch	1200 to 1800 lbs.	Weight with Cal. Rack, 11 ft. 1105 lbs. \$120.00
28...	3 "	1800 to 2200 "	" " 12 " 1125 " 125.00
29...	3 1/4 "	2500 to 3500 "	" " 12 " 1415 " 150.00
30...	3 1/2 "	3500 to 4000 "	" " 12 " 1545 " 160.00
31...	3 3/4 "	4000 to 5000 "	" " 14 " 1815 " 180.00
32...	4 "	5000 to 6000 "	" " 14 " 1945 " 200.00
33...	4 1/4 "	7000 to 7500 "	" " 14 " 2050 " 235.00

Price List of Bain Wagons, Iron Axle Gears, Solid Collars, all Wrought Axles, and full California Clipped, with California Stake Rack Beds, Roller Brake, Double Trees, Stay Chains and Neck Yoke.

34a...	1 1/2 inch	1500 to 2000 lbs.	Weight with Cal. Rack, 11 ft. 1132 lbs. \$140.00
34...	1 3/4 "	2500 to 3500 "	" " 12 " 1225 " 150.00
35...	1 3/4 "	3500 to 4000 "	" " 12 " 1455 " 165.00
36...	1 7/8 "	4000 to 4500 "	" " 12 " 1510 " 175.00
37...	2 "	4500 to 5000 "	" " 14 " 1598 " 190.00
38...	2 1/4 "	5000 to 6000 "	" " 14 " 1933 " 230.00
39...	2 1/2 "	7000 to 7500 "	" " 14 " 2183 " 275.00

Tires on "Bain" Wagons are all fastened with oval-headed rivets. None but the Most Experienced Workmen employed in their manufacture. Especial attention paid to the Iron Work, and only the best of iron used.

THEY COMBINE GREAT STRENGTH WITH LIGHTNESS AND EASY DRAFT. Only the very best of Selected Timber, which has undergone the personal inspection of the maker (E. BAIN, Kenosha) used. None genuine unless stamped with "Edward Bain, Kenosha, Wis."

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I am prepared to sell lands in various counties of Texas and at prices ranging

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I have a solid body of 9,200 acres in Zavalla County, fronting Leona River.

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At \$1.25 per acre, unfenced, and 15 miles from Railroad. Also tract in Frio County, of 10,000 Acres, fronting on Frio River. NEVER-FAILING water, well coated with Grass; ALL FENCED. Well adapted to Cattle, Sheep, Swine or Farming, five miles from Railroad Station, at \$3 per acre, one-half cash, balance in one and two years at 8% interest.

Also 4,005 acres on same river, two sides fenced and near County seat at \$2 per acre.

Also some 640-acre tracts of rich land at \$2.50 per acre, and near Railroad, besides many other pieces in other counties.

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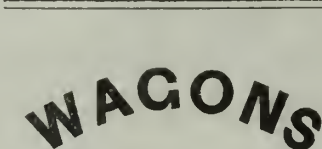
mediate use, and of any Shade or Color desired. Any one who can handle a brush can apply it. It is impervious to our damp atmosphere, and is equally as good on Wood, Stone or Iron Work.

It does not Crack, Chalk or Peel Off, but retains for years that beauty of finish for which it is so justly celebrated.

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Three sizes of THOROUGH-BRACE WAGONS, with 1, 2 or 3 seats. Eight sizes of EXPRESS AND DELIVERY WAGONS. Three sizes of FOUR SPRING WAGONS, with 1, 2 or 3 seats. Besides Business Wagons and Buggies.

Also, all sizes of FARM WAGONS, made by Mitchell, Lewis & Co., of Racine, Wis., who make the best Farm Wagons in the world. All our Wagons are fully warranted. A. W. SANBORN & CO.,

## DIVIDEND NOTICE.

San Francisco Savings Union,

532 California St., corner Webb.

For the half year ending with June 30, 1881, a dividend has been declared at the rate of five and one-tenth of one per cent (5 1/10%) per annum on term deposits, and four and one-fourth of one per cent (4 1/4%) per annum on ordinary deposits, free of Federal tax, payable on and after Wednesday, July 13th, 1881. LOVELL WHITE, Cashier.

## DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending this date, the Board of Directors of The German Savings and Loan Society has declared a dividend on Term Deposits at the rate of five and one-tenth (5 1/10%) per annum, and on ordinary Deposits at the rate of four and one-fourth (4 1/4%) per annum, free from Federal Taxes, and payable on and after the 11th day July, 1881. By order, GEO. LETTE, Secretary. San Francisco, June 30, 1881.

50 All Gold, Chromo and Lithograph Cards. (No 2 alike). Name on 10c. Clinton Bros., Clintonville, Con.

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COMBINED CATALOGUE OF

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Will be Mailed Free to all who apply by Letter.

Our Experimental Grounds in which we test our Vegetable and Flower Seeds are most complete; and our Greenhouses for Plants (covering 3 acres in glass), are the largest in America.

PETER HENDERSON & CO.  
35 Cortlandt Street, New York.

## Attention, Fruit Growers!

As the Budding season is at hand, I am prepared, where quantities are wanted, to grow any variety of Fruit Trees for 1882 at Reduced Rates.

Correspondence solicited. ISAAC COLLINS, NURSERY, Haywards, Cal.

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Rams for Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1854. Thoroughbred and High Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R. P. O. address, MRS. E. McCONNELL WILSON, Elk Grove, Sacramento Co., Cal.

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Volume XXII.]

SAN FRANCISCO, SATURDAY, JULY 9, 1881.

Number 2

### The Wheat Crop of 1881.

It is now conceded by all, so far as we know, that the wheat yield of this State will show a marked falling off from last year's magnificent figures. The contrary has been stoutly maintained by those who wish to depress the value of grain now unsold, but that game is about up as is shown by the strength of the market. We shall be surprised if the price does not show a gratifying advance before the harvest is fully gathered.

This view is strengthened by the reports from the East, which agree that the surplus available for export from Atlantic ports will be much reduced. The *Rural New Yorker*, with commendable enterprise, secured, last month, reports from nearly all wheat growing sections and the hearing of the results upon the market will be so great that we shall introduce the main points of our contemporary's summary thereof. Judging from the present multitude of reports, as well as from those that have been published every week in our columns, and from a discriminating selection and careful study of a large number of other reports made either by the Agricultural Department, State Boards of Agriculture or enterprising journals, we cannot avoid the conclusion that the wheat crop of 1881 will be at least 20% below that of 1880. The latter has been estimated by the Agricultural Department at 480,849,723 bushels, so that, on this basis, this year's aggregate crop can hardly be far from the neighborhood of 380,000,000 bushels. For reasons heretofore given, however, we are strongly impressed with the opinion that the Department's estimate was at least 15,000,000 or 20,000,000 of bushels too high; and should this opinion prove correct, a corresponding reduction should be made from the above estimate of this year's total yield.

Winter wheat has suffered far more severely than spring, and of the vast territory in which this sort is raised, Michigan, Indiana, Illinois, and, probably, Kentucky, with parts of Northern Missouri and Southern Iowa and Wisconsin, have been the heaviest losers. Spring wheat appears to be as thrifty as last year, but, owing to the lateness of the season and the floods on bottom lands in the spring wheat region, the acreage is somewhat less than last year's, except in Northern Minnesota and the Red River country, in which a greatly enlarged acreage has been put in, with highly promising results. The harvesting of winter grain has already advanced as far north as Southern Kansas, Missouri, Illinois, Indiana and Ohio, so that the recent rains will have come too late to benefit the fall-sown grain. Farther north, however, they will doubtless be of considerable advantage. The total acreage under wheat this year is probably somewhat less than last year, as the increase in the newly-settled States and Territories is more than counterbalanced by the decrease in the older States. On the Pacific coast the acreage under wheat is considerably smaller than last year, especially in the middle and northern districts, and the yield per acre is likely to be less.

**THE FOURTH OF JULY.**—As a rule, the Fourth of July celebrations in the larger cities throughout the country were laid aside, out of respect for the President in his affliction and in harmony with the feeling of grief which pervaded the country. Instead of rejoicing, there was suspense, anxiety and solicitude. It was fitting that the day should be memorable by the omission of celebrations. If the President recovers, there will be a general disposition to rejoice, and it is proposed to carry out the plans laid in this city in the celebration of Admission Day, September 9th. It strikes us this would be a very good arrangement.

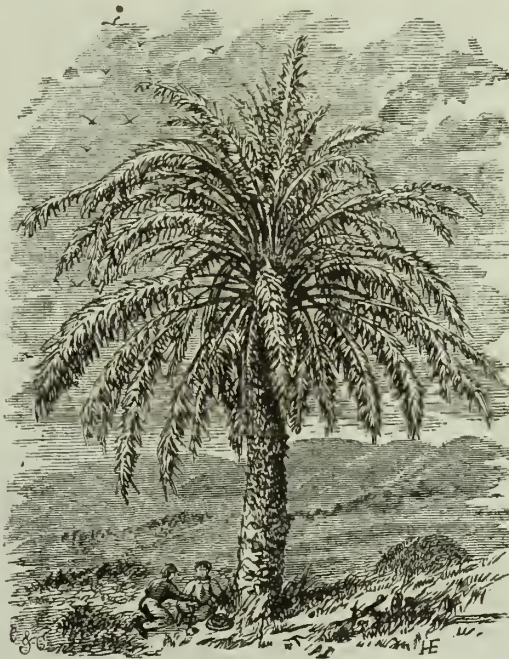
**TURNING THE TABLES.**—A manufacturing company in Providence, R. I., has received a piece of bleached cotton cloth manufactured in England for the West India trade. It bears a counterfeit of the Providence company's ticket and trade-mark, but is of decidedly inferior quality to the goods made by them.

### The Date Palm in California.

The date palm is one of the oldest of the vegetable immigrants to California. It has taken a much humbler position in the public thought than the orange, the olive and the grape, which were its attendants hither, and yet it has grown into stateliness and attained the dignity of a landmark in several places. The date has lingered in quiet probably because, though its leaves and flowers appeared freely, its fruit is seldom seen. Why fruit has not appeared, whether owing to the isolation of individual trees and consequent lack of fertilization, or whether other conditions have made it barren, has not, we believe, been fully decided. And yet the date palm has fruited in California occasionally, as our columns have shown during the last five years. It is probable that lack of fertilization is the cause. We just notice in an essay on fruits by Dr. Sturtevant, of Massachusetts, that Theophrastus, in the fourth century B. C., observed that palm trees do not bear fruit unless the females are fecundated by the dust contained in the flowers of the male, and that in Greece the palm trees raised for

back before a more aggressive people. After nearly a quarter of a century had passed over the heads, and two generations had passed away, they saw the new era dawn upon the land about them. On one side two large brick blocks were suddenly erected. On the other side, between them and the sea, among their companions, the olive trees—nearly as old—the county court house. They were large trees in 1846, when Fremont made his famous ride. The emigrants of '49, who took the southern route from Salt Lake, and struck the Pacific first at this point, remember them as they stood out against the western sky. They are old and substantial evidence of the great fertility of our soil, of the genial nature of our climate, of the softness of our winds. They ought to be cherished and protected. The work of human hands, when destroyed, can be restored. Such a work, when lost, never can be.

The palm shown in the picture is smaller than the veterans at San Buenaventura, but it is of the same species, and serves to show the general characteristics of the *Phoenix dactylifera*. During recent years there has been quite a disposition to plant date palms, and some very



THE DATE PALM IN CALIFORNIA.

ornament in the gardens bear no dates, or at least never bring them to perfect maturity. This is old observation. The old padres should have understood the philosophy of date and fecundate, and have made their early plantations accordingly.

The oldest date palms in the State are those which are growing upon the sites of the Missions in Southern California. The engraving on this page gives a view of one of these, and the use of the engraving is suggested by a fitting tribute to a pair of these old palms, which we find in the *Ventura Signal*, of last week. The old trees and their history are well touched off in the following paragraph:

For many years two large and stately palm trees, in what was once the luxuriant garden of the old Mission fathers of this place, have been admired by Eastern people as the principal attraction of San Buenaventura. They are about 40 ft. high, and 10 ft. in circumference at the base. Long and graceful fern-like leaves branch out about 30 ft. from the ground. They are from seeds planted by the Mission fathers, probably in 1786. For nearly a hundred years have they stood silent witnesses of the decay of the native race, many of whom, in years gone by, were accustomed to carry their branches in religious processions. They were in their prime when the Castilian from Mexico was attracted to the shores of southern California. They saw him accumulate broad acres and cattle upon a thousand hills. They saw him lose his proud position and fall

handsome groves of young trees may be seen in different parts of the State. It remains to be seen whether they shall prove of any value for fruit bearing.

**CARP IN LAKE.**—Lake county will prove one of the best fish-producing districts in America. Schwartz & Wehber, near Middletown, in Lake county, are doing well with carp. They have five ponds, the largest covering about one acre, stocked with an immense number of small fry. They are improving and increasing their ponds, and do not expect to rest until they have 14, embracing in all 8 to 10 acres of land. They have an abundant supply of water from a large trout stream (of 40 to 45 degrees in temperature), brought in by a ditch, and the flow regulated so as to keep the water in the ponds at about 80 degrees during the warm season. The fish are growing fast, and next season the guests at Anderson and Harbin springs—within two miles of the ponds—can be supplied with fine large fish, transported alive in tanks if desired. They have found the low, moist, black soil land more favorable for holding water in ponds than the higher red soil and gravel land—and believe Lake county as good as any in the State for fish culture. The proprietors of Anderson springs have taken water from the stream mentioned above, at a higher point, to supply a large pond made upon their former croquet grounds. Carp have also been placed in the very large pond at Boggs' old mill-site, between Glenbrook and Kelseyville.

### The Cinchona Industry.

Now that we are in the midst of practical experiments with the cinchona, and as the College of Agriculture has sent out a number of seedlings for test in different parts of the State, the interest in the subject of quinine production is a direct one to Californians. We see it stated that the Eastern interest in the subject is also growing, not with the hops that cinchona can be grown at the East, but that our country should do something to ascertain whether some of the varied climates within our national borders cannot do something to augment the failing supply of the famous febrifuge. There was a bill introduced by Mr. Kelly, of Pennsylvania, at the last session of Congress, to start an inquiry and experiment under government auspices, into the practicability of cinchona growing. The bill was lost in the crush at the close of the session, but it may be expected to come up again and will probably receive vigorous support at the East, for there seems more disposition to look favorably upon tests for quinine than upon ventures in tea culture. We trust it may prevail, for with the evidence now in hand there is reason to believe that California should be thoroughly assayed for cinchona qualities.

Cinchona culture in general is progressing. The *Philadelphia Ledger*, drawing its information from foreign sources, says, some of the facts are already known to our readers, others are new. For 40 years England has been industriously engaged in establishing hark plantations in the upland regions of India and Ceylon, the West Indies and wherever it could be ventured on, and the Dutch have been equally busy and successful in Java. Now supplies from these sources are coming regularly to the markets in London and Amsterdam, and the prices got for these East India harks are proportionately higher because they yield a better percentage of quinine, due to the care in cultivation, selection and preparation. We trust this statement is true. It is made without qualification and the market rate is an infallible test for quality in a material of this kind. It has been feared that the quality of hark might suffer under cultivation and by change of conditions, and if this fear can be laid aside it will be fortunate. The English authorities have published full reports of their long and varying series of experiments which finally led to the present success, and their scientific journals regularly report the results of analyses of the last importations.

The field for the production of quinine seems open and not likely to be covered by the enterprises now under way. It is said that some of the enterprising planters in Ceylon have gone ahead so boldly, and are so confident of their future, that they have made calculations for a supply that will soon meet the demand, but careful experts, such as Mr. Howard, the leading English manufacturer of quinine, and the other scientific men with whom he is associated in testing the various harks sent to London, rather discourage any such sanguine hopes, and hold the view that the demand is likely to outstrip their efforts. We trust that the matter may be followed up at the next session of Congress and that our representatives will fully inform themselves of the results which have already been attained here, for these will show the opportunity for more general efforts and the promise of success in them.

**SEEDLESS FRUITS.**—Dr. E. L. Sturtevant has a most interesting and wide-reaching study of the subject of seedless fruits in the transactions of the Massachusetts Horticultural Society for 1880, just published. He draws from all sources the instances of seedless fruits and arranges them with great skill. Afterwards there are some pertinent deductions. The matter will be worth a permanent place in horticultural literature. We are glad that Dr. Sturtevant is bringing his untiring research and able classification and deduction to bear upon fruits. They have already done valuable service in the dairy and in field cultures.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Oakland to San Leandro.

EDITORS PRESS:—A trip from Oakland to San Leandro, is a pleasant one at almost any time, but especially so in the summer season, when crops are growing and maturing. The strip of country between the two places is nearly level, with but a slight elevation above tide water. From the bay on the south-west to a ridge of hills on the north-east, the distance varies perhaps from two to four or five miles. The soil varies somewhat in different places. For about half the distance from Oakland, it is a heavy adobe with here and there strips of soil that is more loamy. The other half towards San Leandro, is composed of a rich sandy loam—not excelled in any part of the State in quality or productiveness.

The grain crop in this section is very poor, especially so toward Oakland, and on the low flat lands. On the hills and toward San Leandro and Hayward it is better, but still much below the average, being foul with grass and weeds, owing to the excessive and continued rains of last winter. Taken as a whole, this may be regarded as among the most fertile portions of the State. The climate is cool and moist, and well adapted to the growth of vegetables, and certain kinds of fruit, while other kinds do not succeed. This region is especially the home of the cherry and the currant, while apricots and plums also thrive well. Peaches grow moderately well, but the fruit is not so high flavored as in warm localities; grapes are not a success, and no person of experience attempts to raise them. Apples do not succeed as well as in some other localities and experienced orchardists are discontinuing their cultivation, while pears do somewhat better than apples. All kinds of stone fruits seem to thrive, and as for vegetables, the country around San Leandro cannot be surpassed. Fruits and vegetables are the chief products, and have with industry made the producers comparatively rich.

One sees quite a number of fine places along the road. Around the neighborhood of Mills Seminary, which is snugly nestled near the hills, about a mile from the main road, are a number of handsome residences with well kept lawns, adorned with flowers and shrubbery. The grounds around the seminary are extensive and laid out with good taste, kept in good order, and present a charming scene of floral beauty and luxuriance.

I need not speak of Fruitvale, just out of Oakland, which is noted for its handsome residences and grounds, and presents an almost continuous line of orchards and gardens. Within four miles of San Leandro the same remark is applicable. The road is there, as at Fruitvale, lined with shade trees, and is kept sprinkled, which makes it pleasant to the traveler and keeps the dust from settling on the fruit and vegetables, so that they are clean and in good order for market.

At Melrose (which is the first station out of Oakland), are located the smelting works of the Castle Dome Mining and Smelting Co., of New York. Ores of gold, silver and lead are brought here from various parts of the country, chiefly from Arizona, to be smelted. The company own several productive mines of silver and galena at Castle Dome, which they work with profit. A few houses, in which reside the superintendent and the workmen, constitute the village of Melrose. There is a fuse factory and a rope-walk near here, but the latter I am informed is not running at present.

A little beyond Melrose, Mr. R. P. Clement, the lawyer, has a fine place. He devotes much attention to fine stock, chiefly thoroughbred horses and Jersey cattle. Still further on is the farm of Mr. Mathews, which seems to be devoted chiefly to grain, hay and stock. Further along on the left of the road is the dairy farm of Mr. Christian Bagge, who resides in Oakland. Mr. Bagge was not at home, but from his foreman I learned that he had tried raising Canary seed with fair success, both for seed and as food for stock. Ten acres produced about 70 sacks, worth 4 cents per pound, while the straw being sweet is readily eaten by stock, which they relish almost as well as hay. Fifteen acres raised for hay, produced 35 tons, and stock prefer it to wheat hay. He uses the bisulphide of carbon with success in poisoning squirrels.

Further on to the right is the vegetable farm of Mr. A. Jones. He raised 7 acres of peas this year that yielded 750 sacks, averaging 100 lbs. each, which he sold by contract at \$1.50 per cwt. He has 80 acres of cucumbers growing, contracted for at \$1.50 per cwt. for pickling. He has 11 acres of squash peppers, contracted for to a pickling house at 2½ cts. per lb. They produce about 5 tons per acre, but require good care and cultivation. He has also about 75 acres of tomatoes, contracted for at \$10 per ton. Mr. Jones has had a long experience in raising vegetables, and makes it profitable. His crop is usually contracted for in advance.

Still further on, about two miles from San Leandro, is the farm and fruit orchard of Mr. L. Stone. He has about 150 acres of rich garden soil, kept in a high state of cultivation. He is a practical fruit-grower of large experience,

great industry and good judgment. Next to the late Wm. Meek, his brother-in-law, his practical knowledge and experience in fruit raising is probably second to none in the State. His place is kept clean and neat, and is a model of a farm, orchard and garden. I called his attention to the essay on cherries delivered before the Horticultural Society by W. W. Smith, of Vacaville, published June 4th in the RURAL PRESS. He took issue with him in regard to his recommendation of the Reine Hortense as the best cherry for canning. "It is a good cherry for canning," said he, "but it is of a stunted growth, a poor bearer and unprofitable to raise." He showed me a number of trees of that variety which seemed to verify his opinion. He considers the Royal Ann to be the coming cherry for canning or for shipping, and he also praises the Elton highly. The Black Tartarian is a good cherry to sell on account of its appearance, but in its eating quality it has been overestimated and has had its day.

He has about 6 acres of rhubarb (or pie plant) in his orchard planted between the rows of trees and within about 4 ft. of them. The rows of plants are about 3 ft. apart. If planted from the seed it yields a crop in two years from planting; if the roots are planted, a crop may be taken the same year. He cultivates well, and manures the plants highly in the fall. From 6 acres he got over \$750 worth of the plant this year, and it does not seem to interfere with the product of the orchard. The crop was sold to a dealer. Cherries and currants seem to be the leading and most profitable fruits of this section, and the crops have been fair this season. I have spoken of only a few of the many farms along the road, and must defer the description of other places until another time. C. E. W.

## HORTICULTURE.

### Santa Cruz for Fruit-Growing.

EDITORS PRESS:—Please let me answer through the PRESS an inquiry from Mr. Leonard Coates, of Yountville (and many others of similar import, from different places), about the fruit-growing interests of Santa Cruz county. Mr. Coates wants to know particularly about growing Petite d'Agen prunes and peaches, the price of land suitable for their growth, and the cost of planting an orchard.

With regard to growing prunes, I know of no trouble so far in any part of the county. The trees commence bearing young, and bear regularly to the full extent of their capacity, and the fruit is very rich and nice. They do well on all locations so far as tried, from the bay to the top of the mountains.

There is a good deal of rough, cheap land in the county on which they would grow to perfection—land that can be had at from \$5 to \$15 per acre. But there is plenty of good fruit land in the hills that can be cultivated easily, that can be had at \$30 to \$40 per acre, that is near town, good roads, and good schools and railroads.

Every kind of prune and plum that I have tried does well here, except the peach plum—that does poorly. As for peaches, we can hardly call Santa Cruz a peach-growing county, although some parts grow very good peaches; but it is of the hardest kinds, which do not "curl" much or none at all, which are profitable to grow here. Our summers are rather cool for first-class peaches, but the hardy kinds bear well and are good for canning, being solid and a little tart.

The cost of planting an orchard here will be about \$16 per 100 for yearling prunes and peach trees, and from \$4 to \$5 per 100 for preparing the ground and setting the trees. There is plenty of good fruit land for sale here now at reasonable rates, and any person wanting land here can get the desired information concerning the fruit-growing quality by giving me a call, as I am well acquainted with the fruit-growing interests of the county. M. P. OWEN.

Santa Cruz, Cal.

### Meeting of the Horticultural Commission.

The second regular meeting of the Board of State Horticultural Commissioners was held in this city, June 30th; Pres. C. H. Dwinelle in the chair. The following Commissioners were present: W. W. Smith, of Napa District; M. T. Brewer of Sacramento District; W. B. West of San Joaquin District; S. F. Chapin, of the Santa Clara District; Matthew Cooke, Chief Executive Horticultural Officer, and Pres. C. H. Dwinelle, Commissioner for the State at large; John H. Wheeler, Sec'y. The minutes of the preceding meeting were read and corrected, to make the regular time for quarterly meetings the Thursday preceding the last Friday of March, June, September and December.

On call for reports of Standing Committees, Mr. Cooke reported his progress in the great quarantine work he was engineering. Regarding this the following resume is given: County Commissioners have been appointed in the following counties: Sacramento, Yolo, Solano, El Dorado, Santa Barbara, Santa Clara, San Joaquin, Contra Costa, Amador, Santa Cruz, and San Bernardino. The Boards of Supervisors—

the officers upon whom devolves the appointment of County Commissioners of Horticulture—of the following counties have promised the appointment of County Commissioners: Placer, Napa, Tuolumne, Los Angeles, Marin, Nevada, and Butte.

### Counties which Refused.

In response to Mr. Cooke's efforts to get Commissioners appointed in Sonoma county, informality of the petition was claimed by the Supervisors, and the petition refused. In Alameda county the Supervisors refused outright. In all of the counties where Commissioners have been appointed, an earnest feeling is manifested by a large majority of the fruit-growers to comply with the requirements of the law, and from present indications the workings of the Commission will be successful.

Mr. Cooke further stated that he had consulted with Mr. Towne, of the C. P. R. R., about the proposed systems of quarantine, and the latter had promised that the company would cheerfully do all in their power to see the proper laws enforced. In conclusion, Mr. Cooke offered for adoption a system of carefully prepared quarantine regulations. They were discussed at considerable length, and the conclusion arrived at discouraged the adoption of these regulations at present; the Board postponing their consideration until a future meeting.

### Afternoon Session.

In the afternoon, Commissioner A. Cadwell, of the Sonoma District, was added to the list of Commissioners present.

Communications from F. Gillett, the Commissioner for the El Dorado District, and from Ellwood Cooper, of Santa Barbara, Commissioner for the State at large, were read. Mr. Gillett made reference to the extensive work to be performed by the Commission, of the commendable action taken by Mr. Cooke, of the necessity of a State Entomologist, etc., closing with a promise, at the next regular meeting in September, to render his report on codling moth and insects injurious to fruit and fruit trees. Mr. Gillett also excused his absence. Mr. Cooper stated his inability to be present at this meeting, and promised his report on insects infesting olive trees, at the next regular meeting, viz., in September.

The following resolution was offered by Mr. Dwinelle for consideration by the Board, after which it was unanimously adopted.

In view of the rapid spread of noxious insects injurious to fruit and fruit trees, the State Board of Horticulture most earnestly calls the attention of fruit-growers to the following matters: "Too great care cannot be used in procuring tree cuttings or scions, whether from foreign countries or local nurseries, to be sure that they are free from scale insects, borers or other like pests. All empty fruit packages should be thoroughly disinfected on their return from market to the farm, in order to destroy insects or their germs. To accomplish these desirable results, the rules for the protection of fruit and fruit trees from the ravages of insects, as prepared by Mr. M. Cooke, Chief Executive Horticultural Officer, are especially commended. Copies of these rules can be obtained by addressing Mr. Cooke, at Sacramento or on application to members of the County Boards of Horticultural Commissioners. Active steps should be taken to secure the appointment of County Boards where not already made as, in general, in co-operation with our only hope of preserving our valuable horticultural interests from the many threatened dangers."

### Practical Entomology.

Following this came a discussion on the feasibility of informing the public on practical entomology, and the principal remedies against obnoxious insects, by means of a pamphlet or descriptive treatise. As a result the following resolution was adopted:

Resolved, That the Chief Executive Horticultural Officer be requested to prepare for publication, in pamphlet form, a brief popular treatise on the more prominent insects injurious to fruit and fruit trees, giving a description of their appearance, life, history, and the best means of their destruction.

Of other important matters acted on by the Board, it was decided to request the State Board of Agriculture to make proper provision at the next State fair for the prominent exhibition of the pests destructive of fruit and fruit trees, the same to be under the supervision of the Chief Horticultural Officer, Mr. Cooke.

To further the quarantine work in the State, it was resolved that the Chief Executive Horticultural Officer be authorized to appoint local resident inspectors in any part of the State where needed.

Again, work was begun for the obtaining of an entomologist on this coast, one to consult as well as instruct. Mr. Cooke thought the most feasible plan for securing immediate results was that which had been proposed by President Dwinelle, viz.: To educate a young man at the University of California for entomological work. President Dwinelle explained that the entomological correspondence addressed to him at the College of Agriculture had assumed such proportions that it was impossible for him to find time to attend to it properly. He had offered to hire some one of the students to give a portion of his time as entomological assistant, and to direct and supervise his work on condition that the horticulturists would furnish the needed funds. His estimate was for about \$600, to make the experiment for a year, including needed apparatus, books, etc. Nearly one-half of that sum was already subscribed, and he hoped that the rest would soon be pledged. A valuable foundation might then be laid for the needed collection of insects, with notes upon their history, and the best means of destroying them.

THE Arizona people want a governor who will stay in the Territory and attend to its business. Therefore they want General Fremont removed to give place to such a man.

## AGRICULTURAL ENGINEER.

### Notes on Irrigation, No. 1.

G. C. Holman, of Lockford, San Joaquin county, read an interesting lecture on the subject of irrigation before a union meeting of farmers at Lodi last May. We shall give our readers the parts thereof which seem to us of most general interest:

There are many inhabited countries where the necessary moisture is deficient. This may be owing to certain topographic conditions, producing climatic effects, as a deficiency of rainfall, or where it is not satisfactorily distributed; or the population may be so redundant that a larger amount of water is required than the usual rainfall, whereby to increase horticultural and agricultural products. This deficiency and supply must be furnished by artificial and mechanical means. This method, or art, we term irrigation.

Irrigation, though practically new to us, is at least as old as Mosaic history, that makes Adam the first of irrigators in the Garden of Eden, where was located a spring, or *cienea*, that watered the garden. In Europe, Asia, Africa, South America and Mexico, it is historic, having an existence of many centuries; and it is still cherished and promoted by some of the most enlightened nations of the world. England, France, Italy, Spain, Belgium, Holland and Egypt have complete systems under Governmental control.

Egypt, practically a rainless land, is noted for her fertility and abundant crops. Yet her aqueous supply comes hundred of miles from the Victoria Nyanza, in equatorial Africa, and is applied by artificial means. I well remember the wonder and interest awakened in my mind in my earliest historic readings, by the descriptions of her immense irrigation works; of her immense reservoirs, often covering areas of miles in extent; her canals of solid concrete or stone masonry; of the popular interest excited by the annual rise of the Nile; the pageantry, the ceremonies and festivities observed in the opening of the sluices, when a most beautiful virgin was offered as a propitiatory sacrifice to the spirit of the waters, which were to bless and enrich the land. And Egypt to-day is not less noted for her fertility than in the time of the Pharaohs.

### Irrigation in India.

India, whose climate in some respects is analogous to our own, prior to British occupation had numerous canals, fed by the snows of the Himalayas, some of them exceeding 100 miles in length and aggregating thousands of miles, which had been in use for centuries. And since England has assumed control over that country the government has expended more than \$100,000,000 in constructing new works and in repairing those destroyed in internecine wars.

As stated by Capt. R. Baird Smith, an officer of the English Army and of the corps of engineers in India, the main trunk of one of the new canals built under English auspices, is 453 miles in length, and with its four great branches, all navigable like its main trunk for vessels of great size, has an aggregate length of 898½ miles. At the head it is 140 ft. wide on the bottom, 170 ft. wide at water surface, and carries a stream of 10 ft. deep with a current of 4 miles per hour. The volume of the water is 6,750 cubic ft. per second. In addition to its great capacity for irrigation and navigation, it affords extensive water-power for driving machinery. And this is only one of the many. The effect upon the prosperity of the country, even in smaller things, is illustrated by the fact that some plantations of trees set along the canal by the English to gratify the Eastern love of shade, soon repaid them in the sale of timber double the outlay, and timber remaining was estimated at 15 times the cost of planting.

Probably no part of the vast expenditures of the English government repays so well as that upon canals. Returns direct and indirect upon some of them are as much as 36% per annum. Their total average is 7.15% per annum. Their effect has been to reclaim from a semi-barbarous and vagrant life nearly twelve millions of inhabitants, and to make them an industrious, contented people. It affords constant employment for a population of upwards of 200 to 500 to the square mile, and in seasons of great drouth relieves them from the dangers of famine, with which they were formerly visited. Produce which cannot be estimated at less than \$50,000,000 in that country of low prices, is placed beyond the contingencies of season, and public revenues amounting to \$15,000,000 annually, is permanently protected from fluctuations in ordinary times and from annihilations during extraordinary ones.

### Irrigation in Italy.

Canals have had an existence of centuries in Italy, where the system is more generally applied than elsewhere, and is thoroughly appreciated although the annual rainfall there equals that of the Atlantic States, and two-thirds of it falls during the growing period, say between April and October of each year, an amount greater than our annual rainfall. The area irrigated is about 1,500,000 of acres, and the great cost of some of the works, their distribution and application, amounts in one instance—that of the Wilan Canal, to \$400 per acre. These improvements are the work of a vast pop-



ulation and of centuries. They consist of heavy masonry dams, thrown across mountain torrents; of revetments of masonry which follow the alignment of rivers for miles, in one instance that came under my notice of 40 miles, protecting the canals from erosion of flood without and the wear within. Canals paved within to prevent their deepening; tunnels under high grounds; aqueducts for crossing rivers and valleys; syphons under, over and through canals, and this work generally of rock masonry. One is astonished at the evident cost and labor. Yet the water is all eagerly appropriated by the farmer or manufacturer, who would willingly pay for more. These canals have greatly enriched the soil and improved the sanitary condition of the country, to whose productiveness they so greatly add. They have enriched the land owners and contributed to the support and comfort of one of the most densely populated districts of Europe. The population of the irrigated lands in Piedmont is 270 to the square mile; Lombardy, 390; Lodi, 475. And in whatever country irrigation works exist, the population increases. The holdings are generally small, rarely exceeding a few acres; but in Italy, Belgium and France, as I have seen, three to five crops are annually raised, two being in the ground at the same time in different degrees of growth.

#### Irrigation in California.

Perhaps I have said enough to impress upon your minds the great esteem and importance in which irrigation is held, where it has been the longest and most generally practiced. A nearer illustration may interest you more. It may be found in the more southern counties of our State, in Utah and Colorado, where it has been practically tested for the last 10 or more years, and with the highest degree of profitable success. Los Angeles county heads the list in priority of use, and to some extent thorough scientific application. The Padres of the various missions from 80 to 100 years ago, constructed canals and aqueducts to convey water to the arid plains where were located their religious establishments. Although few of the latter have survived, their orange, fig and olive orchards and vineyards still bear witness to their enterprise, zeal and devotion. The total watershed which supplies the counties of Los Angeles and San Bernardino, under one system, amounts to about 500 cubic ft. per second, transmitted in 126 canals of an aggregate length of 440 miles, irrigating 64,490 acres. These canals supply a large number of flourishing settlements, the population of which are engaged in the cultivation of the vine, the orange, lime, olive and other semi-tropical fruits, besides the usual field products, with best pecuniary results. And it must be borne in mind that without water artificially applied, much of these naturally fertile, but arid lands would be nearly worthless for agricultural purposes. Before irrigation works were constructed much of the land was sold for \$2.50 per acre; now it is said to be worth \$100 per acre, unimproved.

Mainly within the past ten years the people living in the vicinity of Kern, King's, San Joaquin, Merced and Stanislaus rivers, have had the foresight and energy to construct canals and direct the waters to irrigate the otherwise dry and sterile plains. The canals have multiplied and flourishing settlements have sprung up along the line, adding wealth and population to the country. Areas of vines, wheat, barley, corn, beans, alfalfa, cotton and other crops are grown that astonish even the natives; and I was equally astonished at the seemingly fixed and prolific crops of the infantile and youthful native, and became satisfied there would eventually be no lack of educated and practical irrigators, which the country needs.

Some of our political economists have proposed that the drainage or catchment area of the country embraced in what is called the San Joaquin and Tulare valleys, opening to the north with a downward slope, and the Sacramento valley opening to the south with a downward slope, their waters uniting in Suisun bay, should be utilized by the construction of grand trunk lines, following by an easy grade the line of the foothills on the east and west side of the drainage center of these valleys, and receiving the waters of the various rivers which would intersect them.

It is evident that a work of this magnitude could only be undertaken under the auspices of the State, as a Government work; but this would be in my opinion, antagonistic to the best public interests. In the first place, our rivers generally leave the foot-hills at right angles with the drainage system of the valleys, and the topography of their neighborhood assumes a parabolical form which renders their local application to irrigation the most economical and convenient. Again, as matters now go, jobbery, surpassing that of "lickens" would be fastened upon the people in the shape of burdensome taxation for years to come.

It would, however, be well for the State to assume the proprietorship of all unappropriated waters, and supervise their conservation and equitable distribution, thus preventing further monopoly and waste by speculators or improvident claimants.

I approve in general terms (though with exceptions) of the work that is now being prosecuted under the supervision of our State Engineer, in the various departments to which he has been assigned.

Especially important to the people of the State is the subject of drainage and irrigation; and the facts elucidated by the instrumental investigations now and for the past two years in progress, will give us data upon which indi-

vidual and State policy may be founded. While some portions of our State have availed themselves of the benefits of a water supply, very little active interest is at present evinced by our people; in fact it amounts to apathy. And this in the face of an abundant and cheap supply at our command. Various spasmodic efforts have been made at different times in that direction, but they have all evaporated into evanescent space. We came pretty near being struck by lightning when the Mokelumne Ditch and Irrigation company was incorporated; but that, like its predecessors, rests in—pieces.

The cause of these failures is to be traced to the impecuniosity of the projectors, want of general co-operation, or the game of the big fish eating the little ones—like the autocrats of the gravel road exacting tribute from the outside barbarian, who cheerfully pays (of course) for the privilege of leaving his shekels with his Stockton cousin, or his respect and homage at the kingly court of San Joaquin.

Another cause among us for indifference is the fact that in the last decade, from our improved methods of agriculture, we have had no general failure of cereal crops; and the impression gains among some, that irrigation for these lands is not necessary. Shall we remind such of former barren years, 1864 and 1877, or of individual failures when the aggregated loss would have built sufficient works to have rendered your crops certain; or shall I ask my brother farmer if he expects to fatten a hog on one-fourth or one-half ration? Growing plants, as you know, contain from 70% to 95% of water. To the extent then that water supplies the necessary essential of a growing plant, it is actual nutriment. Water also holds in suspension all the fertilizing elements that enter into the construction and constitution of the plant, and it is only in the shape of water that the constituents of plant-life are disseminated.

Whenever, therefore, the supply is deficient, the plant is stunted and fails to attain a healthy condition. In the progress of time, also, other crops will be grown which require larger amounts of water. To meet the requirements here upon our sun-parched plains, it is necessary we should have water sufficient to produce a healthy growth, and bring the plant to maturity. We point with pride to what our bottom lands can do under favorable circumstances, yielding five crops of alfalfa in a season, aggregating 10 to 12 tons to the acre; or two crops, say one of potatoes and one of corn may be raised off the same ground in a single season. But these must not be flood years, or of drouth. In the one case we suffer from an excess of a good thing, and in the other, like the Good Templars of the plain, we wish for more.

(TO BE CONTINUED.)

## SHEEP AND WOOL.

### Wool Trade of the Half Year.

We have received a copy of the wool report of E. Grisar & Co., of San Francisco, for the six months ending June 30, 1881, and reproduce it for the information of our readers:

The wool season opened here in the face of an exceedingly dull market in the East, prices there being nominal, and manufacturers pursuing the close policy of buying raw material only as they needed it, so that it was generally expected here that prices would open correspondingly low, which as usual, turned out to be a fallacy, as in fact our prices ruled higher during the whole season than the relative rates in the East. Owing mainly to new railroad facilities, and to the favorable condition of the weather, wools arrived earlier and in larger quantities than in former years, showing receipts on the 7th of May, of 33,646 bags, against 22,953 the year 1880. Up to the middle of April the market continued without any general activity, and prices were nominal. The arrival of the usual number of Eastern buyers, although they operated cautiously, gave a better tone to the trade, and by the end of the month, the market showed signs of activity, large sales being effected at 20 to 21 cents for good conditioned San Joaquin, and 17½ to 20 cents for bright Southern Coast, having a few burs. These figures have varied very little during the season.

Northern wool met with marked favor, being mostly taken on arrival, and the market soon became extremely active in this line. Prices of first arrivals ruled from 26½ to 27 cents for good average, to 27 to 28½ cents for light. But the demand seeming to be larger than the supply, competition soon drove the prices to 30 to 31 cents for choice, and really fancy lines of Mendocino and Humboldt brought as high as 32½ cents. The average condition of the clip compares favorably with previous years.

Oregon.—Receipts of this staple have been very large. So far, the wool received is almost altogether from the Eastern range. The demand has been active, opening at 25 cents for choice, and 22 cents for fair, competition soon raised the prices to 26@28 cents for choice, and 23@25 for light medium, the heavy being neglected at 21 to 23 cents. Few Valley wools have been received so far, not enough to give any reliable quotation.

Scoured Wool.—Scouring here has become an important feature in the wool trade, and during the past year the amount exported in a clean state has largely increased.

### Wool Production.

Receipts at San Francisco:		Weight of Bags:	
January.....	702 Bags	66,235 bags.....	21,195,200 lbs.
February.....	305 "	Shipped exclusive of above.....	1,276,229 "
March.....	3,347 "	Total.....	22,471,429 "
April.....	23,540 "	On hand, Jan. 1, about.....	2,000,000 "
May.....	26,152 "	Oregon, 14,091 bags.....	24,471,429 "
June.....	12,189 "	Foreign, 1,276.....	3,935,480 "
Total.....	66,235 "	Grand Total.....	383,800 "
		Grand Total.....	28,790,709 "

### Comparison of Monthly Receipts.

	1881.	1880.	1879.	1878.	1877.
January.....	702	243	360	1,084	540
February.....	305	211	180	787	338
March.....	3,347	1,838	1,673	783	8,948
April.....	23,540	16,400	18,538	15,631	34,386
May.....	26,152	24,828	29,796	28,057	30,523
June.....	12,189	18,081	10,307	12,526	11,924
Total.....	66,235	61,601	60,910	58,873	86,659

### Comparison of Exports.

January 1st to June 30th, 1877.....	29,855,198 lbs.
January 1st to June 30th, 1878.....	19,120,316 "
January 1st to June 30th, 1879.....	23,291,472 "
January 1st to June 30th, 1880.....	12,234,332 "
January 1st to June 30th, 1881.....	21,124,230 "

### Exports:

During the six months ending June 30th, 1881.	
January 31. Railroad from San Francisco.....	1,455,340 lbs.
Feb'y 4. Ship "Imperial".....	207,840 "
28. Railroad from San Francisco.....	2,034,580 "
March 31. Railroad from San Francisco.....	676,600 "
April 30. Railroad from San Francisco.....	2,184,100 "
May 31. Railroad from San Francisco.....	4,505,630 "
June 2. Ship "Seminole".....	1,316,859 "
21. Steamer "Colima".....	2,573 "
25. Ship "Eliza McNeil".....	1,911,659 "
30. Railroad from San Francisco.....	5,550,820 "
	19,848,001 "
Shipped from outside of San Francisco by rail.....	1,276,229 "
	21,124,230 "

Included in exports there were 921,350 lbs. pulled wool, 1,629,850 lbs. scoured wool.

The weights of receipts and exports are gross. The usual tare of bags received is about three lbs. each; on pressed bales shipped, 14 to 16 lbs. each.

### Comparison with Former Years.

California Fleece.		California Fleece.	
1881.....	24,471,429 lbs.	1875.....	23,642,880 lbs.
1880.....	20,349,915 "	1874.....	19,355,682 "
1879.....	20,651,039 "	1873.....	14,658,497 "
1878.....	18,842,920 "	1872.....	12,607,280 "
1877.....	28,239,640 "	1871.....	13,381,390 "
1876.....	27,895,314 "		

## SERICULTURE.

### The Women's Enterprises.

Silk culture under the auspices of the energetic ladies of the California Silk Culture Association, is being pushed through its experimental stages in various parts of the State, and the local papers are furnishing much interesting information of the progress attained. We shall cite two cases as follows:

The Santa Cruz *Courier-Item* says: Mrs. A. J. Donzel and Mrs. O. J. Lincoln, on Church street, are conducting experiments in silk culture. About two months ago Mrs. Donzel took charge of about 5,000 eggs and Mrs. Lincoln 1,000. All that is required to hatch the eggs is a temperature of from 70 to 75 degrees, which must be maintained with but little variation during the period of worm life. The almost microscopical creatures are no sooner born than they commence to feed on mulberry leaves, which continues without cessation for six weeks, when they are prepared to spin their cocoons. The young worms are placed in wooden trays of any convenient size and supplied with fresh leaves three times a day in their early growth, but when it is nearly the spinning season, new leaves are required as often as once in four hours. The "nasty worms" encase themselves in their wonderful silken shrouds in a few days' time, and within ten days from the appearance of the first cocoon, the last delicate, glossy envelope has been spun and wound from the marvelous resources of the mulberry eaters. In this state of suspended animation the stay is short, and unless the chrysalis is "choked" the cocoons are soon pierced by the moths, which enjoy a brief existence, lay their eggs and die. In the experiments conducted by these ladies, from 80% to 90% of the eggs hatched. A few worms died at all stages of existence, as often from mistakes in their care, incident to amateurs, as from natural causes, but now they have about 600 perfect cocoons from each 1,000 eggs. The mulberry leaves for feeding were secured from trees on premises occupied by Mr. Donzel (the old Boston homestead), and from other trees about town, of which there are fine specimens in the yards of Mrs. Blackburn, and Messrs. Tierney, Field, Kirby and Longley, and perhaps others. The cuttings were saved by both Mr. Lincoln and Mr. Donzel, and next season they will have a fine supply of young trees for transplanting. Until disposal is made of the cocoons, or the eggs if devoted to that purpose, an estimate cannot be made of the profit in the business. These ladies, who by the way have by no means discarded masculine assistance in their operations, have been rewarded by witnessing the exceedingly interesting phases of silkworm life, and the cocoons produced are of beautiful quality and fine size, so that the experiments may be considered a success. When undertaken as a business industry, a million worms would not require more thought and care than is demanded by a thousand. We believe these remarkable spinners will prove a prolific source for "pin-money," and that their care may afford a means of securing a livelihood to many invalids and unfortunates, if it does not become a profitable industry.

The San Rafael *Journal* says: Mrs. Dr. McLain is very busy with her coconery, over Gordon's bank. She has about 5,000 worms, all busy in various stages, from those wandering about in search of locations, through the finest floss, to the finished cocoons, and the emerging moths. Mrs. McLain has found that the experiment involves a prodigious amount of labor, and that the actual business differs from all the theories of books. The worms are very large, healthy and vigorous. Mrs. Austin, Mrs. Downing, Mrs. Hooper and a few others are experimenting at their homes with worms from the same invoice of eggs. They will be taken to the State Society's rooms when the cocoons are ready. Mrs. McLain's success so far is very encouraging, and shows that the inducements are great for any who think of embarking in the business.

## THE VINEYARD.

### Meeting of the Viticultural Commission.

The Board of State Viticultural Commissioners met Friday, July 1st, at the offices in this city; present, Charles A. Wetmore, Charles Krug, J. de Barth Shorb, Isaac De Turk, R. B. Blowers, George West, G. G. Blanchard, and the Secretary, J. H. Wheeler; Mr. Wetmore, Vice-President, presiding in the absence of Mr. Haraszthy, who attended later in the day.

During the morning session there was an informal discussion and examination of viticultural matters.

Mr. West submitted for examination samples of wines and brandies of the vintage of 1880, the most interesting among which was a Zinfandel claret, a white wine of the West's White Prolific variety, a Muscat of Frontignan, and new distillations of the White Prolific. All of these were products of the El Pinal vineyard, near Stockton. The Zinfandel attracted attention on account of its fine body, flavor and color, and especially because many have assumed that

### Light Dry Wines

Of fine quality could not be produced in that region. The alcoholic strength measured 9.9%. The soil of the vineyard is a deep black loam, underlaid with rich marl deposits. The Frontignan was from the variety known as the Muscat Blanc, which produces the finest wines of Frontignan, near the Mediterranean Sea—or, rather did produce them before the destruction of that region by the phylloxera. The new brandy was of surprising quality. The West's White Prolific is a vine so named because its true name is unknown at present, and to prevent confusion. It is a prolific bearer, produces a fine, agreeable white wine, and a brandy which resembles the finest types of pure Cognac. It came to Mr. West in a collection from Boston many years ago, and he has been unable to trace its name. It is a variety that is destined to become famous.

Mr. Wetmore exhibited grafts of this year upon *vitis Californica* roots, also young seedlings of *Riparia* and *Californica*, from seed sown this year. The grafts illustrated three

### Systems of Grafting.

Viz.: One on a seedling *Californica*, raised last year at Berkeley, the graft being a *Mataro*; the second being an *Orleans Riesling* on a section of wild root taken from the hills of Lake county—eight or ten inches long; the third a *Grenache*, grafted into the side of a small piece of wild root—a test graft intended to determine whether economy may be practiced in material for root-grafting. These specimens all showed vigorous growth, and fully demonstrated to the satisfaction of the Board the value and importance of the wild vine of this State for grafting-stock.

Samples of insects developed under glass by the Secretary, from germs sent by Ellwood Cooper, were examined; also, specimens of fungoid disease on foliage, canes and fruit, presented by Mr. J. H. Drummond, of Glen Ellen, Sonoma county.

### Afternoon Session.

On the opening of the afternoon session of the Board, the necessity and best means of obtaining viticultural statistics, was considered. Prominent among the means devised was that suggested by Mr. Krug, who recounted the practical experiences of the St. Helena vine-growers in their success with this system: It is to get up proper blanks, and have them sent around by men employed for this purpose. This plan was adopted by the Board, and pursuant to this plan, each commissioner for a district becomes authorized to expend \$50 in thus gathering information on the vineyard statistics of his district. The blanks for this purpose to be made out under the direction of the Executive Committee.

It was unanimously decided to issue, in future, treatises on the various vine pests, remedies, translations on vine culture, etc., to be prepared under the direction of the chief executive officer and the Committee on Phylloxera, vine pests and diseases of the vine. These to be published from time to time, in pamphlet form, and finally incorporated in a bound report at the end of the year. These same pamphlets will be circulated free to those of the public desiring them.

An extended discussion of the value of the University to the agriculture of the State followed an informal report from the Committee

(CONTINUED ON PAGE 21.)



## PATRONS OF HUSBANDRY.

### Questions for Subordinate Granges.

Bro. Eshbaugh, lecturer of the National Grange, has issued his document to the lecturers of subordinate Granges, proposing subjects for discussion during approaching meetings. His says of his propositions:

These documents are intended to assist you in your duties as Lecturer of your Grange. The educational advancement in the subordinate Granges, depends largely upon the efforts of the Lecturers.

Nams this question at a previous meeting, to be considered at the next. Give thought and study to each question, so as to become familiar with the subject. In presenting your views, solicit general discussion.

#### Subjects for July.

Question 13.—How best to preserve summer fruits and vegetables for winter use?

Suggestions.—Best method considering health and economy. How best to preserve their flavor? What temperatures keeps it best and longest? Our worthy sisters should take a deep interest in this question.

Question 14.—Transportation; how does it affect the farmers?

Suggestions.—Agriculture furnishes 80% of inland commerce. On every dollar of extortionate rates farmers pay 80 cents. A railroad may cost \$1,000,000. Reasonable dividends on this amount for profits would be right. But corporations add by adulterated stock—"watered"—from 40% to 100%, then claim dividends, say, on \$1,800,000 instead of \$1,000,000. Hence we pay \$1.80 for \$1.00 worth of services. Consolidated capital in the hands of corporations is used to oppress agriculturists and all other industry. Profits on agriculture are reduced to the average of one per cent. per annum on capital and labor, while corporations make from 25% to 50%, and even 100%. How unjustly is the great wealth produced by the farmers distributed!

#### Worthy Lecturer's Points.

W. L. Wm. Johnston is on his travels, and many subordinate Granges will no doubt be aided by his presence and stirring words. At Stockton last week he made an address at a harvest feast which was reported by the *Independent*. We give the following paragraphs which comprise but a small part of the good advice given his hearers:

Farming is a profession and it required as much time and talent to achieve success in it as in other professions. In fact a farmer must be a business man and a scientific man, too, to be a success. He must take account of his surroundings and use them. If he does not do this he will fall behind his fellows and will be compelled to give way to better men. It takes strict, practical economy to make the farm self-sustaining. The farm should produce its own bacon and hams, and should have a place where both can be properly cured and preserved. Details are generally too much neglected by farmers; and this is more generally true of California than of any other country. They do not like to be bothered with small things pertaining to the household. They prefer to live from a grocery store, in many instances, instead of from the farm.

#### Farmers Paying Tribute.

The Lecturer took a trip to Sonoma recently and there were on the boat a large number of vegetable peddlers; and as soon as the boat touched the wharf they up with their poles and their baskets and away they went over the hills, carrying vegetables to farmers. This heats carrying coals to Newcastle. Think of it; and of the tribute these farmers paid. There was, first, the man who raised the vegetables; then the freights on them to market; then the profits of the commission merchant; then freight again away from market; then fare for the peddlers—for that too had to be paid by the consumers; then the profit to the peddler—all this tribute the farmers had to pay, when by setting aside a few acres each and giving them a little attention, they could have much fresher, better vegetables, and at one-fifth the cost. Was it true that San Joaquin farmers did the same thing? Were they, too, patronizing the Chinese who float, and tote and drive the products of the soil about the country, because producers are too proud to produce them for themselves.

#### Do Not Buy What You Can Raise.

If your farm does not pay it is your fault. No place in the world compares with California for wheat fields and orchards and vineyards and pastures, and it is no fault of the farm if it does not produce well, no fault of the farm if Chinamen supply farmers with vegetables that the farm could better produce. It too often happens that the farmer lives outside his farm, and expects the farm to support him—that is, he buys all he eats and looks to the farm to pay for it. Cases were instanced in which, year after year, this was done, and when, after the market day hills were paid, nothing was left. It was store bills and butcher bills and grocery bills and vegetable bills—possibly other bills—that ruined farmers, just because they did not raise what they could. Old times, when farms were wholly self-sustaining, were better than

such a state of affairs. Farmers tried too often to live like townspeople—they gave too many notes, spent too much time at cross roads and in deadfalls, and did not attend to their business.

#### The Need of Farmers.

Farmers needed to invest more money judiciously on their farms, instead, as was sometimes the case, in town lots. They should make improvements. Should build barns with all conveniences attached and make home pleasant. They should use more tact and judgment than was often shown. Even in making good bread the housewife found it necessary to stir in brains and judgment, and farmers needed more brains and judgment put into the soil with their seed to make farming a good pursuit. They needed to mingle more with each other and to swap and distribute brains among themselves. The Grange was the best place for that. By imparting what each has all will grow and be benefited. All had heard of the "Little farm well tilled." It was a good thing. That and the "Little wife well willed" would always result in at least the "Little barn well filled." This lad, too, needed to be taught their part, but he was not an adept at that and would leave it. He would remark, however, that some mothers were fond of nice-looking young men—those white-handed, smooth-faced young men, who never go out in the sun. The young ladies, too, were apt to favor such beaux. It was all well enough for young people in town, but farmers' wives and daughters ought to look for something else. He would not like to see them marry solely for money and for farms and stock—those things were all well enough, and he would advise the girls never to fall in love with one who had not something of them all; but the man himself to be loved—the true farmer—was more than houses and lands and flocks and herds.

### St. Helena Grange and the Railroad Commission.

EDITORS PRESS:—At a meeting of St. Helena Grange, held on June 18th, the enclosed resolutions were passed, and the writer requested to furnish you with a copy of the same.—H. J. LEWELLING, Sec'y St. Helena Grange:

WHEREAS, The railroad commissioners appointed by the State of California, for the purpose of regulating freights and fares, and check the encroachments and exactions of the railroad companies, and for the protection of the farming, mercantile and industrial interests of the State, have failed for reasons better known to themselves, to afford the relief which was justly expected of them; and

WHEREAS, The record shows that Gen. Stoneman, a member of that commission, has fought manfully to redress the wrongs inflicted upon the people by the grasping railroad monopolists; therefore be it

Resolved, By St. Helena Grange, P. of H., that Gen. Stoneman is entitled to the gratitude and commendation of the shipping and traveling interests of the State for his bold, firm and incorruptible stand in his action as a member of that commission.

Resolved, That a copy of these resolutions be sent to Gen. Stoneman, and that they be published in the *California Patron* and *Rural Press*.—J. Lewelling, Chas. A. Storey, S. T. Pellet, Committee.

THE GRANGERS' SHIPPING ARRANGEMENTS.—Some time since the fact was mentioned in the *Patron* that the Grangers' Business Association of this city had purchased a site for a warehouse just above the railroad slip at Benicia, and designed ultimately to build thereon. Bro. Adams, the manager of the association informs us that the plans for the structure are in hand, and that the contract for putting up the building will be let in a few days. He says that it is the intention of the directors to have the warehouse completed on or before the 25th of this month. The intention is ultimately to have a storehouse, with a capacity at least equal to 50,000 tons. The manager says the association will be ready to receive consignments of produce or storage on or before the 1st of August.—*Patron*.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### COLUSA.

CROPS.—*Sun*, July 2: We are satisfied that the State of California will not have half the wheat she had last year, and hence there will not be as great a surplus as we had after last year's harvest, and there are a great many more ships on the road out here, and the good prices prevailing will head others this way. We therefore confidently expect better prices. Our county will not have half as much as last year—or over half. In company with Col. Hagar we went to Chico last Saturday. Going up we crossed the river at Butte City and returning crossed at Jacinto. There are but very few fields of good wheat on either route near the road. Hon. John Boggs has about 400 acres of white Townselle on the east side of the road, on his home place, which is the best wheat by far—for a field of any size—we have seen this season, and on the west side of the road his Proper is good also. From Butte City, almost to Dayton, the grain was pretty much all drowned out. There were some fields, sown again after the flood, but most of them did not seem to succeed well. John Crouch has, perhaps, a couple of thousand acres mostly on the Parrott grant—in Butte county—that is very good, but not as good as the same land produced last year. He had to sow twice. The northern and western part of the Parrott grant was drowned out and not much of it was sown. We went up on the line between the

Parrott and Pratt grants, and saw but very little grain on the latter where last year it was magnificent. Then the Dayton country, that has never failed, was not nearly up to the average, and was a long way below last year. There was a little good wheat between Dayton and Chico, but even that will be at least one-third short. Returning by the other route we find things no better. Dr. Glenn has but little wheat along the road. What he has is back, and we understand that he does not expect half his last year's crop. Some days before we crossed at Colusa and went up the east side of the river to Princeton. There is a considerable quantity of very excellent wheat along this road. In fact it was nearly all good, but this district of country is not large. We hear about the same reports from other portions of the county, and of neighboring counties. There is, however, a very great amount of land put to summer-fallow this spring, and with a favorable season Colusa will be likely to have the largest crop next year she ever had.

#### CONTRA COSTA.

CARP FARMING.—*Martinez Gazette*, July 2: We made a call a few days since at Mr. Dickinson's little carp farm near Concord, where he has four small ponds, supplied by artesian water, in which he is prosecuting the beginnings, as it were, of his fish hatching and raising here; as upon the 10 acres of land which he occupies, and is about to purchase, there is sufficient space and he has ample water supply from his wells to raise several hundred thousand fish every year, besides growing alfalfa enough to feed a small dairy herd of cows, and raising, with his facilities for irrigation, a large crop of market garden vegetables. One of this artesian wells delivers a constant two-inch stream of water, two ft. above the surface; and this is many times more than he has present use for, to keep his ponds full and running off through the waste pipes. Each of the ponds, which have a depth of from 8 or 10 inches to 2½ or 3 ft., is so arranged that the water can be drawn entirely off, and the fish changed from one to another, as convenience or propagation requirements may dictate. In the spawning pond Mr. Dickinson thinks he has about 15,000 young fish of this season's hatching, and ranging from ½ inch to 2 inches in length, and the larger portion of them will grow to 5 or 6 inches this season. In the larger pond he has about 1,400 of last year's hatching, which will now average a half pound each in weight. The fish gain much faster in size and weight after the second year than before, and there are a few of three years old in one of the ponds, which exceed 2 ft. in length and 6 lbs. in weight. The yearlings are sufficiently large for pan fish, and are of delicious flavor, as we are prepared to affirm from actual test on those given us for the purpose by Mr. Dickinson. As a business, where there is a demand for the stock, or facilities for getting the fish to market, carp raising properly conducted can hardly fail to be profitable, as the fish feed largely on the vegetation of the ponds, its quality and nutritious value depending of course upon the nature of the soil and the quality of the water; but if nothing is furnished from the pond, the cost of feeding the fish will be small compared with the quantity and quality of meat produced. There are a great many places in the county where carp farming could be profitably followed; and there is hardly a farm, where there is a small spring or windmill, but will furnish the means of raising enough for domestic use. We hear that Messrs. Rice, Hemme, Wood, Elliott, Marsh, Russellman, and many other residents of the county, are preparing or have prepared carp ponds, the stock for which they have engaged of Mr. Dickinson.

#### MENDOCINO.

BIG GOOSEBERRIES.—*Ukiah Democrat*: Ukiah valley can challenge the State to heat the gooseberries raised here, both in size and flavor. Mr. N. Wagoner, who is our most enterprising and energetic horticulturist, has made the raising of gooseberries a specialty for the past few years, and now he can boast of having raised the largest berries of that kind ever produced in the valley, and, we think, in the State. On Friday last he exhibited to our gaze, and made us a present of, a double handful of them, the largest of which measured 3½ by 3¼ inches, and it only took 32 of them to weigh a pound. They are of the Queen Victoria variety. Who can beat them?

#### MERCED.

FROM GRAIN TO FRUIT.—*Valley Argus*, July 2: M. D. Atwater, one of our most successful wheat farmers, has planted this year about 40 acres in the choicest varieties of grapes on the high plain lands of his home farm, and is trying the experiment of raising grapes and other fruits without irrigation. The ground was plowed deeply and well pulverized before planting out the cuttings and since planting the ground has been cultivated with a plow, cultivator and hoe at regular intervals, by which means the moisture has been kept up and the young vines are thrifty, making a satisfactory growth. Mr. Atwater expresses confidence in the success of his experiment, which we hope will be fully up to his expectations. He has a few acres about his dwelling devoted to orchard, vineyard, kitchen and flower garden, watered from a reservoir supplied by raising water by windmill, and produces some of the most choice fruits and vegetables grown in the county, and if he succeeds in demonstrating the practicability of raising grapes upon the dry plains without irrigation, he will have accomplished a great deal in developing the value of our soils. Mr. Atwater carries on a wheat

farm of 8,000 acres, a distance of six to nine miles from his residence, and yet finds time to look after his little home farm of 3,000 or 4,000 acres in wheat, a band of sheep, a well tilled garden, orchard and vineyard of four or five acres, from which we have seen as fine specimens of figs, peaches, grapes and other fruits as can be grown in the State.

#### MONTEREY.

CROPS.—*Castroville Argus*, July 2: In company with Messrs. Jordan and Casady we took a drive into the country last Tuesday to see the crops and to witness the working of the straw-carrying attachment for a threshing machine lately invented by the Crane brothers. It is attached to a separator at Mr. Potter's place, about six miles from town, and while there we saw it subjected to a thorough test, and there is no doubt of its being a complete success. We hope the boys will make something out of it. We were not favorably impressed with the looks of the crops, the wheat in particular, most of the barley looking very well. Very little of the wheat seems to be afflicted with rust, but has failed to mature from lack of moisture or other cause. One field in particular, a small distance off, had the appearance of being No. 1, the wheat standing breast high, the heads large and handsome, but had very little in them. Potatoes also looked rather poor.

THE TABLE LANDS.—*Salinas Democrat*: The table lands north and northwest of this town have not this year kept up their reputation as grain producers. The mid-winter rains doubtless were the cause, leaving a crust on the surface which pinched the stalks of the growing grain, and kept the ground cold. It was expected that the "latter rains" would have changed those conditions, but, as they did not come, hence the comparative failures. It is too late now, but we hazard the opinion that a vigorous harrowing made when the spring set in would have remedied the mischief. In this connection we mention the appearance of wild oats in unwanted quantity in the fields alluded to. They are "weeds" and as they have already dropped their seeds, the only effectual way of clearing the land of them must be a double plowing—one in the nature of a summer fallow and the other after they have sprouted and in preparation for sowing the crops which are to occupy the land.

#### NAPA.

ORANGES IN NAPA VALLEY.—The *Calistogan* of late date on this subject mentions the fact that T. J. Tully, located in the hills two miles southwest of Calistoga, has 50 orange trees three years from the bud on four-year-old trees, making them now seven years old. Twenty of these trees are bearing this summer, and next year the whole number will be producing fruit. These trees, the owner says, have never been frost-killed, nor even slightly; and he therefore expects to be entirely successful in his efforts to raise this species of fruit here. Considering that his trees escaped injury last winter, it is not probable that he will be troubled with frost any in the future.

#### SAN BENITO.

THE GRAIN YIELD.—*Hollister Advance*, July 2: The harvest of the grain crop commenced in this county about ten days ago, and is progressing rapidly. But little threshing has been done as yet. Owing to the fine growing weather which has prevailed of late, the crop yield throughout this entire section will be much larger than was looked for two months ago. Grain that was early sown, is in all parts of the county, yielding handsomely, even larger than last season. The late sown grain, of which there is much in this county, is, however, turning out very poor, in some localities being almost an entire failure. A careful estimate shows that the total yield will be from one-fifth to one-fourth smaller than for the season of 1880.

#### SONOMA.

THE WOOL SALES.—*Cloverdale Reville*: The wool sales this season did not create as much excitement as usual. The clip is lighter in weight but superior in quality. So far this month there has been shipped from the depot 2,950 bales or nearly 1,000,000 lbs. On the 14th, J. F. Hoadley forwarded eight car loads of this staple, and other parties the same number, making 16 car loads in all. Shaw, Bowman & Co. and E. Grisar & Co. purchased probably three-fourths of the wool sold here, paying on an average 30 cents per pound. C. Travers of Mendocino county, had the most wool of any individual who came to this market, over 100 bales, from which he realizes nearly \$8,000. According to the number of sheep, Zuver & Truitt had the best yield, their clip amounting to nearly 30 hales. The sheep from Mrs. Moyle's place yielded nearly five pounds per head. The wool market having been good for the last few years, the ranchers are generally out of debt and are prosperous.

#### SAN JOAQUIN.

CARP.—*Stockton Herald*, June 27: W. L. Overhiser has attained very gratifying results in his experiment in fish culture. Mr. Overhiser uses an engine for raising water for his house, stables, and for irrigating his garden and orchard. The water for irrigation is pumped into a reservoir, or pond, on his ground, the said reservoir being made by building a circular embankment, 150 ft. in diameter, of a height sufficient to give a depth of water of 7 ft. above the general level of the place. In this reservoir Mr. Overhiser last February placed about 30 carp, and at the present time this pond appears



to be literally swarming with young fish from 2 to 5 inches in length. Mr. Overhiser failed last year to produce any young carp, and last February he found out the cause of his failure. He had several catfish in the pond with his carp. In February he drew the water off and removed the catfish, since which time his carp have multiplied with astonishing rapidity. The catfish in scouring about the bottom of the pond had destroyed all the spawn as fast as it was deposited.

#### TULARE.

NOTES.—Delta, July 2: Along Tule river, from the Lake to the mountains, all the farmers are busy garnering their grain, and from the present appearance, the yield will be generally good. Some have already threshed and are hauling their grain, for market or storage. Everybody and every available horse in the country, is on the move. On the lower Tule a great deal of the grain is lodged, requiring much extra time, labor and expense to head it; consequently it will not all be secured before August.

TURKEY CROP REDUCED.—The turkey crop through Pleasant and Frazier valleys will not be so large as heretofore, though there are enough to supply each family in Tulare county with one for Thanksgiving. B. M. Hotchkiss, who has, in previous years raised them by the thousands, thought it useless to do so this year, as the sun would, undoubtedly, draw the earth into that flaming orb on the eventful 19th, and roast them before they were half grown. As soon as he found his error, he started over the country to purchase several hundred, so as to utilize the large number of acres of stubble he has.

#### VENTURA.

THE GOOD OUTLOOK.—Free Press, July 2: It is cheering to notice how rapidly Ventura county has recovered from the depression caused, first, by the dry year, which killed two-thirds of all the cattle and sheep in the county; afterward, by the two years in which the price of our then staples, hogs and barley, went down to about nothing. Last year, with a fair crop, the farmers very nearly paid up the stores, the bank—and the printer. This year, with splendid crops of everything (honey excepted, which is not a farming crop) they will pay everybody in full, and have coin left. The wheat crop now being harvested is above the average, especially in quality, the flax and barley the same, while the later crops of corn and beans never looked more promising. No wonder our people feel good. In any other country, three consecutive years of such depression as our farmers were subjected to, would have taken 10 years to recover from and pay off the mortgages. Here, our farmers have done it in two years, with cash left—or, rather, they will have when the present crop is marketed, say, three months hence.

#### OREGON.

CRICKETS.—Oregon Cor. Idaho Statesman: A few days ago I had occasion to ride over the range on Burnt river and Willow creek, traveling over about 75 miles of territory—bunchgrass hills—and along the whole distance, from 10 miles below Old's ferry, on Snake river, to Ironsides mountain, and averaging five miles in width, the earth presented a black, moving, shrieking mass of crickets (*orthoptera*). While those crickets are not so destructive as the locust (grasshopper), they nevertheless devour gardens, grain fields, and much tender vegetation in their path. I saw many gardens which they had left a wreck. They cross streams, ditches and mountains, and seem to move in columns, but with little regularity. They have no wings, hence they depend upon their long, lever-like legs, or hoppers for locomotion. They are not much like the chimney black cricket. They are fearful cannibals, slaying and eating each other with a ravenous appetite. They have no sting or dangerous nippers, hence are not dangerous to the human family, so far as inflicting wounds. The way these crickets cross streams is amusing. When they come to a stream of water which they "think" they can cross, they climb every object along the margin, and when as high as they can ascend, they shut their eyes and give one long, dangerous, and sometimes fatal, leap into the water, shut up like a jack-knife and float down till they come in contact with an object; then they immediately seem to wake up and make a desperate grab and crawl upon it. If he is lucky enough to be on the right side, he moves on; if not, he tries it again. Thus thousands are drowned.

BURSTING POWER OF ICE.—Ed. Hagenbach experimented, during the past severe winter, upon the bursting force exerted in the expansion of water when freezing. Two interesting experiments were made with cast-iron hand grenades. The outer diameter was 5.9 inches, the inner diameter 5.04 inches. The shells were filled with water, closed with a screwed iron plug, and exposed to the cold. Both shells were broken, and a curved thread of ice was projected, by means of an ice column, from the upper surface. One of the plugs was evidently thrown out with great violence, and to such a distance that it could not be found. The curvature in that case was bent upward.

At Painesville, Ohio, July 4th, Martin Noonan, a teamster, and Daniel Noonan, his brother, were arrested as the men who robbed an express wagon of \$20,000 on June 7th. The securities were recovered hidden in a straw bed. There was \$6,000 in currency and \$5,000 in other forms left.

#### Meeting of the Viticultural Commission.

(CONTINUED FROM PAGE 19.)

on Conference with the Board of Regents. Attention was called to the important advantages which the University afforded to mature minds in matters of scientific research, which, it was considered by the Board without dissent, were of greater practical value to the State than even elementary instruction of under-graduates. One of the members thought that the public was in danger of being

#### Misled by Careless Statements

Of men who are supposed to understand the wants and condition of the University, to the effect that the institution is not a success. The first manufacture of the bisulphide of carbon had been attempted successfully by a University graduate, aided by instruction from Prof. Hilgard, and its use for exterminating squirrels and gophers had first been recommended from the same source. The special investigator of this commission in the field is a University graduate, specially selected, instructed and guided by Prof. Hilgard in his occupation of searching out and disclosing the presence of phylloxera and other pests in vineyards. His work has already been the means of circumscribing and commencing the systematic destruction of a disease that, until this year, was fatally threatening an industry in which at least \$30,000,000 are already invested. The executive officer of the commission is also a graduate. So in other active pursuits the young men educated at Berkeley are industriously laboring to the honor and for the welfare of the State. It was the expressed opinion of the commission that the University should be liberally endowed and supported, and that its usefulness and success should not be measured by the number of under-graduates, but rather by the continued study and influence of graduates during their mature life, and the means afforded for the whole people to derive advantage from a well-supported seat of learning and scientific labor.

In this connection, Mr. Blanchard offered

#### The Following Resolution,

Which was unanimously adopted:

Resolved, That it is the sense of this Board that the Agricultural Department of the State University has been ably conducted, and has already been of incalculable benefit to the farmers of the Pacific coast, and indirectly to all its industries; that its weakness lies only in want of adequate appropriations of money to maintain and conduct its work, and that the agriculturists of the State be urged to accord to the University a cordial and zealous friendship and support.

The Secretary was instructed to transmit a copy of this resolution to the Board of Regents.

#### Report of the Chief Executive Officer.

On the call for reports from special committees, Mr. Wetmore submitted the following on the progress of the work in his department as Chief Executive Viticultural officer:

To the Board of State Viticultural Commissioners—GENTLEMEN: I have the honor to submit for your consideration a brief report concerning the progress of work in my department. A more detailed account will be prepared for publication as soon as practicable.

The most important work of investigation of the extent of ravages of vine pests and vine diseases, and results of remedies applied, is now being continued, as it was begun last year, with the assistance of a special investigator, F. W. Morse. The chief ends of the researches are as follows:

First—To determine as accurately as possible the locations and extent of vineyard areas affected by pests and diseases.

Second—To instruct vine-growers how to ascertain the presence of pests.

Third—Having ascertained the presence of a pest in a vineyard, to warn the proprietor and others in time to eradicate the evil before it becomes unmanageable or too costly.

Fourth—To ascertain by actual observation the results of any remedies that may have been applied or experimented with in practical culture.

Attention is especially directed by Mr. Morse to the phylloxera. Last year our funds were too limited to permit as careful and as thorough work to be done as was desired. This year our investigator was engaged to commence observations on the 1st of June, with the intention of keeping him steadily in the field at least four months, visiting as many vineyards in all important districts as possible, and all suspected places wherever reported in the State.

#### He is Keeping a Record

Of all his observations, meanwhile advising us of important discoveries as he passes from one district to another. It is too early now to give any detailed statement from his notes. It is gratifying, however, to know that his discoveries of phylloxera in vineyards, heretofore considered unaffected, have been thus far immediately followed by determined and systematic efforts on the part of proprietors to exterminate the pest, which will, without doubt, be successful and easy to accomplish, because the newly discovered spots are generally less than one acre in extent.

A careful examination of the portion of J. C. Weinberger's vineyard, near St. Helena, which was found affected by phylloxera last year, and treated with bisulphide of carbon last winter, under the personal supervision of our Secretary, J. H. Wheeler, was made by Mr. Morse. His report corroborates those of others who had previously examined it. He was unable to find any phylloxera on the roots of the section treated; but, on the contrary, to our extreme gratification, the roots which showed the effects of last year's ravages were vigorously developing healthy rootlets, and the foliage and new canes of the vines displayed renewed life and fertility. Outside of the section treated, two rows of vines were found infected on one side, indicating that the area of the diseased part had not been fully circumscribed. One more treatment, it is now expected, will completely eradicate the pest from this vineyard. The success of this treatment, which was considered a test case, has restored confidence to the vine growers throughout the State. One of the lessons taught by it, however, is that ample margin should be treated around infested spots to insure the destruction of all the insects which may be spreading upon healthy vines, but not yet sufficiently numerous to be

#### Easily Detected.

In comparison also with the results of treatments during this summer upon diseased vines, now being watched, it is apparent that the winter treatment is the cheapest and most effective.

It is to be hoped that every facility will be afforded to Mr. Morse by the vine-growers, wherever he goes, to expedite his work. The sooner we know where pest exists,

the sooner may the remedies be applied, and the saving of time will not only lessen the extent of the evil and expense, but also check its progress.

Some vine-growers last year complained bitterly against this commission because the values of their properties were injured, as they claimed, by the disclosures of our investigations. Now, however, there are fewer complaints, because through our efforts the practical values of remedies have been demonstrated and confidence has been restored. I have noticed several important purchases of diseased vineyards by experienced viticulturists, who no longer doubt their ability to contend against the insect. Many intelligent proprietors have voluntarily engaged us to examine their vineyards, hoping to discover the pest, if present, before it has made serious progress.

A simple way of stating the cost of making a thorough winter treatment with the bisulphide of carbon is by saying, "It costs one ton of grapes per acre." If only one or two acres are affected the expense is a trifling one.

#### Experimental Work.

The experimental work, which by law I am required to supervise, is being carefully conducted. I have been ably assisted by our secretary, who has personally supervised and directed applications of bisulphide of carbon, by Mr. Morse, who, together with Mr. Wheeler, made an accurate chart of the vines to be experimented with, showing the relative positions of the dead, diseased and apparently healthy stocks; by Prof. E. W. Hilgard, of the State University, who, with Mr. Morse, personally directed the preparation of various fertilizers to accompany the bisulphide treatment, and by Mr. H. Appleton, who has given us control of a small isolated vineyard belonging to him in the Sonoma valley for experimental purposes, and has worked faithfully under our direction at small expense to the State. Mr. Mayers has also devoted to our experiments a portion of his vineyard lying near Mr. Appleton's. A preliminary report from Mr. Appleton is appended hereto. The charts of the experimental grounds and of the methods of treatment are also submitted.

As soon as practicable I shall make a detailed report concerning this experimental work, and make known results as they are developed. So far we are encouraged by apparent success.

Efforts are being made to test the phylloxera resisting powers of the wild vine of this State—*Vitis californica*.

The statistics of this year will be important in respect to plantations of

#### American Resisting Stocks.

I have become more convinced than I was when I prepared my report to you last year, as commissioner at large, that we must follow the experience of French vine-growers with these stocks and institute experiments of our own rather than to rely on the written advice of some vine-growers of the United States east of the Rocky mountains, who publicly declare that the phylloxera is a blessing and not a curse, because it causes to be substituted the American vines for the *vitis vinifera*, and who ignore the fact that our vine-growers, without denying the value of some of the American varieties, are seeking to preserve the European or *vinifera*. Great mistakes have already been made this year by following such incompetent advice, and it is therefore my intention to report as early as possible upon the results of experiments with American vines, so that as much light may be thrown on this branch of the subject as possible before new orders are sent East for cuttings. Again, I desire to caution our people against the importation of any rooted vines. Cuttings will be less dangerous, and can be easily disinfected.

I have obtained, through the courtesy of Prof. Foex, of the National School of Agriculture of Montpellier, France, voluminous notes of French experience with resistant grafting stocks, and shall have them translated, giving due credit to his intelligent and most valuable labors.

The sample specimens of various grafts on roots and seedlings of the *vitis californica* submitted for your inspection will probably be interesting as illustrating the facility with which this species takes the graft of the European varieties, and the rapidity and vigor of development. The seedlings are of this year's growth, from *Riparia* and *Californica* seeds.

#### Entomologist and Cryptogamic Fungi.

An effort was made early this year to obtain the services of an entomologist through the creation of a Chair of Entomology at the State University, which institution has already and is still doing valuable service in the cause of agriculture. Unfortunately, this has failed, the Legislature having adjourned without passing the necessary appropriation for the purpose. There will be no further opportunities to obtain the appropriation until the Legislature convenes again. The long interval intervening will prove a great loss of time, and we may again be disappointed. Cryptogamic fungi also require careful and continuous study. The duties of the administrative officers of this Board are chiefly confined to matters of invention, experiment, compilations and direction, and the dissemination of information drawn from practical experience. For purely scientific research our members have little time. Meanwhile, each year brings more trouble for the farmer, whether in viticulture, horticulture, or other branches of agriculture. It is time that some one should devise a way to accomplish what we want.

Prof. Dwinelle has wisely thought of the plan of commencing the education of at least one student at the State University in entomology, who shall devote himself to books, correspondence, and original observation. The professor very patriotically offers to assist and direct such a student in his studies, having himself studied sufficiently for that purpose. A subscription is being organized to raise the funds to defray the expenses, and with our aid I doubt not but that it will prove an important

#### Step in the Right Direction.

Mr. Cooke, your Chief Executive Horticultural Officer, is accomplishing good by encouraging young men in Sacramento, who have the opportunity to consult his collections and advise with him, to study this science. There remain two effective means of doing more immediate good.

First—The National Government might be induced to provide for a member of the Entomological Commission to reside on this coast.

Second—It is within the reasonable possibilities that a fund of \$100,000 might be obtained from private subscriptions to endow at the University chairs of Entomology and Cryptogamic Fungi. Our more wealthy men might be found who would honor themselves and the State by making the endowment, or a popular subscription, generally circulated among the people, might be successful. The adaptation of vines to soil and climate is, I would respectfully suggest, an important topic for each member of this Board, and others who will assist us, to consider. The question is constantly recurring, "What varieties of vines ought I to plant?" We shall save many unprofitable ventures when we can answer this question with a fair degree of accuracy. It is very important because so many new vineyards will continually be planted. I intend to collate what information I can on the subject, but I shall need all the assistance that can be given to me.

#### Fungoid Diseases.

This year was marked by showers of rain about the 1st of June. The rapidity with which some vineyards were afterward attacked by fungoid disease is attributable to the increased moisture. Questions have been forwarded to the Commission relating to the names of and remedies for certain types of this evil, which, without careful scientific examination, we have been unable to satisfactorily answer. We have been promised assistance, however, through one of our well-known botanists, who makes a specialty of fungi. In consultation with him I elicited the following general statement, which may serve as a guide for inventive spirits, viz.: Cryptogamic Fungi are susceptible to strong odors or perfumes. A case was cited where he had recommended one gentleman to cultivate heliotrope in a conservatory at San Rafael, where a grapevine was suffering from mildew. He preferred tobacco smoke to sulphur in treating affected vines. Refuse tobacco may be used, or the plant may be raised at the vineyards for the purpose.

I find by consulting Prof. Foex' Manual that in France,

for the Anthracnose—a stubborn form of fungus which does not yield readily to sulphur—lime and sulphur are freely used, the latter beginning with the first appearance of the disease and repeated every eight or ten days until it disappears. It is recommended also to wash the old wood of the vines with green vitriol (sulphate of iron), which is also beneficial to vegetation. The value of the blue and green vitriol has been demonstrated this year in this State, but I think that preference should be given to the latter on account of its stimulating effect upon soils and vines.

CHAS. A. WETMORE, Chief Ex. Vit. Officer.

#### Miscellaneous Matters.

Mr. Krug here spoke of the active work being done in the St. Helena district with carbon bisulphide to exterminate phylloxera immediately, whenever discovered by Mr. Morse, who had recently visited that district for the Commission.

President Harazthy reported favorable results with bluestone, as applied over a year ago to the Orleans vineyard. Commissioner Blowers, of Woodland, reports having been overrun with grass-hoppers in the vicinity of his vineyard, but by the commendable co-operation of his neighbors, destroying them by means of hauling pans of tar thinned with petroleum, about the borders of the vineyards, he has been able to prevent their destructive progress.

A question occupying the Commission at considerable length was that of the adaptability of different varieties of grapes to certain soils. No definite rules could yet be laid down. Mr. Krug specially asserts the necessity of adopting hillside soils for red wines, whereas light-colored wines belong to the rich, low bottoms. A valuable work to ascertain the truth of these facts will, during the ensuing harvest, be conducted at Mr. Krug's cellar, at St. Helena, viz., the appointment of a department in which will be stored samples of wine made from the various grapes from the various vineyardists—varieties, locations, altitudes, etc., will be noted and preserved. Whether this adaptability be only local, can be ascertained only by other cellar-masters following his plan.

The resolutions of the Board of Horticulture, adopted on the 30th ult., were concurred in without debate.

Furthermore, the work of President Dwinelle, of the Horticultural Board, regarding a subscription to support an entomologist, were approved and recommended to the public. Adjournment followed.

#### News in Brief.

EARTHQUAKE at Hanford on the 3d.

CYCLONE at Poughkeepsie, N. Y., on the 5th.

THERE are only 45 prisoners in the Utah penitentiary.

THE total acreage in vines in Napa county is about 12,000.

SANTA CLAUS, the California horse, was defeated at Rochester on the 5th.

THE army worm has just made its appearance at Lower Soda Springs, Shasta county.

A NUMBER of the retail butchers of this city have organized a Mutual Protective Union.

THE opera house and 12 other buildings at San Jose, were destroyed by fire on the 4th.

THERE are 300 men in the woods at the head of the Yakima, W. T., getting out railroad ties.

THE World says: There is no longer a doubt that the infant heir of the Duke of Norfolk is blind.

CHINAMEN are catching spring salmon on the Columbia river, near Clifton, Oregon, with hook and line.

THE silver ledge recently discovered at Orcas Island, W. T., is creating considerable excitement.

FROM 200 to 250 tons of refined sulphur are shipped every month from the Humboldt Co.'s works, near Winnemucca, Nev.

France has determined to mobilize 100,000 troops and send them to Africa to put down the insurrection with a strong hand.

HAMILTON DISSTON, the Philadelphia saw manufacturer, has bought 4,000,000 acres of land in Florida. It will be reclaimed and colonized.

THE proposition to levy a special tax of \$12,000, in Seattle, W. T., to build new school houses, was voted down by the people of that district.

WILLIAM BLANKENSHIP, a young farmer who resides in French Camp, has just fallen heir to \$30,000, through the decease of an uncle in Arizona.

THEY have a locomotive in Austin, Nev., called the "Mule's Relief," which hauls a car heavily loaded with ore up a grade 400 ft. to the mile with ease and rapidity.

THE Oregon Astorian says: The other day one man returned to the West Coast cannery with three salmon among his lot that weighed 183 lbs., an average of 61 lbs. each.

AN English official will go to America in the autumn to conclude a consular convention with the United States in order to cope with the crimping of British sailors in America.

ISAIAH W. HELLMAN, President of the Farmers' and Merchants' bank of Los Angeles, has been appointed by the Governor as a Regent of the University, in place of D. O. Mills, resigned.

REPORTS from Camas prairie, Idaho, are to the effect that the cattle are recovering from the terrible epidemic with which they have been afflicted. Over 250 have died from black-leg out of a herd of 5,000.





## Threnody.

Oh, sweet are the scents and songs of spring  
And brave are the summer flowers,  
And chill are the autumn winds that bring  
The winter's lingering hours.  
And the world goes round and round,  
And the sun sinks into the sea,  
And whether I'm on or under the ground  
The world cares little for me.

The hawk sails over the sunny hill,  
The brook trols on in the shade,  
But the friends I have lost lie cold and still  
Where their stricken forms were laid.  
And the world goes round and round,  
And the sun slides into the sea,  
And whether I'm on or under the ground  
The world cares little for me.

O life, why art thou so bright and boon?  
Oh breath, why art thou so sweet?  
O friends, how can ye forget so soon  
The loved ones who lie at your feet?  
But the world goes round and round,  
And the sun drops into the sea,  
And whether I'm on or under the ground  
The world cares little for me.

The ways of men are busy and bright,  
The eye of woman is kind;  
It is sweet for the eye to behold the light,  
But the dying and dead are blind.  
And the world goes round and round,  
And the sun falls into the sea,  
And whether I'm on or under the ground  
The world cares little for me.

But if life awake and will never cease  
On the future's distant shore,  
And the rose of love and the lily of peace  
Shall bloom there for evermore.  
Let the world go round and round,  
And the sun sink into the sea;  
For whether I'm on or under the ground  
O, what will it matter to me?

—J. G. Holland in Scribner.

## To the Girls.

What are you doing, my dear girls, to help along this great, bright world of ours? Toward what path are your feet tending? To what goal in the far distant future do your thoughts turn? What is your aim in life? There have been earnest-souled women who have done great and good deeds in humanity's cause, or have won with pen, pencil and chisel, undying honors, and written their names in never-fading letters upon fame's glittering page; and these, not scions of noble stock, but honest, self-made women of the soil, who, through long days of labor and nights devoid of ease, have raised themselves to a high position by the mere force of their sterling qualities with native energy and strength of character. It cost something! Ah, yes. Fortune seldom comes at your beck; if you sit down with folded arms to woo the fickle goddess, you will very likely sit there to the end of the chapter. Rouse yourselves, gird on your armor, go forth with confidence and hope, make up your mind to work, and work with a will, throw mind and soul into your pursuit, for whatever is worth doing at all is worth doing well; the reward may be long in coming, you may sometimes grow faint and weary, and may fail more than once, twice or thrice, but never give up, try again and again; let every defeat nerve you to fresh contest. Girls, whatever your lot in life, do your best; whatever your work, it is worthy of best efforts. In climbing the mountain's rugged side, take care that there be no unwary steps, no sudden fall from rectitude into chasms of moral vice; lend a helping hand now and then to lead a weaker companion along the rough places, improve each golden moment of opportunity, catch the good within your reach. Do not spend your time in vain regrets for any mistakes you have made, but set yourselves to work to repair it; she who waits for an opportunity to do much at once may breathe out her life in vain and idle wishes, and regret at the last moment of her life her worse than useless endeavors in not accepting the present instead of looking into the far future, for a more glorious and exalted sphere. Let every stroke tell, let every step be a firm mark along your onward journey, footprints that will remain long after you have passed to the other shore; and let whatever will be your aim, above all else, strive to make your life attractively upright, pure and honorable; be everything that is thoroughly womanly, helpful, charitable, tender toward your fellows; a living, breathing lesson to all around; and a golden anthem that shall ring golden chimes of joy and love throughout all eternity.—Mrs. F. G. Church, in Western Rural.

**INDUSTRIAL INDICATIONS.**—The arrival of gold in the United States from Europe is as great in proportion as is the arrival of immigrants from the same quarter. The United States have such vast resources of production that we are fast draining Europe of her surplus gold and of her best blood and muscle. We have cotton, which must be used to clothe toiling millions, and of late years we have been applying food in immense quantities from the Western States and from the Pacific coast. Every year now but makes more manifest the grand destiny which is in store for the inhabitants of the most favored people in the world.

## Home Making in Miniature.

[Written for the RURAL PRESS by MRS. C. F. YOUNG.]

Referring to the sketch of trout pond farm in last week's RURAL, I think I hear some one exclaim:

"I do not see the pay coming in, or the enjoyment Mrs. C. can have, living out in the woods. More than likely a cold winter, or heavy rain, or hot wave in August, will kill all their fish, and then there they will be poorer in the woods than we are in town. For myself, I don't want anything to do with such a life."

My dear madam, Mrs. C. is living her own life. You could not, if you would, share it. Perhaps you can, by reasoning, comprehend where and how money is saved and accumulated by living out of town. First, the cost of rent. A house of four rooms, where there are side-walks, is counted cheap at \$10 a month, or \$120 a year; water, at \$2 a month, equals \$24 a year; milk, two quarts a day at 10 cents a quart, \$73; two rolls of butter a week at 65 cents a roll, \$67.60; 30 cords of wood a year, at \$6 a cord, \$180; poultry, 50 chickens at 50 cents each, \$25; eggs, 50 dozen, \$16.66. After the first year, strawberries, 50 lbs, at 12½ cents, \$6.25; ditto, blackberries and red raspberries, \$12.50; radishes, lettuce, string beans and tomatoes, \$20. This is a fair estimate of actual cost in Nevada City. It aggregates \$545 saved each year by living out on their own place. Of eggs and poultry there will be a surplus equal to the cost of their feed. The calves, kept three years and sold for beef, will pay for the hay required to sustain them the previous winters. By that time, they will be ready to harvest both clover and wheat hay.

Beside helping their father in the construction of the trout ponds, the two eldest boys have, since March, first cut, sawed and split 25 cords of stove wood, worth, on the ground, \$3 a cord. If they cut as much more, then they have earned their own clothing and books. This \$545, that must have been expended in town, in a manner, that, at the end of the year, there would have been nothing to show for it, will, on the new place, be seen in the shape of an addition of two rooms, hard-finished, and paint, and in pipe to bring the water to the door. Every dollar will count in substantial improvements.

The time and strength that town boys apply to mischievous pranks, Mrs. C.'s boys will give to the acquisition of industrious habits and the care of pets. The little fellows have pigeons and doves. They have swings and little axes, and take turns playing pull the cross-cut saw. It does not appear to be a task, but a pleasure to help build a home. They challenged us to a trial of strength with sledge and wedge in splitting stove wood, and said that we could almost be as much a boy as mother was.

My dear madam, it largely pays to train boys to industrious habits. It pays the parents and the community in which they reside. After that, it pays the State and the nation. Who dares to say that it will not pay even in the next world and throughout eternity?

New and crude as everything will appear for a year or two, the consciousness of proprietorship with their parents in this important work of home-making, lends a charm to every hour's work. Something to love and pet, to plant and see it grow, to beautify and remember as long as they live. If they persevere, how many precious memories will, in future years, cluster around the experiences of these lads at the (then) old home in 1881.

**USE OF DRESS.**—No matter what men may write or say upon the subject, the womanly woman will always pay considerable attention to her dress, as she should. Indifference, and consequent inattention to dress, often shows pedantry, self-righteousness, or indolence. It is not a virtue, but a defect in the character. Every woman should study to make the best of herself with the means at her command. Among the rich, the love of dress promotes some degrees of exertion and displays of taste in themselves, and fosters ingenuity and industry in inferiors; in the middle classes, it engenders contrivance, diligence, neatness of hand; among the humbler, it has good effects. So long as dress merely interests, amuses, occupies such time and such means as we reasonably allot to it, it is salutary; refining the tastes and the habits, and giving satisfaction and pleasure to others. Sensible men like to see their wives and daughters well dressed, and take pride in their appearance. The woman who has not some natural taste in dress, some love of novelty, some delight in the combination of colors, must be deficient in a sense of the beautiful. As a work of art, a well dressed woman is a study. Consistency in regard to station and fortune, is the first thing to be considered. A woman of good sense will not wish to expend in unnecessary extravagance money wrung from the hands of an anxious, laborious husband; or, if her husband be a man of fortune, she will not encroach upon her allowance. It will be her duty to dress well with as little expense as possible—for it is unbecoming to no woman's dignity to be careless of the clothes she wears, and to economize in her expenditure. When love of dress is indulged in beyond the compass of means, it cannot be too severely condemned. But it is the duty of every woman to dress as well as she can.

## Two Farmers' Wives.

During a summer tour among the New England mountains, Col. Higginson came across two types of farmers' wives. The thought impressed by the meeting was that "home" meant much in their patient, silent lives, which are seldom broken by a holiday. He wrote to the *Woman's Journal* what he saw:

"Walking by a comfortable farm-house, the other day, I was attracted by a remarkably fine lily, of a species new to me, which grew in a wooden urn on the doorstep. On closer inspection it proved so beautiful that my companion and I made bold to ring at the door and ask for further information.

"We were at once cordially greeted by a cheery woman of middle age, who received with delight our praises of the lily, showed us a fuchsia and geranium which rivaled it in her affections, and insisted on our going into her old-fashioned parlor, where a magnificent ivy literally encircled the four sides of the room from a single root in the corner. She had come to us from the wash-tub, but she looked perfectly neat, and was ready to talk as we listened.

"She had lived all her life in the house where we saw her; it had been occupied by three generations of her own family before her; relics of their old-fashioned furniture were there, stoutly retained against the blandishments of furniture hunters such as ourselves. Especially curious was a quaint old mirror, with heavy gilt frame, and an odd little clock at the top.

"Here our hostess had been married, here she had borne six children, several of whom had died; she had lived for a year or two in Boston, 'hub of the universe,' but she liked the old homestead better. She did all her own work,—the children at home being still young—and she apologized profusely for the untidy appearance of a room in which we could nowhere detect a speck of dust. In her manners and language she would have appeared to advantage anywhere. She lived, to be sure, near the village; but I am constantly receiving the same sort of impression from the women whom one meets at the doors of lonely houses far up on the mountain side.

"Driving a long distance, one day, in search of a lost spy-glass, I was directed at last up a by-road leading from a by-road, and ending at length in a solitary mountain gorge, where there was but a single house. I could not imagine what had brought a settler there, until I noted a fine 'sugar orchard' of maple trees, the finest to be seen in that whole region.

"On my knocking at the farm-house door, it was opened by an old lady—I use the term advisedly—so neat, so kind, so agreeable in expression and manners, that a city visitor would have felt justified in engaging a month's board at once, on the face of appearances alone. For 25 years she had lived up in that lonely glen, going out of it only to attend 'meeting' on Sunday, or to make rare purchases at the little village store.

"She did not seem so have thought of it as distant or solitary until all of her children had left the farm to seek their fortunes elsewhere; but now she confessed to a wish to leave it, not because it was in itself lonely, but because it was far from them. Consequently, she now hoped that 'he' would buy a farm nearer to other folds."

## Hints for Writers.

Write one side of the sheet only. Why? Because it is often necessary to cut the page into "takes" for the compositors, and this cannot be done when both sides are written upon.

Write clearly and distinctly, being particularly careful in the matter of proper names, and words from foreign languages.

Don't write in a microscopic hand. Why? Because the compositor has to read it across his case, at a distance of nearly two ft.; also, because the editor often wants to make additions and other changes.

Never roll your manuscript. Why? Because it maddens and exasperates everyone who touches it—editor, compositor and proof-reader.

Always write your full name and address plainly at the end of your letter. Why? Because it will often happen that the editor will want to communicate with you, and because he needs to know the writer's name as a guarantee of good faith. If you use a pseudonym or initials, write your name and address below it; it will never be divulged.

## Mind and Brain.

Aristotle regarded the heart as the seat of the "rational soul." The brain was looked upon by this prince of philosophers as a comparatively useless organ, whose only function was to cool the heart. According to the latest opinion of scientific authorities, the functions of the mind are performed in the rim of gray matter of which the outermost layer of the brain consists. There sensation ends and thought begins. There are the "end-stations" where the messages from the outside world are delivered, and where volitions originate. But though anatomists have succeeded in following the trail thus far, and have, so to speak, cornered the mind and driven it into close quarters, they seem as far as ever from seeing the mind itself or from learning what it is.

Mental science is as distinct from physical science to-day as it ever was. The nerves are excited by motions. These motions are delivered to the brain, and there become transformed into things as different from the motions in which they originate as light is from darkness. The nerve of the eye when excited causes the sensation of light. This excitation may be produced by undulations of the luminiferous ether, by electricity, by congestion, or by a blow on the head; in every case the message along the nerve is, in the brain, translated into the sensation of light. The messages delivered by the nerve of the ear are translated into the sensation of sound. But these various sensations are altogether different from the physical excitements producing them. So also are the thoughts and volitions radically different from the sensations.

## The Advantage of Perseverance.

As we have just passed the centenary of the eminent engineer, George Stephenson—June 9, 1781—it is not out of place to remind struggling young mechanics or engineers that this great man did not achieve his distinction and fame without hard work, and that it was not his genius alone that saved him and made him what he was, but more his perseverance, energy and determination to succeed. It will not do for a young man, because he supposes he has genius or his friends suppose he has, to sit down and wait for opportunity to come to him. He must manfully sail forward and put aside the obstacles which impede his path, must persevere in his endeavors to perfect his knowledge and skill, and make the opportunities to use them. Samuel Smiles, who has written a life of George Stephenson, says of him that for the first 50 years of his life, he had everything against him. He owed nothing to luck, to patronage, to the advantages of education. He owed everything to bravery, intense conviction, and prolonged perseverance. He had to teach himself everything from the A B C to the principles of mechanics. He had to conquer every inch of the ground on which he stood. His conquests were not easy, for arrayed against him were, first, his own ignorance which had to be subdued by silent, persistent endeavor; and second, the opposition of men of knowledge and science, who stood united to oppose him and could only be silenced by success. At first, Stephenson stood almost alone in his belief in the powers of the locomotive engine. His experiments were carried on in silence and obscurity. They were quite unknown to the journalists, historians, and writers of the day. The great work was done without any help from authors and orators. He never contented himself with dwelling in the regions of speculation and abstraction. He worked energetically in giving life to a dormant principle, and practical realization to an abstract proposition. Yet the facts which he developed by experience were laughed at as "moonshine."

There is something tragic in witnessing the determined hostility which obstructed his efforts. The whole prejudice of the scientific world opposed him. When he invented the safety lamp he was "pooh-poohed," and regarded as an interloper. The civil engineers opposed him to a man. He was not "one of us," he had never received an engineer's education. They would not admit his facts. They would not even inquire into his experiments. Everything that he proposed to do was demonstrated to be impossible. The civil engineers declared that it was impossible to drive a locomotive at the rate of 12 miles an hour. The engine would be driven back by the wind. If it traveled it would be beaten by the canal boats. But it could never go at all. The smooth wheels could never "bite" upon smooth rails. The wheels would merely turn round and round, and the whole machine would stand still. It was also declared to be impossible to make a railroad over Chat Moss without stopping short of the bottom. "No engineer in his senses," said a distinguished civil engineer, "would go through Chat Moss if he wanted to make a railroad from Liverpool to Manchester." The whole thing was declared to be "impossible." And yet the impossible things were done. What George Stephenson proposed to do, he did. The impossible locomotive was run, not only at 12 but at 50 miles an hour; and the impossible railroad was made from Liverpool to Manchester over the center of Chat Moss.

Altogether the life of this distinguished man affords an example of what one may do by persistent efforts, and unshaken energy. The moral teaching of such a life is great, and the young men of the day will find that as far as the means of personal progress are concerned, the means have not changed since George Stephenson's time.

**AN IMPROVED MORTAR.**—Some time since the use of sawdust in mortar was recommended as superior even to hair for the prevention of cracking and subsequent peeling off of rough casing under the action of storms and frost. Someone by the name of Siehr says that his own house, exposed to prolonged storms on the seacoast, had pieces of mortar to be renewed each spring; and after trying, without effect, a number of substances to prevent it, he found sawdust perfectly satisfactory. It was first thoroughly dried and sifted through an ordinary grain sieve, to remove the larger particles. The mortar was made by mixing one part of cement, two of lime, two of sawdust, and five of sharp sand, the sawdust being first well mixed dry with the cement and sand.



## Floral Exchange.

EDITORS PRESS:—The following is my list of flower seeds and cuttings for the Floral Exchange: Sweet Alyssum, Princess Feather, Nolana, Pink, Petunia, Nigella, Phlox, Rose Champion, Marigold, Larkspur, Sweet William, Candytuft, Bachelor Button, Ageratum Clarkia, Tassel Flower, Morning Bird, Portulacca, Ice and Dew Plant, Morning Glory, Nasturtium, Mignonette, Pansy, Balsam, Daisy, Chrysanthemum, Ivy, Honeysuckle, Lemon Balm, Plain and Variegated Myrtle.—M. A. HENLEY, Covelo, Mendocino Co., Cal.

**TIDINESS ABOUT THE HOMESTEAD.**—There is an old story to the effect that once upon a time there was a man in search of a housekeeper, and as applicants for the position arrived he arranged matters so that each one, as she entered, found a broom lying on the floor in her way. All the women but one stepped over the broom and passed serenely on. The one woman who stooped and picked it up secured the place of housekeeper solely from that fact. It was her only recommendation; but her employer argued from that, that the woman was observant and orderly—two qualifications that he highly appreciated. Whenever you walk over sticks and brush and rubbish in your yard, that disfigure its tidy appearance, instead of picking them up, remember that you are "stepping over the broom," and somebody will pass judgment upon you, by what you may be pleased to call very insignificant indices. But the judgment in most cases will be quite correct. If every man, woman and child about the premises were trained to pick up and remove from view all rubbish and litter that he or she comes upon in walking about a yard or lawn, there would always be an appearance of neatness secured at little cost.—*Rural New Yorker.*

**VEGETABLE LEATHER.**—The London *Mechanics' Magazine* states that there are very extensive works at Stepney Green, London, in which great quantities of artificial leather, are manufactured. In appearance it resembles common leather, and it is only by a very close scrutiny that the distinction between them can be detected. It is manufactured in webs 50 yards in length, and four-and-a-half feet in breadth, and is now much used for bookbinding, and several other purposes for which tanned calf and sheepskin are employed by us. It is also used by saddlers for making harness, and it may be made of any thickness desirable, and is capable of being stretched or cemented. India rubber is the principal substance of its composition, but there are other ingredients mixed with it, whereby its leather qualities are secured. The method of making it is not given, and it appears that this is kept secret; but that such a substance is manufactured, sold and used in large quantities is a fact of too great importance to be overlooked.

## Chaff.

WE hear of a man who has made a fortune by attending to his own business. This is authentic. But then he had few competitors.

A YOUNG lady graduate may in after years forget the title of her essay, but she will always remember how her white dress was made and trimmed.

A STUDENT at Oxford University, on being asked "Who was Esau?" replied: "Esau was a man who wrote fables, and sold his copyright for a mess of pottage."

A PHILADELPHIA man who has found a bed of remarkably fine clay on his property in the suburbs, is undecided whether to start a brick-yard or a French candy shop.

A story is told of a German shoemaker, who, having made a pair of boots for a gentleman of whose financial integrity he had considerable doubt, made the following reply to him when he called for the articles: "Der poots ish not quite done, but der beel-ish made out."

A NEWSPAPER canvassing agent, being told by an old lady that it was no use to subscribe for the papers now, as Mother Shipton said the world was coming to an end this year, said, "But won't you want to read an account of the whole affair, as soon as it's over?" "That I will," answered the lady, and she subscribed.

"MOTHER sent me," said a little girl to a neighbor, "to ask you to come and take a cup of tea with her this evening." "Did she say at what time, my dear?" "No, ma'am; she only said she would ask you, and then the thing would be off her mind. That was all she said."

THE people of a Western town are so fearfully lazy that when the wife of a minister who had just settled in that town asked a prominent citizen if the inhabitants generally respected the Sabbath and refrained from business, he replied: "Confound it, ma'am, they don't do enough work in a whole week to break the Sabbath, if it was all done on that day."

THE baby didn't feel pretty good anyway, poor little thing; the car was cold and the road was rough and everybody else was cross and glum, and the baby had only one way in which to express its emotions, so it cried. And how it did cry! Twenty-eight miles of it, and no sign of a let up, and the tired mother just smothering it with baby talk and rocking the little thing in her arms. Presently a testy-looking man, an old bachelor if there ever was one, turned in his seat and snarled, "Can't you shut that child up?" The light that gleamed from her eyes was dangerous, as she hugged the baby a little closer, and fired back at him, "I can shut you up a great deal quicker." The howl of approbation went up all over the car and he "shut up."

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of 38 letters.  
My 14, 35, 21, 4 is a garden vegetable.  
My 8, 25, 37, 6 names an ancient empire.  
My 11, 36, 20, 9, 7 is a valuable domestic animal.  
My 1, 12, 4, 17 is a large cask.  
My 2, 23, 8 is an organ of the animal body.  
My 3, 15, 27 is sick.  
My 6, 16, 30, 8 is to change one's course.  
My 13, 10, 8, 34 is a greater quantity.  
My 18, 32, 31, 27 is an elevation of land.  
My 19, 23, 23, 4 is a point of the compass.  
My 22, 24, 28 is a place of public entertainment.  
My 26, 2, 27, 29, 35 is a delicious fruit.  
My 33 is in all knotty problems.  
My whole is a familiar assertion, which travel and wandering but verify.

OLD JOE

## Problem.

The sum of three numbers is forty-eight. The smallest number is equal to one-third of the second, and the sum of the two smallest numbers is equal to one-third of the largest. What are the numbers? C. P. H. A.

## Cross-Word Enigma.

My first is in man but not in beast;  
My second is in most, but not in least;  
My third is in use, but not in make;  
My fourth is in bun, but not in cake;  
My fifth is in try, but not in do;  
My sixth is in false, but not in true;  
My seventh is in life, but not in death;  
My eighth is in lungs, but not in breath;  
My whole is a natural land formation.

JENNIE

## Riddle.

My first and last are just alike, upon my soul!  
But who my middle reads?—my middle is my whole.

## Names of Authors.

1. To purchase and to proceed rapidly.
2. To tremble and a weapon of "ye olden time."
3. A manufactory and a heavy weight.
4. A feminine name and a male relative.
5. A trifle and an expression of grief.
6. A greater quantity.
7. A domestic animal and a noise of animals of the feline genus.
8. An important organ of the body.
9. To peruse.

AUNT HANNAH.

## Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Our fireside.

PROBLEM.—Twenty-four.

SYLLABLE PUZZLES.—1. Mar-tin. 2. Li(e)on. 3. Night-in-gale. 4. Bu(f) a lo(w). 5. Weasel (wee-sell).

WORD-SQUARE.—

I T E M

T A R E

E R S T

M E T E

CONCEALED MOTTO.—"Look before you leap."

## The Orphans' Love.

A boy, not over 11 years old, whose pinched face betrayed hunger, and whose clothing could scarcely be called by the name, dropped into a carpenter shop on Grand river avenue the other day, and after much hesitation explained to the foreman.

We want to get a grave-board for ma. She died last winter, and the graves are so thick that we can't hardly find her no more. We went up last Sunday and we came awful near not finding it. We thought we'd git a grave-board so we wouldn't lose the grave. When we thought we'd lost it, Jack he cried, and Bud she cried, and my chin trembled so I could hardly talk!"

"Where is your father?" asked the carpenter.

"O, he's at home but he never goes up there with us, and we shan't tell him about the board. I guess he hated ma, for he wasn't at home when she died, and he wouldn't buy no coffin nor nothing. Sometimes, when we are sitting on the door step talking about her, and Jack and Bud are cryin', and I'm remembrin' how she kissed us all before she died, he says we'd better quit that or we'd get what's bad for us. But we sleep up stairs, and we talk and cry in the dark all we want to. How much will the board be?"

The carpenter selected something fit for the purpose, and asked.

"Who will put it up at the grave?"

"We'll take it upon our cart," replied the boy, "and I guess the grave-yard man will help us put it up."

"You want the name painted on it don't you?"

"Yes, sir, we want the board white, and then we want you to paint on that she was our ma, and that she was 41 years old, and that she died on the 2d of November, and that she was one of the best mothers ever was, and that we are going to be good all our lives and go up where she is when we die. How much will it cost, sir?"

"How much have you got?"

"Well," said the boy, as he brought out a little calico bag, and emptied its contents on the bench, "Bud drew the baby for the woman next door and earned 20 cents; Jack he weeded in the garden, and earned 40 cents, and found five cents in the road; I run two errands and made kites, and fixed a boy's cart, and helped carry some apples into a store, and I earned 65 cents. All that makes a hundred and thirty cents, sir, and pa don't know we've got it, cause we kept it hid in the ground under a stone."

The carpenter meant to be liberal but he said:

"A grave-board will cost at least three dollars."

The lad looked from his little store of met-

als to the carpenter and back, realized how many weary weeks had passed since the first penny was earned and saved, and suddenly wilted out.

"Then we can never, never buy one, and ma's grave will be lost."

But he left the shop with tears of gladness in his eyes, and when he returned next day little Bud and Jack were with him, and they had a cart. There was not only a head board, but one for the foot of the grave as well, and painter and carpenter had done their work with full hearts and done it well.

"Ain't it awful nice—nicer than rich folks have!" whispered the children, as the boards were being placed on the cart; "won't the grave look nice, though, and won't ma be awful glad?"

Ere this the mother's grave has been marked, and when night comes the three motherless ones will cuddle close together and whisper their gratitude that it cannot be lost to them even in the storms and drifts of winter.—*De-troit Free Press.*

## GOOD HEALTH.

## A Barber on Baldness.

Speaking of the credulity of many people touching the efficacy of hair tonics, an intelligent French hair dresser says:

"Very often the hair falls out after sickness."

In such cases it generally grows again without the aid of any hair tonic whatever; but when it falls out from natural causes it never grows again. The celebrated Dr. Bazin, who was formerly physician-in-chief of the St. Louis Hospital at Paris, and who is known throughout the world as the most learned specialist for affections of the skin, told me one day that there was nothing that could make the hair grow after the baldness had come on gradually. This I believe firmly, or, if there was anything of the kind, we would not see so many New York doctors with heads as completely destitute of hair as the backs of turtles.

"I don't think I am far from the truth when I say that during the past 25 years that I have practiced the profession of hair dresser, I have made the trial upon different bald heads of more than 500 different hair tonics, and I am bound to admit that I never saw a single head, the hair of which was restored after baldness. At the end of so many failures, I am completely undeceived as to the value of all the preparations; and I would not now recommend any one of them, because I would be afraid to commit the crime that is designated by the words, 'obtaining money under false pretenses.' In my pathological studies upon the hair, I have found that people who perspire a great deal from the head are apt to get bald. The bad habit of wearing hats indoors is also very hurtful to the hair. In 1806, after the famous battle of Jena, in which the Prussians were completely defeated by Napoleon I, Baron Larrey, the celebrated military surgeon, perceived that many of the German prisoners were completely bald. Surprised, he made inquiries as to the cause of this, and he found that they owed their baldness to the shape—as homely as unhealthy—of their caps. The foul air of their head gear, having no issue, destroyed the vitality of the hair."

**MAN AND HIS FOOD.**—Of course, various conditions of life, climate and locality, have to do with the quantity of food. Thus, an idle person can get along very well with two and three-quarter ounces of nitrogenous food and 20 ounces of carbonaceous food (flesh and cereal or vegetable food), when, if the same individual were walking or in active out-door life, double this quantity might be used. Perhaps the Esquimaux represent the heaviest feeders in the world, for Parry tells of a young native who devoured in 24 hours 9½ lbs of sea-horse—half raw, half cooked—1½ lbs of ship-bread, 1½ pints of water, not counting grog and spirits. Both Sir John Ross and Dr. Hayes, from personal observations, declare that the daily ration of an Esquimaux may range from 12½ lbs of flesh food. On the other hand, it is quite remarkable how small a quantity of food a man may eat and still retain his health, though, as to the point of mental vigor engendered by scanty fare, that is another question. Cornaro, who wrote a treatise on long life, subsisted for 53 years on 12 ounces of vegetable matter, and 14 ounces of wine per diem, while another case is cited of a man existing for not quite 20 years on 16 ounces of flour per diem, made into some kind of pudding.

**A HEROIC REMEDY FOR BALDNESS.**—In cases of confirmed baldness the new remedy proposed is to remove the scalp, bit by bit, and substitute, by skin grafting, pieces of healthy scalp, taken from the heads of young persons. The success which has hitherto attended operations of this nature in cases of scalp wounds, gives a promising outlook for this new mode of curing baldness; and perhaps the day is not far distant when the shining pates of our venerable fathers will bloom with the flowing locks of youth.

**A MEDICATED PILLOW** has been devised, containing receptacles filled with inhalent mixtures suited to different cases, as of headache, bronchitis, catarrh, etc., the fumes of which may be breathed at night, and for which much is claimed.

## DOMESTIC ECONOMY.

## Hints for Housewives.

[Written for the RURAL PRESS by JEANNE C. CARR.]

**Honey from fruits:** Our honey crop is short this year, and I have already begun to put up fruit syrups which I think are even more delicious with waffles and other breakfast cakes. This year I have made them in a little different manner from my former practice. I dissolved five lbs. of granulated sugar in sufficient water to cover it, let it come to a boil and set it away until cold. This is then poured over 10 lbs. of freshly gathered raspberries or strawberries and kept in a closely covered vessel for 24 hours. The syrup, which has extracted the aroma with the finer juices of the fruit, is then drained through a fine sieve or strainer, without pressure, and boiled again, care being taken to skim it well. Five minutes' boiling will make it rosy if the fruit is at the proper condition of ripeness; every housekeeper knows how to test the consistency of jellies, and this compound is simply a jelly "arrested in its development." It should be bottled and sealed as soon as it cools. The pulp which remains, with the addition of a little more sugar, makes a good plain jam.

Squeeze the juice of one lime into a tumbler, add two tablespoonfuls of the syrup, fill up with water, and a delicious drink is the result.

Peaches make the richest fruit syrup for cakes. Quinces and grapes, especially Delaware grapes, are very delicate in this form. If peaches are used, the syrup should be boiled longer and to a greater consistence before bottling.

**Fruit Syrup Pudding:** I invented a pudding for four persons, last week, which proved very acceptable, viz.: To one large cup of sifted breadcrumbs or rolled crackers add a salt spoon of salt, well stirred in. Add a cup full of any of the above mentioned syrups, which the crumbs will absorb. Melt a tablespoonful of butter in two cups of sweet milk, and add to this when cool the beaten yolks of two eggs. Stir into this custard mixture the syruped crumbs, and bake in a shallow pudding or deep pie dish. When nearly done, make a meringue of the whites of the eggs and sugar, spread over the pudding, return to the oven long enough to "set," and serve cold.

**Lima Bean Soup:** Boil a pint of lima beans until soft enough to be beaten to a smooth paste with a potato masher. Stir into this paste two quarts of hot soup stock of any kind, and let it come to a boil. (The jelly which is left after boiling a ham may be used if not too salt.) Stock from beef or mutton makes a more delicate soup. Use a trifle of cayenne in the seasoning. Serve with sippets of toasted bread.

**TO WASH LACE.**—Mix a teaspoon of powdered borax in a basin of strong white castile soapsuds. Baste the lace to be washed very carefully with fine thread upon two thicknesses of flannel. Soak the lace thus arranged in the suds mixture 24 hours or longer if very dirty, changing the suds two or three times. Then let it lie a couple of hours in clean water to rinse, changing the water once. Squeeze it out (do not wring it), and when partially dry place the flannel, with the lace on it, lace downward, on two thicknesses of dry flannel laid on a table, and smooth it with a hot iron. When the lace is quite dry rip it off. Its considerable trouble, but the lace looks beautiful.

**GINGER SNAPS.**—Two cups of molasses, one cup of butter, one tablespoonful of ginger, two teaspoonfuls of soda dissolved in a little hot water; put the ingredients together, warm them in cold weather, then stir in as much flour as possible, but do not knead; pinch off pieces the size of a marble and place on tins, with space enough between to allow them to spread without touching each other. After baking, let them stand on the tins a few minutes to crisp.

**RABBIT A LA MINUTE.**—Clean, skin, wash and cut up a rabbit; put in a saucepan with one-fourth pound of butter; salt, pepper, a couple blades of mace powdered. When about three-fourths done, add two teaspoonfuls of flour, a pint of water, two glasses of sherry, two tablespoonfuls of minced parsley, and if you have them, three dried mushrooms. Boil hard for 10 minutes.

**BLACK INK.**—To 1 gallon pure rain water take 1 lb. of logwood chips, 1 oz. bi-chromate of potash and 15 grs. prussiate of potash. Boil and strain the logwood first, thoroughly, adding water to make it up to a gallon. Then add the other ingredients. Hundreds have paid a dollar each for this recipe. It is said to stand the test of oxalic acid.—*N. Y. Tribune.*

**ROAST LAMB.**—Put the meat in the dripping-pan with a little hot water in the bottom. Sprinkle with salt and a little pepper. Baste often, and allow 8 or 9 minutes to a pound. When done, take the grease off the gravy, make it bubble on top of the stove, and make a thickening of browned flour.

**OMELET.**—A plain omelet was made with four eggs, beaten with a spoon, two tablespoonfuls of milk, one tablespoonful of salt. The pan in which it was cooked was very hot when the mixture was put in, and while cooking the pan was kept in rapid motion.





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G. B. STROM

SAN FRANCISCO:

Saturday, July 9, 1881.

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## Business Announcements.

Fresno Colony.—T. E. Hughes & Sons, S. F.  
Rifles.—C. D. Ladd, S. F.  
Washington College.—S. S. Harmon, Principal.  
Williams' Evaporator.—F. B. Seeley, Oakland, Cal.

## The Week.

The country and the world has been appalled by the attack of an assassin upon the life of the President of the United States. Lying in wait for Mr. Garfield the wretched miscreant, Chas. Guiteau, fired upon him in the waiting room of the Washington railway station on Saturday morning. The bullet, fired from behind the President, penetrated his back, pierced his liver and lodged near the skin in front having penetrated his body. For days the President has tarried between life and death and the country has held its breath hoping to catch assurance that he would live and not die. From end to end of the nation there is but one desire, and that is a longing, deep and prayerful, that the people should not be robbed, by a wretch's freak, of its chosen chief magistrate, who has entered upon his course with such determination and manliness, and bids fair to serve the country well by his stand against political evils which are so generally condemned. There has been undisguised rejoicing and thanksgiving that thus far there is reason to believe that the President will survive a wound which but rarely spares a life. For, up to this writing, on Wednesday, he has progressed favorably and his physicians are gaining more courage.

The stroke which felled the President has drawn all the people to him, and, should he survive and rule wisely, he will be always held in honor and affection. His opportunity for well doing will be great, and it is to be sincerely hoped that he will live to embrace it. The assassin is a disreputable person whom it is charitable to believe insane, but who is now held in execration by the whole nation.

In his trying hours the President is reported brave and hopeful, and his devoted wife, herself just escaped the vale of shadows, is a true heroine. These two honorable ones are just now held firm in the affection of a loving people, and their sufferings will not be without value, for the nation has found that it has a heart.

## Editor and Contributors.

It has always been one of our editorial tenets that the strength and usefulness of a journal lie not alone in its subscription list and in its editorial chair, but in its power to draw out the thoughts, observation and experience of its readers, in order that each may enjoy the truth and success which all have discovered, or attained. Our ideal journal is one which shall present each subject in the light of the freshest research and the widest experience. If a comet flash in the sky, let one who has made astronomy a careful study tell the people, in a style every one can comprehend, just what is known about it, and what, according to the best knowledge of such bodies, will be its future. For the lack of such authoritative statement and from the unbridled fancies of reporters, which occupied space which should have been better used, there are doubtless some people who believe that the comet now visible is revolving around the polar star. And, dropping to mundane affairs, the papers are filled with the imaginings of uninformed writers on social and industrial subjects until the public mind is charged with ideas on nearly all themes which are crude, untrue, and apt to mislead. For such deception and misguidance of the popular mind, the editor is responsible.

There is scarcely an issue of a journal which does not contain some statement of fact or deduction therefrom which is in reality an untruth, in essence and in inference; and there are readers, few or many, who know it. In the public interest it is the duty of the knowing one to correct the error, and the editor should welcome the new light and haste to shed it forth. In this way the public would be educated in the truth, both in small things and great, and the result is delightful to contemplate. We admit that editorial conceit would receive a stunning blow, and we see no reason why editorial conceit should be spared the crushing. It is an old dogma that an editor should be omniscient, and that journalistic dignity will not admit a correction of any kind. The journal will never be true to its mission until such narrow ideas are swept away.

But we did not intend to write a homily upon editorial conduct in general, but rather to point out clearly what we believe to be one way in which a journal may be brought up to the highest intelligence of the time and press most closely to the popular heart, and that is by encouraging its readers to freely contribute the truth which in them lies, whether it be a point of international law or the growing of a turnip. Much depends upon the editor whether his journal shall have a reputation for the fullest truth and accuracy on the subjects it discusses, or whether it shall slash around so that the lawyer may laugh at its ignorance one day, and the farmer denounce it as a pack of nonsense the next. If the editor is courteous toward contributors and welcomes their favors, the lawyer will be glad to set him right in the public interest, and the farmer will ransack his house for writing materials to tell him that he can't make a pound of butter from five lbs. of milk. But if the editor shows that he cares more for what he has said than for the truth and if the waste basket is proclaimed the largest piece of furniture in the sanctum, the editor will naturally be left alone with his conceit and the propagation of error and fallacy will continue.

We are led to these remarks by the perusal of an interesting article in an English magazine concerning Dickens as an editor, and we are proud to know that ideas and methods which we have held and practiced in our modest experience, were characteristic of him in his editorial conduct. The writer shows that he was most kind in his treatment of contributors, and in this way drew out their best efforts and enriched his journal by them. We have no space to cite the many instances of this behavior which are given. In one place, alluding to Dickens, the writer says:

It is in his relations with writers in his periodical, and, indeed, in all connections with his "literary brethren," that he modestly calls them, that this amiable and engaging man appears to the most extraordinary advantage. As I read over his many letters on these points, I am amazed at the good-natured allowance, the untiring good humor, the wish to please and make pleasant, the almost deference, the modesty in one of his great position as head, perhaps, of all living writers—to say nothing of his position as director of the periodical which he kindled with his own perpetual inspirations. There was ever the same uniform good nature and ardor, the eagerness to welcome and second any plan, a reluctance to dismiss it, and this done with apologies; all, too, in the strangest contrast to the summary and plain-spoken fashion of the ordinary editor. This patient interest should, in these editorial matters, become more wonderful when it is considered that his position as head of an important periodical made him a marked figure for importunity. I believe every composition was seriously glanced at, and some estimate made—and many an obscure, clever girl was surprised to find her efforts appreciated.

The writer of this tribute to Dickens as an editor, and who, we imagine, is himself one of the best known of living novelists, proceeds to show the patient labors of the editor in "touching up" contributions, which it must be acknowledged is often a severe task, but which no true editor will shrink from, providing there is merit in the article. He writes:

I have many proof-sheets by me, corrected by his own hand in the most painstaking and elaborate way. The way he used to scatter his bright touches over the whole, the sparkling word of his own that he would insert here and there, have a surprising point and light. The finish, too, that he imparted was wonderful; and the "dash," stops, shiftings, omissions, were all valuable lessons for

writers. Now, this was all encouraging and cordial to a degree. I frankly confess that, having met innumerable men, and having had dealings with innumerable men, I never met one with any approach to his genuine, unaffected, unchanging kindness.

It would be well for journalism if the spirit of Dickens were invoked in every sanctum in the world. If all the mole-eyed conceit which rules in editorial chairs could be melted away in the sunny welcome to worth, which was his constant disposition, how much that is true and valuable would push from the columns the vapid generalizations, the gross inaccuracies and the glaring untruth and injustice which are too prevalent. We believe that this will be the future of journalism. Such policies are gaining ground and the people are every day learning to distinguish more and more in favor of true gentility, and love of truth for its own sake, in the journals which they support.

## QUERIES AND REPLIES.

## Catalpa Trees.

EDITORS PRESS.—We are very much interested in putting out trees for wind-breaks and timber. The catalpa is recommended. Can you inform us whether it is of quick growth, liable to be killed by frost, durable for timber and suitable for firewood? Can it be easily raised from seed, and if so, how, and can it be obtained at seed stores?—J. W. WEBB, Lompoc, Cal.

There have been several interesting pamphlets on the catalpa written by the late Mr. Barney, of Dayton, Ohio. They give all the points on the growth of the tree in the Western States. The conclusions reached, as nearly as we can recall them, were, that of all the trees suggested as adapted to the formation of timber plantations in the Eastern States, the catalpa stands pre-eminent. Its exceedingly rapid growth; its adaptation to almost all soils and situations; its wide range of latitude, extending from Canada to the Gulf of Mexico; its extraordinary success on the Western and Northwestern prairies; the ease and certainty with which it is transplanted; its strong vitality and freedom from diseases and insects; the incomparable value of its timber for the most important as well as minor uses for which timber is needed; the almost imperishable nature of the wood when used for posts, railroad cross-ties, and in other exposed situations, to say nothing of its handsome and stately appearance and the unrivaled beauty of its flowers—all are cited to point to the catalpa as the tree to plant. These remarks apply to the hardy, Western, early-blooming *Speciosa* catalpa, and not in any degree to the common *C. Bignonioides*, which, unfortunately, is the one generally met with in cultivation in the Western States.

Although these points seem to indicate great value in the right kind of catalpa for Eastern situations, what is most needed by California inquirers is the local experience. We are not aware that there has been any general collection of information on this point, although the trees have already been introduced in different parts of the State. We would like to have all readers send us their experience and observation concerning the growth of the tree under California conditions.

We believe the trees are easily grown from the seed—at least they are produced in large quantities and at a low price by the Western nurserymen. Whoever has the seed for sale, or knows who has it, may address our correspondent.

JOURNALISM.—President Garfield, in his address before the Ohio Editorial Association, at Cleveland, said: "It belongs to the honor of the press to have developed within the past few years as gallant a body of men, of as bright intelligence as the world knows in any profession—men who have illustrated what heroism is by bringing from remote and dangerous quarters those items of intelligence that do so much to enlighten the world. Two forces are needed to improve, enlarge, and ennoble the sphere of journalism. The first rests with us who are outsiders. If by all the means in our power, we can make the people so intelligent that they will only patronize the best and worthiest journals within their reach, we shall have done our part. And if on your part you do so enlarge the sphere of your work, and increase its intelligence and justice and force, that ignorant and weak men will not want your journal—and only the worthy and honorable will deserve it—between you and us, the profession of journalism will go in no noble improvement, bettering that growth, and increasing the security of liberty in your country."

COLORING VEGETABLES GREEN.—M. Wurtz, the well-known French savant, describes a simple process for coloring vegetables green. It consists in the use of an excess of chlorophyll obtained from spinach, which holds in its cells a large amount of coloring matter. A watery solution of this, rendered alkaline by soda, is added to the boiling vegetable, which is slightly acidulated with hydrochloric acid. The chemical result is common salt and a deposit of coloring matter on the organic tissue. There cannot now be any possible temptation for the unwarrantable dyeing of preserved vegetables by salts of copper or the employment of adulterants for obtaining a vivid coloring.

HENRY GROSSE, who had been held to answer on a charge of the murder of C. Smith, in Marsh Canyon, on May 11th last, and whose application for bail had been denied, hung himself in his cell in the Martinez jail.

## The Olive in Italy.—No. 4.

[Translated for the RURAL PRESS from *L'Italia Agricola*, by DR. J. I. BLEASDALE.]

## On Making Olive Oil.

Oil, unlike wine, is not a product of rural industry, but we may consider it so, though the nature of it be different, in so far as we treat simply of the extracting of it from the fruit in which it already exists ready formed. Human industry is limited to working out the best methods to accomplish that end without loss or waste of the smallest part, as well as to master every means of refining it. Our intention then will be to explain in most brief and simple manner, the methods of proceeding in the various operations comprised under what is called in Italy *oleificazione*.

We write with no view of filling the columns of a journal, but purely with the intent to familiarize the less educated in this branch of industry, with a method of making oil which, even if it be not the most perfect, will certainly at least not fall below that traditional one which is still at the present day retained by not a few cultivators.

The process of oil-making comprises the following separate operations, viz:

1. Crashing the olives. 2. The extracting of the oil from the paste. 3. The process of clearing the oil. 4. The means for avoiding the least loss or waste. 5. The care indispensable in purifying the oil, and storing it for keeping.

## Crushing.

After the olives have been gathered and spread out on the floor of the store-room for some days, in thin layers, to prevent fermentation, they are submitted to the action of the crushing mill (*frantoio*), to separate the pulp from the stones, mash it, and burst the oil cells.

A simple oil mill consists of a vertical beam, turning on its own axis, to which are fixed one or two millstones, placed vertically, and in such a way, that they can be readily rotated within a basin in which the olives are placed, and from which the crushed pulp can be conducted into a suitable receptacle.

Motion is communicated to these millstones by means of a horizontal lever some six or eight ft. long, fastened in the vertical beam and passing through the center of the millstones. The lever is worked either by men or animals, and sometimes by water power. As mechanical arts advanced an oil mill, far more handy and easy to work, was invented, in which rollers were substituted for the old-fashioned millstone.

Reverting to the method of crushing the olives, it is worth while to mention that one of the principal matters to be kept in mind is to avoid, by all means, the smashing of the kernels or stones, to which end the following observations will prove useful:

That placing the olives on the mill platform, they should be in sufficient quantity and spread evenly.

That the crusher or millstones, without being too heavy, should still have weight enough to crush the fruit promptly; and be fit to be easily raised, together with the axis on which they are supported, in case of the crushed mass being too much.

To keep the mass always changed and soft, especially where the mill has already done its work, which one man can easily do, by going round the basin of the mill with an iron shovel.

The first crashing should be speedily done; rather than have to delay, it were better to stop crushing, even if the mass be not equally done, so long as there are no whole berries left in it.

It is worth while also to recommend the greatest cleanliness in every single utensil, which can easily be done by washing them with lye and rinsing with cold water and vinegar, in order to remove any offensive smell.

Over and above the already mentioned utensils, there are others of an accessory kind, viz: brushes, baskets, hair mats, etc. The most part of these should be renewed every year, using the new for the first pressing and the others for the crushed stones. As soon as the olives have been pressed the mass is put aside in a suitable place, and is afterwards put through another crushing; after which it is then packed in strong hair bags, divided in layers, one above another, by means of small hair mats. A single bag is sometimes divided into as many as 12 layers by these mats. In an ordinary oil mill, with only one millstone, worked by horse power, about 16 hectoliters (352 lbs.) can be crushed in a day.

Presses.—(*Strettojo*). Since the most remote times this wooden implement has been in use, and was made, as it is now made, of the following parts, viz:

Of the worm or screw of walnut wood, well seasoned and frequently of one piece; of a nut of sorba wood also well seasoned; of legs, and a tablet of oak or sometimes stone, upon which the material to be pressed is placed.

The press is worked at first by the hands, and then by using a windlass placed vertically, and moved by four or five men, in order to bring sufficient pressure to bear.

To the old wooden or stone oil-press, there succeeded the *Trappeto*, which was nothing more than the *strettojo* made of iron, with which the work of pressing can be done with much more precision and the employment of less force. More recently hydraulic presses have come into use, by which a far greater pressure can be exerted, and which allow of a greater



saving of time and fatigue, since two or three men can do the work of five or six.

#### Catching the Oil.

A small vat (*Tinello*).—This is a receptacle placed about three ft. below, into which, as the press is worked, the oil flows through a little circular channel wrought in the tablet. Above the small vat it is customary to fix a wicker basket, lined with a net to catch and hold back grosser substances, which would fall into the oil. The pressure under which the first pressing is conducted, must be regulated very nicely, because if it should be excessive, some of the oil of the kernels might become mixed with that of the pulp—a matter always to be avoided where the best oil is sought to be made.

#### Clearing.

When the crushing or pressing is done, the oil is drawn out of the small vat and placed in a suitable vat in a dark place where the temperature must be maintained at not lower than 10° Reamur, to prevent the oil from freezing. The best vessels to use in this operation are large earthen ones, glazed on the inside, of the shape of a truncated cone, the small end being the bottom. Even these vessels need a good

Agriculturists call such residue *lees*. If the mill is at work continuously these *lees* may be collected once a month and put in places apart from others. Authors assure us that an oil mill without this important accessory gives nearly 5% less oil, which, however, only serves for lamps.

**STRAIGHTENING SHAFTS.**—A correspondent of the *Blacksmith and Wheelwright* asks how he can straighten a lathe-finished shaft, four inches in diameter and three ft. long, without damaging it by hammer blows. The editor of that journal answers as follows: "I would try this way: I would get a hard-wood plank or timber the length of my shaft, heat the shaft as hot as I could and not scale it; lay it on the piece of hard-wood plank or timber, crowning side up; take another smaller piece of hard wood and put it on the shaft, end up, and then let some one strike with the sledge hammer on the end of the small piece." Another correspondent of the same journal suggests the following method: "Let him get his bent four-inch shaft red hot, rest it horizontally level by pieces placed under each end, and apply water to the rounding side of it. This will contract that side. When the

#### California Wild Grape Stock.

Monsieur C. Mottier, half a mile above the celebrated Harbin Springs, four miles from Middletown, Lake county, is a busy man at present, converting the wild land of a wild sloping ravine into a fruitful garden. He has 12 varieties of bearing foreign grapevines grafted on wild stock, all of which seem to thrive well. The White Muscat and Black Hamburgs produced remarkably well last year, and have set for large fine clusters this season. The growth of grafted vines appears strong. A graft inserted the first week in April measured eight ft. in the middle of June. Although his principal object is to raise anti-phyloxera seedlings of the best varieties of wild vines, he will harvest a fine table crop for the local market this season. His new land is overgrown with wild grapes, and in clearing it off he saves roots enough in place to graft to make a well-stocked vineyard. As long as 20 years ago he was observing and experimenting in this line, and he is satisfied that this method of grafting

#### Sutter's Mill.

The accompanying illustration will call to the minds of many pioneers of California pleasant reminiscences of those favored and long to be remembered days, the "days of '49." It represents Sutter's mill, where the first practical discovery of gold was made, which led to the "excitement" of 1849, and the immense influx of people from all parts of the world to our shores, ultimately resulting in the opening of the gold fields of the Sierras, the civilization and settlement of our State; the discovery of the unbounded field of mineral country on the Pacific Coast; and the development of the numberless resources of much-famed California, as well as adjacent States and Territories.

Sutter's mill was situated on the South Fork of the American river, in El Dorado county, for a time known as the Empire county of the State. The site was in a pleasant valley, as the engraving shows. The mill, we believe, was never completed, and the sketch shows it as it was left at that time. Among the persons who were there at the time of the discovery of gold were J. W. Marshall, E. Pierson, John



SUTTER'S MILL, WHERE GOLD WAS FIRST DISCOVERED IN CALIFORNIA, JANUARY 19, 1848. FROM A PAINTING BY NAHL.

cleansing with vinegar and water before being used to insure their sweetness. When removing the oil from the small vat the greatest attention must be paid to avoid the intermixture of any other substance.

#### Treatment of the Pomace.

When the oil of the first pressing has been removed, the mass is again put in and subjected to another crushing, which in this instance may be more violent; and while this is going on, a kettle of hot water is to be got ready, at a temperature of 70° or 80° R., to pour little by little on the mass during the grinding. The amount of water used should be about as much as that which ran from the olives in the first pressing. This being done, the mass is placed in suitable bags and at once put in the press, and pressed up to the full capacity of its power. The oil obtained by this second pressing should be placed in the clearing room, in separate jars.

There is a dark underground reservoir (*inferno*) closed and subdivided into two or three compartments, communicating with each other, which communicate with a small vat by means of another small subterranean channel. The object here aimed at is to collect the water and other vegetable substances remaining in the oft-used small vat after the oil of the second pressing had been removed, in order that with rest the remainder of the oil still held in the water may rise to the surface and be separated,

shaft is black but about one inch deep, get it red hot again as before and repeat the operation, and so on. This is a wrinkle worth knowing, for it will straighten a shaft of any diameter without damaging it by blows."

**ALCOHOL IN NATURE.**—A paper on the presence of alcohol in the earth, in water and in the air, was recently read before the French Academy of Sciences. The author, M. Muntz, has developed the method depending on the change of alcohol into iodoform, so that one-millionth of alcohol in water can be detected. Alcohol is found in all natural waters except very pure spring water, and in greater quantity in snow. Rain water and the water of the Seine contain about one gramme per cubic metre. Alcohol, no doubt, also exists as vapor in the atmosphere. In soils, especially those which are very rich in organic matter, there is a considerable quantity. The wide diffusion of alcohol in nature is due to the destruction of organic matter by various agents of fermentation.

**THE PACIFIC RURAL PRESS.**—With this week's issue the PACIFIC RURAL PRESS concludes its 21st volume. The PRESS is one of the ablest agricultural journals in the country, and, published in California, naturally contains more valuable suggestions for the agriculturists of the Pacific coast than all the rest combined.—*San Jose Herald.*

roots produces a stronger and more fruitful vine than will grow in the same soil from a Mission grape cutting without grafting. While wild grape cuttings, grafted, may appear to flourish for a time, it is his opinion that they will fail in a few years' time. Consequently the true way to secure anti-phyloxera vines, is to bud or graft in wild seedling stock. He has no difficulty in grafting seedlings. Is trying budding, but cannot yet report the result. He has found five distinct varieties of wild grapes growing in his locality. He points to the difference in the indentures of the leaves, different color of the "veins" of others, and other differences, decided by appearance. Tame grapes embrace male and female branches or qualities, but (at least some of) the wild vines are single in gender, and a portion non-bearing, the blossoms blasting and falling every season and failing to fruit. There are no producing vineyards near Mr. M., and no chance has been offered the wild grape to mix with the cultivated, as happens in some places where the prunings from vineyards have been thrown into creeks and thus distributed by streams and floods.

Last season Mr. Mottier made some 50 gallons of wine from wild grapes, which may now be considered very clever claret for its age. It has a deep color, full, agreeable, but decidedly unique flavor, suggestive of medicinal or restorative virtue.

Weimer, Peter Weimer, W. H. Scott, A. Stephens, H. Bigler and C. Bennett. The engraving of this historic locality was made from a painting by the late Charles Nahl, which was from a sketch made by him in 1851. The painting formerly belonged to A. Roman, Esq., but is now the property of Mr. Julius Jacobs of this city.

**CARRIAGE BUILDING** is becoming one of the most extensive interests in the country. Something like 1,000,000 carriages, representing a value of over \$100,000,000, is about the average of our annual production. It may not be generally known that more carriages are annually made in the United States than are turned out by Great Britain, France, Italy and Germany, together. Since carriages are kept only by the smaller portion of our well-to-do citizens, the vast number in use speaks volumes in regard to the general wealth and prosperity of the American people.

**SIGNIFICANT** declarations were made at the sitting of the Monetary Conference on Saturday last, by Thurman, the American delegate, who expressed the conviction that the offers of England and Germany would not warrant the United States in allowing the free coinage of silver. The United States did not insist on immediate and unqualified bi-metalism, but were ready to accept approaches thereto, believing it would eventually prevail.



## Cling to California.

The *Mining and Scientific Press* last week had a wise article appealing to California miners not to forsake the State for the mooted and oft-times deceptive cries of treasure in some distant part. Although the words are directly addressed to miners, they contain considerations which are applicable to dwellers in California generally; hence we quote as follows:

In the first place, then, when tempted to leave California for any of the remote and much bepraised discoveries let the staid and thoughtful miner consider how, almost always, the importance of these reputed new finds is grossly, not to say shamefully exaggerated, the story of their extent and richness arising often from misapprehension and ignorance, or being the villainous fabrication of interested parties. Never have the first reports of these discoveries been subsequently verified, the most of them, as is quite notorious, having had no foundation whatever in fact. In so far as any benefit ever accrued to the masses who left California for Frazer river, Washoe, or any other localities outside her borders, every one of these movements may be pronounced dead failures, not one man in a hundred of those who were carried away by these excitements but would have been better off had he remained where he was. Let the miner who contemplates a journey to any of these outside places ponder well this significant fact.

Then there arises to the man who remains and pursues his calling in a neighborhood where he is acquainted, this advantage: he not only saves his time and money, but he is pretty sure to earn something. Making available his knowledge of the diggings, he can hardly fail to earn enough to pay his way and a little more. This the *stamperder* does not always do; on the contrary, he is apt to spend what he had and return to his old home "dead broke." Seventy per cent. of this kind come back from their campaigns in a worse plight than the Prodigal Son—out their expenses and incontinentally "strapped." In this we have another phase of the question for a prudent man to ponder.

Again, California is a pleasant, healthful country for a man to live in. Even if he does not make so much money, he can enjoy life here and otherwise get a great deal more out of it than is possible in these sage brush, alkali lands with their cloud-bursts, sand-storms, and their siroccos, their brigands and blizzards. As regards health, this State is a vast sanitarium, in which men, but for their bad habits or inherited disease, would live until old age. Bare existence amounts to something in a country and a climate like this. Better live here, under the wide-spreading boughs of an umbrageous oak, than in a palace almost anywhere else. And are not the mining regions the most desirable places of abode in all this broad and delectable land? Is there another such place for the homes of white men as these foothills of the Sierra, with their salubrious atmosphere, their magnificent rivers, stately forests, rich, red soil and their gold? Not another in all the world. Go where you will—traverse the face of the earth over and you will not find its like.

And let the California miner think of this, too, and stopping where he is, let him take up some land, inclose, plant and cultivate it, and make there a home. While doing this, it will be an easy matter to secure also some mining interests near by. And, certainly, these are things to be looked after. If not very valuable now, they will be by-and-by. Quartz veins that possess no value to-day will, with the improvements that are being made, be worth a good deal in the course of a few years. Our advice to miners, therefore, is that they take up these properties and hold onto them. A gold mine will, after a while, be a handy thing to have on the premises.

To the waiters and toilers in our own mines, we would say, then, stop in California; abide where you are; take up mines and stay by them; get land; own, beautify and plant it. This will be better than a pilgrimage to Tombstone, Yankee Fork or Wood River, even if you could be assured that it would be attended with much more than the average success.

## Mechanics' Fair.

On Tuesday evening another meeting of the Board of Managers of the coming Mechanics' fair was held, and from the reports of the various committees a most satisfactory showing for the success of the exhibition was made. The announcement that \$1,000 would be paid for the first successful trip of a flying-machine around the pavilion, carrying a man, has had the effect of bringing to light a number of wonderful inventions, and an eminent professor of aeronautics has exhibited a perfect model, from which a large machine will at once be constructed. The identifying season ticket used this year will be designed by A. R. Wells, a member of the Board, and used so successfully at previous fairs. The prices of admission this year will be: Double season, \$5; single season, \$3; single admission, 50 cents. The display of agricultural and mining machinery in operation, combining the latest improvements in those two important elements of our prosperity, will be a special feature, for which a large and inclosed space has been set apart. Another new triumph of California, from invention and manufacture, will be shown for the first time by an improved steam fire-engine and a rotary engine of novel construction.

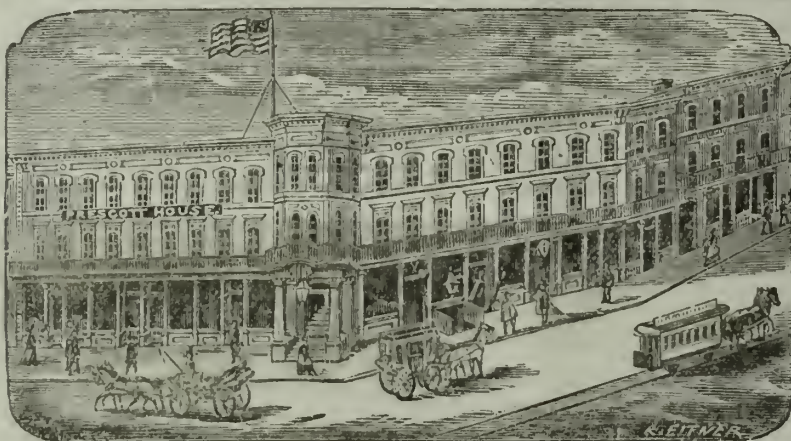
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## PATENTS AND INVENTIONS.

### List of U. S. Patents for Pacific Coast Inventors.

From Official Reports for the "Mining and Scientific Press," U. S. and Foreign Patent Agents.

FOR THE WEEK ENDING JUNE 21ST, 1881.

243,053.—TALLY BOARD.—H. J. Baddley, Napa, Cal.  
243,202.—OIL STOVE.—B. C. Brown, S. F.  
243,139.—DRY PLATE HOLDER FOR PHOTOGRAPHIC CAMERAS.—J. M. Howe, S. F.  
243,071.—POCKET KNIFE.—A. Kayser, S. F.  
243,160.—FANNING MILL.—Thos. E. Rosier, Dayton, W. T.

243,161.—LATCH.—J. W. Ross, Santa Clara, Cal.  
243,321.—HARROW.—Geo. S. Sperry, Willows, Cal.  
NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign, Patent Agency, the following are worthy of special mention:

**SOFA BED.**—Frank Laeremans, 525 Washington street, San Francisco. Dated June 14, 1881. No. 242,941. The patent which covers this invention, though modest in title, really covers several in one. It relates to that class of furniture which combines the sofa with the bed, wherein the back of the piece of furniture folds forward on the arms. It consists in a pair of grooved arms and a shifting back, provided with studs entering said grooves, and upon which the back swings in combination with projecting rails secured to the ends of the back, and which sustain the back when it is in a horizontal position to act as a bed. When used as a sofa, it looks like one—and is one; when used as a bed, it is a good wide one on a firm foundation. The user does not lie on the upholstery, but on the ticking, and this is made with slates like a regular mattress. With it is a movable frame for mosquito bars. Another combination of this principle is the sofa and operating table for the use of physicians. In one position, it is an office sofa; in the other, an operating table, with all necessary appliances, and so made as to take the patient in any position. Many of these have been sold, and for country physicians they are excellent. The combination is also formed as a chair and a crib. During the day-time it is a good easy-chair for bed-room use. At night a single motion makes it a crib, the side unfolding and being properly held in position. The most peculiar arrangement, however, is the sofa and table in combination. The back of the sofa, when tipped over horizontally, makes a table capable of extension. Its edges project over sufficiently to allow room for the limbs under the table. The end-leaves draw out and admit of inserting any number of leaves. This is a very useful arrangement for residences, steamers, etc., being very convenient. The frame can be made in black walnut, but a cheaper form is, of course, in pine. For sitting-rooms in the country this is handy, the table being out of the way when not in use, and being, at the same time, available as a sofa. A 6-ft. sofa makes a 12-ft. table. The slide is peculiarly arranged so as to leave no chance to get out of order.

**POCKET KNIFE.**—A. Kayser, S. F. Dated June 21, 1881. No. 243,071. This invention relates to that class of pocket knives the novelty in which is the peculiar construction of the handle and arrangement of the blades, whereby the said blades may be easily removable, and contained complete within the handle when not in use and pushed out therefrom when required, being held in place to prevent their unexpectedly closing up and hurting the hand. The object of the invention is to provide a knife, the blades of which can be easily removed and others substituted, and which, when not in use, will be convenient and harmless, the blades not being able to open in the pocket, and when in use will be held firm and rigid, the whole knife being substantial and not likely to get out of order.

**HARROW.**—Geo. S. Sperry, Willows, Yolo county, Cal. Dated June 21, 1881. No. 243,321. This is a peculiar sectional harrow, the two parts of which are connected by peculiar links, with notched or corrugated surfaces which give to the two sections a zigzag or vibratory motion and conform them to the character of the ground. An extended heel, or tube, carrying the teeth, is journaled on the frame; these teeth revolve between the interstices of the frame timbers, and are long enough to cut the straw or stubble beneath.

**OIL STOVE.**—B. C. Brown, S. F. Dated June 21, 1881. No. 243,202. This invention relates to an oil stove for heating and cooking purposes, the novel features of which are the details of construction of the oil-holding tank. The construction of the stove makes it possible to warm the room at the same time a cooking vessel is used.

### The Color of the Sun.

Prof. S. B. Langley, Director of the Alleghany Observatory, famous in the line of discovery in solar physics, is about starting on an expedition of scientific and popular interest. The main object of this expedition is to determine by actual experiment the amount of heat given by the sun to the earth, and also the true color of the sun, as it would appear to an observer beyond our atmosphere. Numerous questions of importance to meteorology are closely involved in this inquiry, and hence it has a direct practical bearing. A liberal citizen of Pittsburgh, Pa., who wishes that his name should not be made public, has defrayed the large cost of the requisite apparatus, and also of the incidental expenses of the expedition. The co-operation and hearty assistance of Gen. Hazen, Chief of the Signal Service Bureau, has been given to the enterprise, and it proceeds under his official direction. To attain its special object the expedition must seek one of the most elevated summits on the continent, in an extremely arid region, these two conditions being essential. These are only to be found combined in the remote localities of Arizona and Southern California, in places far from civilization, and where the aid of government by the War Department is indispensable both to provide transportation and protection.

One of the objects of the expedition will be to prove by a new class of experiments a curious conclusion which Prof. Langley has already arrived at: to the effect that the sun is not really a white, or yellow, or even a red object, but that sunlight is in reality "deeply, darkly, beautifully blue." We, however, see sunlight only through the delusive medium of an atmosphere. We are in the position of people who have been looking through colored spectacles without knowing it. If we had always looked at the electric light in this way—say through yellow glasses—we should have fully believed it yellow. The proof that we have a blue sun is, however, somewhat conclusive at present, and this expedition is likely to add to the strength of the proof. This is not merely a subject of curious inquiry. If our atmosphere in reality has played the part of yellow glasses, it follows that an enormous proportion of the sun's heat has never been taken into account in those questions of scientific meteorology which have a special bearing on climate, and hence upon agriculture and other practical affairs. Two adjacent stations will be selected, respectively at heights of 3,000 and 14,000 ft. for purposes of comparison, through their very different thicknesses of atmosphere. The personnel of the expedition will include at least six specialists, of whom one will be an officer from the army, three from civil life, and two non-commissioned officers of the Signal Service. The expedition starts July 1st from Pittsburg.

**SPEED AT WHICH WINGS ARE DRIVEN.**—The speed by which some wings are driven is enormous. It is occasionally so great as to cause the pinions to emit a drumming sound. To this source the buzz of the fly, the drone of the bee, and the boom of the beetle are to be referred. When a grouse, partridge or pheasant suddenly springs into the air, the sound produced by the whirling of its wings greatly resembles that produced by the contact of steel with the rapidly-revolving stone of the knife-grinder. It has been estimated that the common fly moves its wings 330 times per second, that is, 19,800 times per minute, and that the butterfly moves its wings nine times per second, or 540 times per minute. These movements represent an incredibly high speed even at the roots of the wings; but the speed is enormously increased at the tips of the wings, from the fact that the tips rotate upon the roots as centers.—*Fraser's Magazine.*

**FORMATION OF MOUNTAINS.**—Speaking of the formation of mountains, Prof. Favre, of Geneva, has said that the three systems which account for the origin of mountains do not differ greatly from each other. Those who admit the system of elevations as the principal cause would probably admit the formation of depressions as a secondary cause, while those who give depression the first place would also admit elevation as a secondary factor. Lastly, in the system of lateral crushing there is a general depression of the earth, since there is a diminution in the length of the radius of the globe, and yet there result elevations of the ground in the midst of this general depression.

**MEASURING STELLAR LIGHT.**—An apparatus has been described by M. Janssen for measuring the intensity of the light received by us from the stars. It is, of course, necessary for comparative purposes that the photographs of different stars should be taken under identical conditions. M. Janssen hopes to be able shortly to obtain by this method additional data for ascertaining the relative dimensions and distances of the stars, and also additional evidence concerning the phenomena which take place in them.

**BLACKING PIANO-FORTE KEYS.**—A good black ink is as effectual as any stain to blacken the sharps of a piano. It is, perhaps, not generally known that, though made of ebony, these keys always require staining, as true ebony is rather brown than black, and full of a yellowish grain. Old keys are probably saturated with grease; they should therefore be treated with potash first.—*English Mechanic.*

### New Method of Inlaying Wood.

A new method of inlaying wood has been contrived by a furniture manufacturing house in England. The process is as follows: A veneer of the same wood as that which the design to be inlaid consists—say sycamore—is glued entirely over the surface of any hard wood, such as American walnut, and allowed to dry thoroughly. The design is then cut out of a zinc plate about one-twentieth of an inch in thickness, and placed upon the veneer. The whole is now subjected to the action of steam, and made to travel between two powerful cast iron rollers of eight inches in diameter by two ft. long, two above and two below, which may be brought within any distance of each other by screws. The enormous pressure to which the zinc plate is subjected forces it completely into the veneer, and the veneer into the solid wood beneath it, while the zinc curls up out of the matrix it has formed and comes away easily. All that now remains to be done is to plane down the veneer left untouched by the zinc until a thin shaving is taken off the portion forced into the walnut, when the surface being perfectly smooth, the operation will be completed. It might be supposed that the result of this forcible compression of the two woods would leave a ragged edge, but this is not the case, the joint being so singularly perfect as to be unappreciable to the touch; indeed, the inlaid wood fits more accurately than by the process of fitting, matching, and filling up with glue, as is practiced in the ordinary mode of inlaying.

**TREATMENT OF SUNSTROKE.**—The peculiar atmosphere of California admits of much more exposure to the rays of the summer sun than can be endured in the Eastern States. But it is still well to know what to do in case of sunstroke, as prompt action is generally necessary to avoid serious results. An exchange says: In case of sunstroke, loosen the patient's clothes and bathe the head and entire body with cool water, and with moistened hands rub the extremities, the neck, and the whole length of the spine, rubbing in a downward direction to draw the blood from the head. As soon as boiling water can be obtained, put a dry blanket round the body, then ring flannels from the hot water and apply them quickly to the region of the stomach, liver, bowels and spine, over the blanket; also, immerse the feet in hot water, or wrap them in hot flannels as far as the body. Rewring the flannels once every five or eight minutes for half an hour or more, then remove them and apply cold water in the same way, either by cool towels or sponging with cool water; dry well and rub the surface lightly and briskly with the hand until a glow is produced. As soon as the patient can swallow, give him hot water to drink, and plenty of it, with occasional bits of ice or sips of cold water. Often, of course, the attack is so slight that so thorough treatment is not necessary.

**WASHINGTON COLLEGE.**—The next term of this well-known institution will begin July 28th. The school is beautifully situated upon a rise of ground overlooking the Alameda valley, in a most healthful location. The buildings are well adapted for the comfort of pupils, and the educational appliances are of high order. The grounds are beautifully laid out and covered with a handsome growth of trees. The faculty is able, and the government of the school, in the hands of such well known instructors as Rev. and Mrs. S. S. Harmon, needs no encomium. Youth of both sexes are admitted, and each has its own buildings and grounds. The catalogue shows the attendance of scholars from all parts of the Pacific coast. Young people from rural homes will find the school a charming one in every respect.

**CAMPING OUT.**—C. J. and Albert Cressey, with Mr. Briggs, their families and others, of Modesto, are out on a long camping trip. The writer met them at Siegler's springs, recently, where they were happily situated for a few days' stay. Favorable mention was made by members of the party concerning the springs for bathing and drinking purposes. They expect to visit Clear lake, and most of the resorts in Lake county, the Geysers and other noted places in Sonoma and other counties. The company number 16, including children. Their outfit seemed complete, with large tent, 11 animals, saddles and covered spring wagons. RURAL readers would like a "report" from such rovers, who see and enjoy so much.

### A GREAT REVELATION.

Some Valuable Thoughts Concerning Human Happiness and Timely Suggestions About Securing It.

Synopsis of a Lecture Delivered by Dr. Chas. Craig Before the Metropolitan Scientific Association.

"The public speaker of the present day labors under difficulties of which the speakers of the last century never dreamed, for while the audiences of the past received what was said with the mental equals or superiors of the ones who addressed them. Rev. Dr. Tyng, when a theological student, supplied a church in a neighboring town, and on his way to preach one morning met an aged colored man. 'Well, Uncle, do you ever go to hear the young

preacher?' asked the unfledged doctor. 'No, Massa,' replied the negro, 'dis chile don't let none o' dem students pratts on him.' The darkey had begun to think. The free and independent thought of this age accepts statements only where they are proven to be truth, while the development of mental power seems equally great in every other department of life. The valuable inventions of the day are counted by thousands. The increase of scientific study is universal. The spirit of inquiry in all fields is so marked as to cause

### Comment on Every Side.

While people seem investigating and advancing in every direction which can help them morally, mentally or physically. This is specially true of the human body and everything which concerns it, and the truths which the people have found, even in the last 50 years, are simply marvelous. How really ignorant some cultured and supposedly scientific people were only a few years ago, as compared with the present day, may be better understood from a few illustrative facts. A prominent writer prepared an elaborate essay to prove that steamships could never cross the Atlantic, and his pamphlet was issued just in time to be carried by the first steamer that went to England. People once believed that the heart was the seat of life and health. It is now known that this organ is only a pump, simply keeping in motion what other and more important organs of the body have created and transformed. It was once supposed that if a person felt a pain in the back, the liver was deranged; if a pain came in the lower chest, the lungs were affected and consumption was near; it is now known that a pain in the back indicates diseased kidneys, while troubles in the lower chest arise from a disordered liver and not imperfect lungs. A severe pain in the head was once thought to come from some partial derangement of the brain; it is now known that troubles in other parts of the body and away from the head, cause headaches, and that only by removing the cause can the pain be cured. It is a matter of

### Private History

That Gen. Washington was bled to death. His last illness was slight, and caused principally by weariness. A physician was called who "bled him copiously." Strange to say, the patient became no better. Another doctor was called, who again took away a large amount of the vital fluid. Thus, in succession four physicians drew away the life of a great man, who was intended by nature for an old age, and who prematurely died—murdered by malpractice—bled to death. That was the age of medical bleeding.

The speaker then graphically described another period which came upon the people, in which they assigned the origin of all diseases to the stomach, and after showing the falsity of this theory, and that the kidneys and liver were the causes of disease, and that many people are suffering from kidney and liver troubles to-day who do not know it, but who should know it and attend to them at once, continued:

"Let us look at this matter a little more closely. The human body is the most perfect and yet the most delicate of all created things. It is capable of the greatest results and it is liable to the greatest disorders. The slightest causes sometimes seem to throw its delicate machinery out of order, while the most simple and common sense care restores and keeps them in perfect condition. When it is remembered that the amount of happiness or misery we are to have in this world is dependent upon a perfect body, is it not strange that simple precautions and care are not exercised? This is one of the most vital questions of life. People may avoid it for the present, but there is certain to come a time in every one's experience when it must be faced.

"And here pardon me for relating a little personal experience. In the year 1870, I found myself losing both in strength and health. I could assign no cause for the decline, but it continued, until finally I called to my aid two prominent physicians. After treating me for some time, they declared I was suffering from Bright's disease of the kidneys, and that they could do nothing more for me. At this time I was so weak I could not raise my head from the pillow, and I

### Fainted Repeatedly.

My heart beat so rapidly it was with difficulty I could sleep. My lungs were also badly involved; I could retain nothing upon my stomach, while the most intense pains in my back and bowels caused me to long for death as a relief. It was at this critical juncture that a physical longing which I felt (and which I most firmly believe was an inspiration) caused me to send for the leaves of a plant I had once known in medical practice. After great difficulty I at last secured them and began their use in the form of tea. I noticed a lessening of the pain at once; I began to mend rapidly; in five weeks I was able to be about, and in two months I became perfectly well and have so continued to this day. It was only natural that such a result should have caused me to investigate most thoroughly. I carefully examined fields in medicine never before explored. I sought the cause of physical order and disorder, happiness and pain, and I found the kidneys and liver to be the governors, whose motions regulate the entire system.

After describing at length the offices of the kidneys and liver, and their important part in life, the doctor went on to say:

"Having found this great truth, I saw clearly the cause of my recovery. The simple vegetable leaf I had used was a food and restorer to my well nigh exhausted kidneys and liver. It had come to them when their life was nearly gone, and by its simple, yet powerful influence had purified, strengthened and restored them, and saved me from death. Realizing the great benefit which a knowledge of this truth would give to the world, I began in a modest way, to treat those afflicted, and in every case I found the same.

### Happy Results

Which I had experienced. Not only this, but many who were not conscious of any physical trouble, but who, at my suggestion, began the use of the remedy which had saved my life, found their health steadily improving and their strength continually increasing. So universal, where used, was this truth, that I determined the entire world should share in its results, and I therefore placed the formula for its preparation in the hands of Mr. H. H. Warner, of Rochester, N. Y., a gentleman whom I had cured of a severe kidney disease, and who, by reason of his personal worth, high standing and liberality in endowing the Astronomical Observatory and other public enterprises, has become known and popular to the entire country. This gentleman at once began the manufacture of the remedy on a most extensive scale, and to-day, Warner's Safe Kidney and Liver Cure, the pure remedy that saved my life, is known and used in all parts of the continent.

"I am aware a prejudice exists toward proprietary medicines, and that such prejudice is too often well founded, but the value of a pure remedy is no less because it is a proprietary medicine. A justifiable prejudice exists toward quack doctors, but is it right that this prejudice should extend towards all the doctors who are earnestly and intelligently trying to do their duty? Because Warner's Safe Kidney and Liver Cure saved my life before it became a proprietary medicine, is it reasonable to suppose that it will not cure others and keep still more from sickness now that it is sold with a Government stamp on the wrapper? Such a theory would be childish.

The doctor then paid some high compliments to American science, and closed his lecture as follows:

"How to restore the health when broken and how to keep the body perfect and free from disease must ever be man's highest study. That one of the greatest revelations of the present day has been made in ascertaining the true seat of health to be in the kidneys and liver, all scientists now admit, and I can but feel that the discovery which I have been permitted to make, and which I have described to you, is destined to prove the greatest, best and most reliable friend to those who suffer and long for happiness, as well as to those who desire to keep the joys they now possess."



**THE BERKELEY GYMNASIUM.**—This well-known preparatory school for the University will begin its fall term July 11th. During the vacation extensive repairs have been made in the buildings to accommodate the large patronage of the school, and the coming year bids fair to be one of unusual activity and success. This school has been exceedingly well sustained from its start, and many of its graduates pass the University examinations triumphantly each year.

**HIGHLAND SPRINGS.**—This popular resort has had a fine company of visitors in June, who seem to have enjoyed their recreation exceedingly.

**BOARDING AND DAY SCHOOL FOR YOUNG LADIES.**—The young ladies' boarding and day school, on Oak St., between 10th and 11th Sts., Oakland, will open on Wednesday, July 27th. The school is now under the principalship of Miss S. B. Bisbee, an educator of experience and repute. It is the school formerly managed by Mrs. Poston.

### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. F. OSBORN—San Francisco.  
A. C. KNOX—Napa and Lake counties.  
G. W. MCGREW—Santa Clara county.  
M. F. OWEN—Santa Cruz county.  
J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
JARED C. HOAG—California.  
B. W. CROWELL—Yuba and Sutter counties.  
D. W. KELLER—Solano and Sacramento counties.  
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Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

### Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on, or address U. F. D., this office.

**ANDERSON SPRINGS**, in Lake county, 19 miles from Calis toga (over a grand, picturesque route, via Mt. St. Helena) are among the best in this State. They are situated in the midst of a natural park, full of beauty and interest to the naturalist. Good home-like accommodations at reasonable rates are invariably furnished by the Anderson family.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

How to STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So we are sure and send us notice by letter.

## S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, July 6, 1881.  
The week has been broken, as is common at the Fourth of July season. Every one who could has flown to the springs, and this, added to the excitement about the attack on Pres. Garfield, has drawn the minds of men away from trade. The markets are therefore of little importance, and there is little to say of them.

The latest from abroad is as follows:  
LIVERPOOL, July 5.—Good to choice California Wheat, 9s 5d to 9s 8d.

#### The Foreign Review.

LONDON, July 5.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Wheat passed through the critical blossoming period favorably. The general condition of the crops appears healthy. Barley in appearance indicated good crops on the best land, and variable elsewhere. Oat prospects appear to be the worst. Regarding trade, on account of the scarcity of native W heats, they advanced both in London and in the province, and the advance was maintained, but at the close buyers operated less freely. Foreign trade has been on the wane the whole week. Wheat Friday was cheaper all round. The advance which was made out on Monday was due to a small supply. This advance movement was changed last Friday, particularly regarding American Red Winter Wheat on the spot. The decline amounted to 6d to 1s, yet buyers hesitated. The amount on passage is increased and the week's supply is chiefly Indian, Russian and American. Flour maintains Monday's advance, but the demand, which has been only consumptive, is still a slacking. The foreign supply is chiefly Australian and European. Prices were lower in London and the provinces on Friday. Barley was dull and rates were lower where business was transacted. Oats, native and foreign, are firm and higher. Business is quiet in tone and in the buyer's favor. Sales of English Wheat in the past week were 19,357 quarters, against 17,974 for the corresponding week of last year.

#### Freights and Charters.

British ship *Cleomenis*, 1,739 tons, Wheat to Cork, U. K., £4—prior to arrival. British ship *Racenswood*, 1,123 tons, Wheat to Cork, U. K., £3 2s 6d—prior to arrival.

#### Eastern Grain and Provision Markets.

NEW YORK, July 5.—Wheat, lower, \$1.22 to 1.26. Flour, quiet.

CHICAGO, July 5.—Wheat, unsettled and lower, at

\$1.09½ to 1.09½ cash, \$1.11½ for August, \$1.09½ for September. Corn, weak and easier, at 45½ cash, 45½ to 46 for August, 46½ for September. Oats, weak and lower, at 37 cash, 28½ for August, 26½ to 27 for September. Rye, Barley and Whiskey are steady. Pork, firm and higher, at \$16.42 cash, \$16.52½ for August, \$16.62½ for September. Lard, strong and higher, at \$1.56 bid cash, \$1.45 bid for August, \$1.15 bid for September.

#### Eastern Wool Markets.

BOSTON, July 1.—The market for Wool is firm. Prices are well sustained, but the demand of the manufacturers is not so pressing. Buyers are now withdrawing from the interior on account of the high prices very generally demanded. Supplies of the new clip are arriving quite freely. There is now a good assortment offering. Sales of washed fleeces have been quite small, as most of the supplies are held above the views of the buyers. The sales of X and XX Ohio and Pennsylvania have been at 42 to 42½c, and choice XX is held at 45c; not over 43c could be obtained for medium. Ohio has been sold at 45c and is firm. Michigan and Wisconsin fleeces range from 40 to 41c for X, and are firm. The entire sales of the week have been 2,800,000 lbs. All kinds of delaine fleeces have been in demand at 44 to 45c; for fine, mostly 45c. In Kentucky combings there was considerable sales at 43c; coarse combing continues dull. California Wool has been in demand, and sales have been made at 24 to 36c for Spring. The transactions in all kinds of California Wool have been about 1,000,000 lbs. Unwashed fleeces have been in demand at 35c for Georgia, 32c for Kentucky, 24 to 42c for Texas, 25 to 33c for fine Western and 27 to 35c for medium. Pulled Wools are firm and in steady demand at full previous prices. In foreign Wool the business has been light, but including some lots of Montevideo, Cape and Australian at full prices.

NEW YORK, July 5.—California Wool, steady; Spring fleece, 17 to 32c; burry, 14 to 24c; pulled, 33 to 38c. Fall clip, 12 to 15c; burry, 15 to 17c.

#### The London Wool Sales.

LONDON, July 1.—At the Wool sales yesterday 8,300 bales of New South Wales and Victorian were disposed of. There was a good demand and prices were firm. At the sales to-day 890 bales were offered of Sydney and New Zealand. The present series of sales closed to-day. The next series begins August 23d. The sales closed with firm prices. Of 331,000 bales sold during the present series of sales, 131,000 were for home consumption and 200,000 for export. There has been a good demand throughout, and the prices obtained show an advance of 1d on the March series.

BAGS—Bags are quiet. Wholesale lots are said to be purchasable at 9 to 9½c.

BARLEY—There is no change and few sales: 1,000 sbs Bay Feed sold at 92½c and 210 sbs at 90c.

BEANS—Unchanged, except that the top price for Pea Beans is now \$2.30.

CORN—Small round Corn is a shade lower; other sorts unchanged; 400 sbs Large Yellow sold at \$1.02½.

DAIRY PRODUCE—Fancy dairies have shaded off a fraction, and 27c is the top of the market to-day. Much fine Butter goes at 26 to 26½c. The market is quiet. Cheese is unchanged.

EGGS—Eggs are about the same. There are some shipments of Utah Eggs, which are selling closer than usual to fresh Californias.

FEED—Hay prices are as before, to-wit: Wheat, old, \$10 to \$12.50; do, new, \$8.50 to \$9; Barley, \$7 to \$8; Wild Oat, new, \$7.50 to \$9.50; do, old, \$10 to \$11.50; Stock, \$7 to \$8; Stable, \$8 to \$10.50 per ton.

FRESH MEAT—Dressed Pork is higher, sales reaching to 8½c for fine firm meat.

FRUIT—What change there has been in the line of improvement, as many concluded there was no money in Apples, Pears and Peaches at last week's prices. The reduced supply has put up values. Cherries and Currants are going out and are scarce. Berries are still abundant and cheap.

HOPS—Lots to brewers are still held at 20 to 25c.

OATS—The market is quiet and sales obscure.

ONIONS—Receipts have been large and prices are at a low ebb. The choicest Silver Skins are not going above 75c per cwt at present.

POTATOES—Potatoes, too, are abundant, the choicest in boxes bringing not above 90c and sacks 75c. The average is, of course, much less.

PROVISIONS—Last week's advance is sustained and the tendency upward, in sympathy with the advance of the raw material.

POULTRY AND GAME—Hens have gone forward a little. Turkeys are a shade weaker.

VEGETABLES—Tomatoes are abundant again and cheap. Carrots are lower. Other fluctuations have been few and are noted in our price list.

WHEAT—There has been but little done either by shipper or millers, and values are stationary. We note sale of 1,200 tons Milling at \$1.42½.

WOOL—The market is quiet and prices unchanged.

### Fruits and Vegetables.

[WHOLESALE.]

FRUIT MARKET.		WEDNESDAY M., July 6, 1881.	
Apples, bsk.	25 @ 30	do, looses.	7 @ 8
do, Astracan, bx.	50 @ 75	Peaches.	10 @ 13
Apricots.	75 @ 100	do, pared.	18 @ 20
Bananas, bunch.	2 50 @ 5 00	Pears, sliced.	9 @ 10
Cantaloupes, crt.	1 50 @ 2 50	do, peeled.	9 @ 11
Cherries, chest.	9 00 @ 10 00	Plums.	5 @ 15
Cocoanuts, 100.	6 00 @ 7 00	Pitted.	14 @ 15
Crab Apples.	1 50 @ 2 00	Prunes.	11 @ 13
Cranberries, bbl.	— @ —	Raisins, Cal, bx.	1 25 @ 1 50
Currants, chest.	4 00 @ 4 50	do, Halves.	1 75 @ 2 00
do, black.	— @ 12 00	do, Quarters.	2 00 @ 2 25
Figs, bx.	50 @ 75	Eighths.	2 25 @ 2 50
Gooseberries.	— @ —	Zante Currants.	8 @ 10
do, English.	— @ —	Asparagus, bx.	— @ 1 00
Grapes.	65 @ 1 25	Artichokes, doz.	— @ 10
do, Cal, box.	5 00 @ 6 00	Beets, ctt.	— @ 75
Lemons, Cal, bx.	2 00 @ 3 00	Beans, String.	— @ 11
Sicily, box.	8 50 @ 9 00	do, Wax.	— @ 11
Australia.	— @ —	do, Fountain.	15 @ 2
Oranges, Cal, bx.	1 00 @ 1 50	Cabbage, 100 lbs.	60 @ 65
do, Tabiti M 20 00	60 @ 65	Carrots, sk.	40 @ 50
do, Mexican.	— @ —	Calliflower, doz.	40 @ 50
do, Loreto.	— @ —	Cucumbers, bx.	25 @ 40
Peaches, bx.	50 @ 75	Egg Plant, bx.	1 25 @ 1 50
do, bsk.	50 @ 75	Garlic, lb.	— @ 11
do, Crawford.	75 @ 1 00	Green Corn, doz.	7 @ 12
Pears, bsk.	25 @ 60	Green Peas, lb.	— @ —
do, bx.	40 @ 75	do, Sweet.	— @ 21
Pineapples, doz.	6 00 @ 8 00	Grn Peas, sk.	40 @ 50
Plums, bx.	40 @ 75	Lettuce, doz.	10 @ —
Prunes, German.	40 @ 1 25	Mushrooms, lb.	— @ —
Quinces, bx.	— @ —	Okra, bx.	1 00 @ 1 25
Blackberries, ctt.	3 00 @ 5 00	Parsnips, lb.	— @ 1
Raspberries, ctt.	6 00 @ 6 50	Horse radish.	— @ —
Strawberries, ctt.	4 00 @ 5 00	Rhubarb, box.	25 @ 50
Sugar Cane, bbl.	— @ —	Squash, Marrow.	— @ —
Watermelons, 100 lb.	20 @ 30	fat, ton.	— @ 15 00
DRIED FRUIT.		do Summer, bx.	
Apples, sliced, lb.	5 @ 6	Sprouts, lb.	— @ 2
do, quartered.	5 @ 6	Tomatoes, bx.	25 @ 35
Apricots.	18 @ 20	do, River.	60 @ 75
Blackberries.	12 @ 15	Turnips, ctt.	60 @ 75
Citron.	2 @ 3	Rutabaga.	— @ 75
Dates.	9 @ 10		

### General Merchandise.

WHOLESALE.

WEDNESDAY M., July 6, 1881.

CANDLES.		Cement, Rosen-	
Crystal Wax.	16 @ 18	dale.	2 00 @ 2 25
Paraffine.	20 @ —	Portland.	4 00 @ 4 50
Patent Sperm.	25 @ 28	NAILS.	
CANNED GOODS.		Assrt'd sizes, keg.	— @ 5 00
Assrt'd Pic Fruits.	— @ —	OILS.	
Table do.	3 50 @ —	Pacific Glue Co's.	— @ 10
James and Jellies.	3 75 @ —	Castor, No. 1.	1 00 @ 1 10
Pickles, hf gal.	3 25 @ —	do, No. 2.	1 00 @ —
Sardines, qr box.	1 67 @ —	Baker's A. A.	— @ 30
Hf Boxes.	2 50 @ 1 90	Olive, Plagnoll.	5 25 @ 5 75
Merry, Faul & Co's.	— @ —	Possel.	4 75 @ 5 25
Preserved Beef.	— @ —	Palm, lb.	9 @ —
2 lb, doz.	3 25 @ 3 50	Boiled.	70 @ —
do 4 lb, doz.	5 50 @ 6 —	Cocoanut.	60 @ —
Preserved Mutton.	— @ —	China nut, cs.	68 @ 69
2 lb, doz.	3 25 @ 3 50	Sperma.	1 40 @ —
Beef Tongue.	5 75 @ 6 00	Coast Wbales.	35 @ —
Preserved Ham.	— @ —	Polar.	80 @ 85
2 lb, doz.	5 50 @ 5 60	Lard.	18 @ 22
Deviled Ham, 1 lb.	— @ —	Petroleum (100°).	28 @ 35
do Ham 1 lb doz.	2 50 @ —	PAINTS.	
Boneless Pigs Feet.	— @ —	Pure White Lead.	61 @ 10
3 lbs.	3 50 @ 3 75	Whiting.	14 @ —
2 lbs.	2 75 @ —	Pntly.	4 @ 5
Spiced Fillets 2 lbs 50	— @ —	Paris White.	23 @ —
Head Cheese 3 lbs 50	— @ —	Ochr.	33 @ —
COAL-Jobbing.		Venetian Red.	34 @ —
Australian, ton.	8 50	Averil mixed Paint.	— @ —
Coco Bay.	6 50 @ 7 00	gal.	— @ —
Bellingham Bay.	— @ —	White & Tints.	2 00 @ 2 00
Seattle.	7 50 @ —	Blue.	— @ 50
Cumberland.	— @ 13 00	Ob Yellow.	3 00 @ 3 50
Mt Diablo.	— @ —	Light Red.	3 00 @ 3 60
Lehigh.	— @ —	Metallic Roof.	1 30 @ 1 50
Liverpool.	— @ 9 00	RICE.	
West Hartley.	— @ 8 50	China Mixed, lb.	5 @ 5½
Scranton.	— @ —	Hawaiian.	5½ @ 9
Vancouver Id.	— @ —	SOAP.	
Wellington.	— @ 9 00	Castile, lb.	9 @ 10
charcoal, sack.	— @ —	Common brands.	4½ @ 6
coke, bush.	— @ —	Fancy Brands.	7 @ 8
COFFEE.		SPICES.	
Sandwich Id lb.	— @ 14	Cloves, lb.	37½ @ 40
Costa Rica.	13½ @ 14	Cassia.	19 @ 20
Guatemala.	13½ @ 14	Nutmegs.	85 @ 90
Java.	24 @ 25	Pepper Grain.	15 @ 16
Manilla.	15 @ —	Pimento.	10 @ 20
Ground, in cs.	22½ @ 25	Mustard, Cal 1 lb.	— @ 25
FISH.		SUGAR, ETC.	
Sac'to Dry Cod.	— @ 5	Cal. Cube lb.	— @ 13½
do in cases.	— @ 5	Powdered.	— @ 13½
Easter Cod.	7 @ 7½	Fine Crushed.	— @ 13½
Salmon, bbl.	7 00 @ 7 50	Granulated.	— @ 12½
Hf bbls.	3 50 @ 4 00	Golden C.	— @ 11½
1 lb cans.	1 12½ @ 1 22½	Cal Syrup.	65 @ —
Pik'd Cod, bbls.	— @ —	Hawaiian Molasses.	25 @ 30
Hf bbls.	— @ —	TEA.	
Mackerel, No. 1.	— @ —	Young Hyson.	— @ 65
Hf bbl.	9 50 @ 10 00	Moynay, etc.	40 @ —
In Kits.	1 75 @ 1 85	Country pkd Gun-	— @ —
Ex Mess.	3 50 @ 4 00	powder & Im-	— @ —
Pickled Herring.	— @ —	perial.	35 @ 75
box.	3 00 @ 3 50	Hyson.	30 @ 35½
Boston Smoked.	65 @ — 70	Foo Chow O.	27½ @ 32
LIME, etc.		Japan, lat quality.	40 @ 42
Plaster, Golden.	— @ —	2d quality.	25 @ 40
State Mills.	3 00 @ 3 25	DOMESTIC PRODUCE.	
Land Plaster.	— @ —	WHOLESALE.	
ton.	10 00 @ 12 50	WEDNESDAY M., July 6, 1881.	
Lime, Santa Cruz.	— @ —	BEANS & PEAS.	
bbl.	1 25 @ 1 50	Brazil.	12 @ 14

Bayo, ctt. 1 00 @ 15  
Butter. 1 00 @ 15  
Castor. 3 00 @ 3 50  
Pava. 2 00 @ 2 30  
Red. 85 @ 87½  
Pink. 85 @ 87½  
Small White. 2 00 @ 2 30  
Lima. 2 25 @ 2 40  
Field Peas, b'k eye 40 @ 50  
do, green. 1 35 @ 1 50  
SOUTHERN. 3 @ 6  
Northern. 4 @ 6  
CHICORY. 4 @ 4  
German. 6½ @ 7  
DAIRY PRODUCE, ETC.  
BUTTER.  
Cal Fresh Roll, lb. 25 @ 27  
do Fancy Brands. 27 @ 28  
Pickle Roll. 26 @ 27  
Firkin, new. 25 @ 26  
Western. 18 @ 22  
New York. — @ —  
CHEESE.  
Cheese, Cal, lb. 11½ @ 12½  
do, boxed. — @ 13  
FOOS.  
Cal Fresh, doz. 23 @ 24  
Ducks. 19 @ 20  
Oregon. — @ —  
Petersb, by exprs. 18 @ 19  
Pickled here. — @ —  
Utah. — @ 23  
FEED.  
Bran, ton. — @ 14 00  
Corn Meal. 24 00 @ 25 00  
Hay. 6 50 @ 6 10  
Midlings. — @ 20 00  
Oat Meal. — @ 20 00  
Straw, bale. 40 @ 45  
FLOUR.  
Extra, City Mills. 4 87½ @ 5 00  
do, Co'ntry Mills. 4 25 @ 4 75  
do, Oregon. 3 75 @ 4 37½  
do, Walla Walla. 4 00 @ 4 25  
Superfine. 4 00 @ 4 25  
FRESH MEAT.  
Beef, 1st quality, lb. 5½ @ 6  
Second. 4½ @ 6  
Third. — @ 4  
Mutton. 3½ @ 4  
Spring Lamb. 4 @ 4½  
Pork, undressed. 5 @ 6  
Dressed. 8 @ 8½  
Ven. 7 @ 7½  
Milk Calves. 7½ @ 8  
do, choice. 8½ @ 9  
GRAIN, ETC.  
Barley, feed, ctt. 80 @ 85  
do, Brewing. 1 10 @ 1 20  
Chevalier. 1 15 @ 1 20  
do, Coast. 85 @ 90  
Buckwheat. 1 60 @ 1 75  
Corn, White. 1 07 @ 1 15  
Yellow. 1 02½ @ 1 07½  
Small Round. 1 05 @ 1 07½  
Oats. — @ 60  
Milling. 70 @ 80  
Rye. 1 37½ @ 1 45  
Wheat, No. 1. 1 40 @ 1 45  
do, No. 2. 1 35 @ 1 37½  
do, No. 3. 1 10 @ 1 20  
Choice Milling. — @ 15  
HIDES.  
Hides, dry. 19 @ 20  
Wet salted. 9 @ 10½  
HONEY, ETC.  
Bee wax, lb. 20 @ 24  
Honey in comb. 10 @ 12  
do, No. 2. 8 @ 10  
Dark. 5 @ 6  
Extracted. 6 @ 7  
SQUASH, ETC.  
Oregon. — @ —  
California, new. 20 @ 25  
Wash. Ter. — @ —  
Old Hops. — @ —  
NUTS-Jobbing.  
Walnuts, Cal. 8 @ 9  
do. 7 @ 8  
Almonds, hd sh lb 8 @ 10  
Soft shell. 12 @ 14

### Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, July 6, 3 P. M.

SILVER, 1.  
GOLD BARS, 890 to 910. SILVER BARS, 10 to 18 ¢ cent. dia-  
count.  
EXCHANGE on New York par; London, 49½ to 49½; Paris,  
5.20 francs per dollar; Mexican dollars, 91 to 92.  
NEW YORK (4 per cent), 117½.

### Bags and Bagging.

[JOBBER PRICES.]

WEDNESDAY M., July 6, 1881.

Eng Standrd Wheat. 10 @ 10½	45 inch. ....	9½ @ 94
Cal Manufacture. ....	40 inch. ....	8½ @ 82
Hand Sewed, 22x36. 10 @ 10½	Wool Sks Hand Swd	— @ —
20x36. ....	34 lb. ....	— @ 47
23x40. ....	4 lb do. ....	52½ @ 55
24x40. ....	Machine Sewed. ....	— @ 49
Machine Swd 22x36. 10 @ 10½	Standard Gunnes. ....	13½ @ 14
Flour Sks, halves. ....	Bean Bags. ....	6½ @ 7
Flour Sks, quarters. ....	Twine, Detrick's A. ....	— @ 37
Eightbs. ....	..... A.A. ....	— @ 37
Hessian, 60 Inch. ....	.....	— @ 11





The Capital of this old and favorite company has been increased to

**\$600,000.00,**

All of which has now been fully paid up in U. S. Gold Coin, and invested in such securities as are not liable to loss by fire, and are readily convertible into coin.

**Assets, \$840,004.43.**

Having but a very limited amount exposed to loss in this city, and its business being so conducted as to be free from serious loss by conflagration anywhere, the "Old" California is now prepared to offer a quality of indemnity second to that offered by no other insurance institution, whether domestic or foreign.

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L. L. BROMWELL, Vice President.  
ZENAS CROWELL, Secretary.  
E. T. BARNES, Ass't Secretary.

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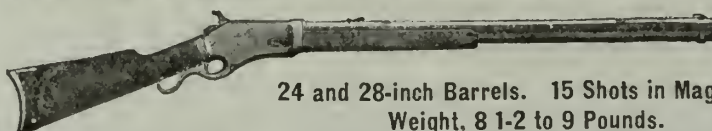
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Yearling Ram (1st and 2d).....38.50  
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Ram and 5 of his Lambs.....30.00

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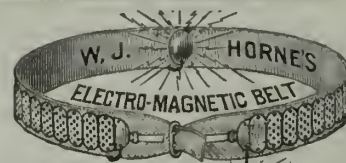
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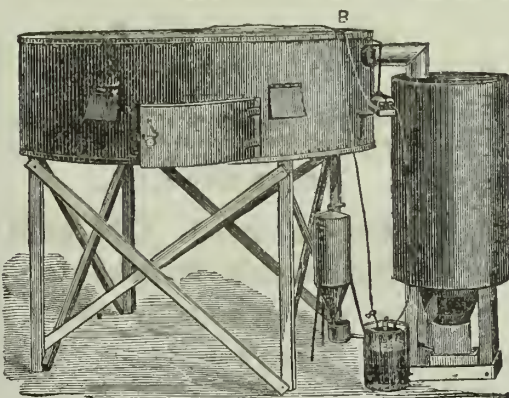
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CROP 1881. FRUIT GROWERS, ATTENTION!

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(SUCCESSORS TO SPEAR, MEADE & CO.)

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We are prepared, as usual, to make direct purchases of the next crop of DRIED FRUITS of all kinds in small  
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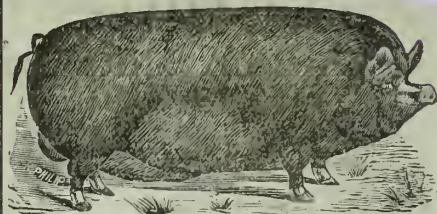
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I am now ready to sell Carp which were imported from  
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My Berkshires are Thoroughbred, and selected with  
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not be excelled. My breeding stock are recorded in the  
"American Berkshire Record," where none but pure bred  
Hogs are admitted. Pigs sold at reasonable rates. Cor-  
respondence solicited.

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OATMEAL!

ABSOLUTELY PURE!!

MADE FROM SELECTED WHITE OATS. The most  
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WHEELER'S  
Carbon Bisulphide,

FOR KILLING

Phylloxera, Squirrels, Gophers, Rats, Vermin, Etc  
CHEAP AND EFFECTIVE.

Any Person Can Use It Without Harm.

6-lb Cans, each.....\$1.00  
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La France Steam Fire Engine.

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Our work is good. We sell it low. Satisfaction guaran-  
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We have 40—Corner 10th and Howard Sts.—Thorough-  
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Low Down. Wish to sell. HOMER P. SAXE & CO.,  
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Calvert's Carbolic  
SHEEP WASH.  
\$2 per Gallon.

After dipping the Sheep, is use-  
ful for preserving wet hides, de-  
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The New Non-Poisonous Sheep Dip and Disinfectant.  
Price reduced to \$1.60 per gallon. For directions and tes-  
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A complete  
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pages of plain and full instructions by a practical and  
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rear Italian Queen Bees. Bound in cloth. Price, post-  
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Francisco.

54 All Gold, Chromo and Lithograph Cards, no 2 alike.  
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# No Drouths! Sure Crops!

## READING RANCH,

Shasta Co., Cal.

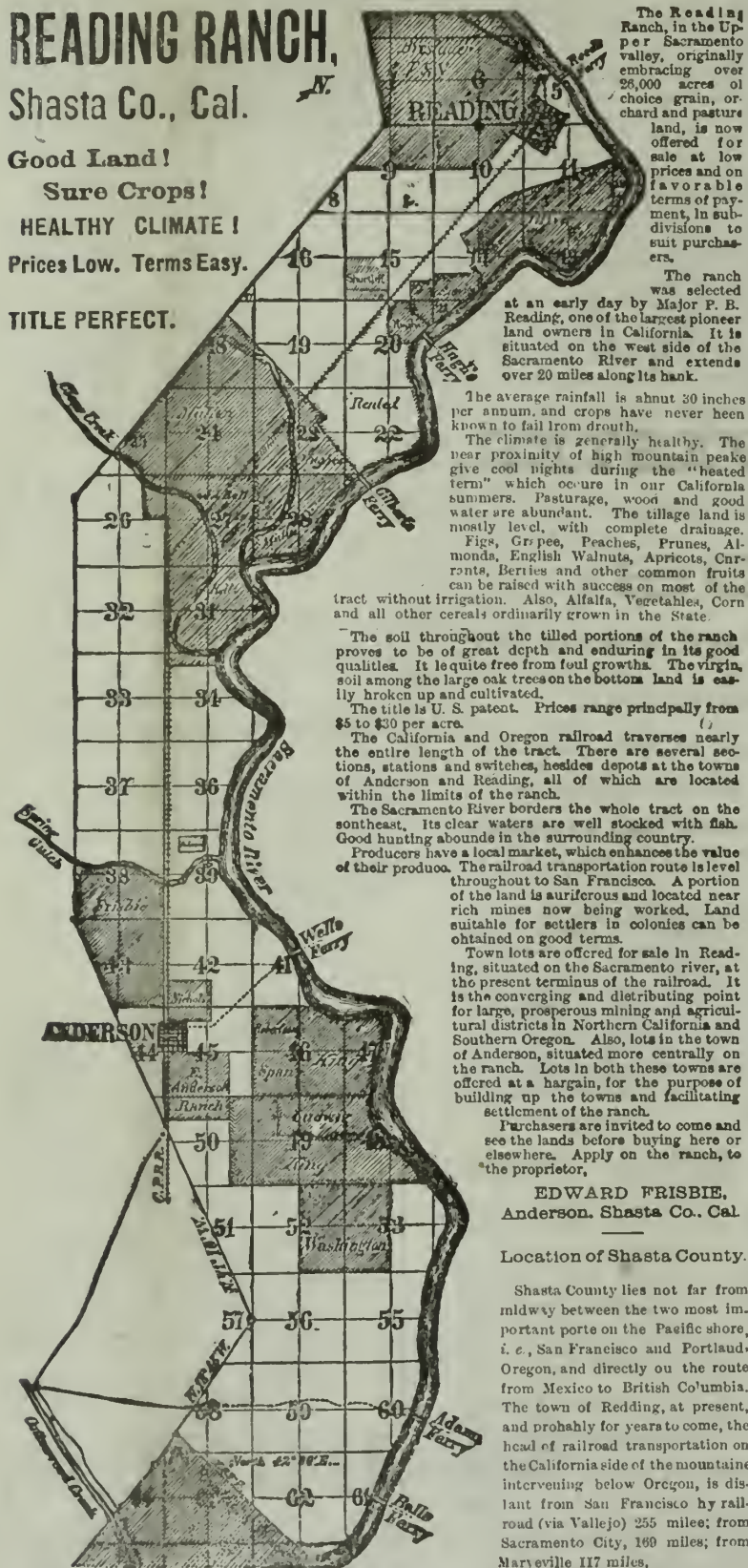
Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



Persons thinking of buying or renting land will not likely regret a camping or excursion trip to this upper Sacramento country.

The Reading Ranch, in the Upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drouth.

The climate is generally healthy. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers. Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage. Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Apricots, Currants, Berries and other common fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,  
Anderson, Shasta Co., Cal.

Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the route from Mexico to British Columbia. The town of Redding, at present, and probably for years to come, the head of railroad transportation on the California side of the mountain intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 160 miles; from Marysville 117 miles.

LAND FOR SALE OR RENT IN SUB-DIVISIONS.

I. J. TRUMAN.

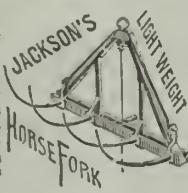
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JACKSON & TRUMAN,

Manufacturers of

Feeders and Elevators,

With recently invented Spreader, Horse Forks for Headings or Hay, Folding Derricks, Hoadley Straw-Burner and Automatic Cut-off Governor for Portable Engine, Separator Shoes and Repairs, WINDMILLS for Stockmen and Gardeners. Buy and sell second-hand Threshers and Engines. Machine Castings a specialty.



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Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates.

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Washington Corners, Alameda County, Cal.

THE FALL TERM WILL BEGIN

Thursday, July 28th.

Catalogues can be had at the Bookstores of A. L. Bancroft & Co., San Francisco, and W. B. Hardy, Oakland.

For Catalogues or other particulars, address

S. S. HARMON, Principal,

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FRUIT GROWERS, ATTENTION!

The attention of Fruit Growers is called to the

WILLIAMS EVAPORATOR,

Now being introduced on this Coast by the General Agent, F. B. SEELEY, Oakland, Cal., to whom address for circulars.

This machine requires no shifting of sieves, is continuous in its action, and put up under a guarantee, therefore costing nothing unless it DOES WHAT IS CLAIMED FOR IT.

F. B. SEELEY, General Agent,

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821 Kearny Street, San Francisco, Cal.,

C. D. LADD & CO., Branch House, 49 First St., Portland, Oregon.



Sole Agents for the Pacific Coast for the

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Full line of Winchester, Burgess and Kennedy Magazine Rifles. Sharps and Remington. Complete Assortment of Breech and Muzzle Loading Shot Guns of all Makers. Pistols of all Descriptions. Ammunition of all Kinds, Wholesale and Retail.

SEND FOR 1881 PRICE LIST.

A CHANCE TO VISIT FRESNO COUNTY.

The Fresno Colony,

Which adjoins the Town of Fresno, being one of the finest locations in the County for Colony purposes, is now being sold off in 20 acre lots at \$50 per acre, with undisputed title to both land and water, and on terms to suit all.

We assert without any fear of contradictory proof, that the grapevines on irrigated land in Fresno County, produce at least one-third more grapes per vine than any other portion of the State. G. G. Briggs, of Yolo County, a few days since remarked, "of a truth, this seems to be the home of the Grape, Pear, Peach and Apricot."

We only ask all who are seeking homes or profitable investments to come and see what we have; none go away without expressing surprise at the productions of our soil.

A GRAND EXCURSION will leave Stockton and San Francisco on August 15th, for Fresno. Tickets good for five days, and only cost \$7 for the round trip; free conveyances from Fresno to all the Colonies.

THOMAS E. HUGHES & SONS, Fresno, and 314 Montgomery Street, S. F.

At the SANBORN WAGON DEPOT,

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WAGONS

Three sizes of THOROUGH-BRACE WAGONS, with 1, 2 or 3 seats. Eight sizes of EXPRESS AND DELIVERY WAGONS. Three sizes of FOUR SPRING WAGONS, with 1, 2 or 3 seats. Besides Business Wagons and Buggies.

Also, all sizes of FARM WAGONS, made by Mitchell, Lewis & Co., of Racine, Wis., who make the best Farm Wagons in the world. All our Wagons are fully warranted.

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Liberal advances made on all consignments, and prompt personal attention given to all sales.

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Special attention given to country traders.

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Grain and Wool Brokers.

OFFICE—28 California St., San Francisco.

REFERENCE—LAZARD FRERES, BANKERS.

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And Wholesale Dealers in all kinds of

Country Produce, Fruits, Etc.

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CONSIGNMENTS SOLICITED.

HATCH & BARCLAY,

Commission Merchants,

(Members of San Francisco Produce Exchange)

20 California Street, San Francisco.

Send your Consignments to



The Oldest House.

NEW WOOL AND GRAIN

Commission House,

J. H. CONGDON & CO.,

No. 6 Stewart Street, S. F.

To our friends and the Wool Growers and Farmers generally, having established ourselves in a General Commission Business for the sale of Wool, Grain, Hides, Pelts, Tallow, Alfalfa Seed, etc. A strict attention to the business, as well as a careful study of the interests of Wool Growers and Farmers, during an experience of 12 years with the well-known house of Miller & Co., enables us to anticipate the wants of the consignors.

We shall do a Commission Business exclusively, giving personal attention to all consignments. Our facilities for handling Hides, Pelts, Tallow, etc., being unsurpassed, we can make it an object for our friends to consign to us.

We are prepared to make liberal cash advances on Consignments, at a low rate of interest. To those who need the services of a Commission Merchant we would say, give us a trial, we will guarantee satisfaction.

Send for Circular to J. H. CONGDON & CO.

GEO. F. COFFIN & CO.,

Commission Merchants,

NO. 13 PINE STREET,

UNION BLOCK, SAN FRANCISCO.

Special attention given to Consignments of Grain and Fruit

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

DAIRY COWS WANTED.

Wanted, from TWENTY to FORTY GOOD DAIRY

COWS that will come in between August and October.

Address, with particulars, B. MARKS,

Fresno, Cal.

"NEW"

HYDRAULIC RAM!

The only Horizontal Ram made. Will do

good work on light fall. Send for Circular

H. F. MORROW, Chester, Pa.

70 YOUR NAME in New Type 100

New styles, by best artists. Bouquets, Birds, Gold Chromes, Landscapes, Water Scenes, etc.—no 2 alike. Agent's Complete Sample Book 25c. Great variety Advertising and Book-Edge Cards. Lowest prices to dealers and printers. 100 Samples Fancy Advertising Cards, 50c. Address STEVENSON'S BROS., Box 22, Northford, Ct.





Volume XXII.]

SAN FRANCISCO, SATURDAY, JULY 16, 1881.

Number 3

### Notes on Eucalypts.

We notice that Baron Von Mneller has written to Prof. Thos. Meehan, editor of the *Gardener's Monthly*, concerning other encalypts than *E. globulus*, which we have to our hearts' content in this State. It is true that we have immense areas of hillside and hilltop which might still be planted with the blue gum for timber and to tangle up the winds in their courses, but the blue gum as a wind-break in orchards and as a street tree in villages, has come into sad disrepute. Everything has its proper place, and this includes the blue gum—in such appropriate field let it multiply.

But we thought to allude to Baron Von Mueller's letter to present some characteristics of other eucalypts as compared with those of the blue gum. The leading idea is to show the hardiness of some of the other species, and this will be of interest to many dwelling in parts of the Pacific coast where the blue gum has shown itself too tender to survive the heavy frosts prevalent there. Baron Von Mueller thinks *Eucalyptus amygdalina*, *E. parviflora* and *E. Gunnii*, (all tall timber trees) may endure winters of your more northern States, as they adorn the Australian Alps. Von Mueller advised the Italians under the leadership of Count Torelli, to plant *E. amygdalina* on the malarian swamps near Rome, after *E. globulus* (but only in its young, sappy state), was largely destroyed by the unusually severe winter cold of the year before last. But this time the experiment is made with *E. amygdalina*, the richest oil-yielder of all eucalypts, and one which will live in a cold climate where no *E. globulus* will stand through the winter months. For timber, however, the *E. amygdalina* is far inferior to *E. globulus* and many other sorts. *E. Gunnii* and *E. parviflora* yield good timber, but their hygienic value is not equal to that of *E. amygdalina*, and the growth of none of them is as fast as that of *E. globulus*; still they are all trees of comparative celerity of growth, especially in somewhat humid soil. Baron Von Mueller believes that much might be done to subdue the yellow fever of New Orleans and other southern places in the States, if all back-yards were planted with eucalypts; but should the climatic condition not admit of it, he would earnestly impress on all concerned to plant our most terebinthine pines at New Orleans, and by the millions.

The distinguished botanist adds some notes of the way by which the exhalations from trees act upon the dangerous matter in the atmosphere, and these are of interest to all growers of eucalypts, and other trees having the properties considered. The action of the terebinthine pines is by the liberation of a volatile oil, which acts much like that of the encalyptus, as from its emanations originate dioxide of hydrogen and ozone, the most powerful oxydizers, and therefore destroyers of micro-organisms and the gases in which they dwell. Von Mueller is engaged, at present, on determining the percentage of volatile oil in the twigs (leaves and young bark and young wood) of various pines, as this has an important bearing on the sanitary value of each species of fir. The result of these inquiries will be of much interest in this country.

**MILDEW ON ROSES.**—The *Journal des Roses* gives two recipes for destroying mildew. The first is from M. Verdier. It recommends to boil for ten minutes 500 grams (about 17½ oz.) of flowers of sulphur, and an equal quantity of lime, in 6 litres (about 5½ quarts) of water, often shaking the mixture. This solution is allowed to settle, and afterwards put into well-corked bottles. When required for use, one litre (about 1½ pints) of this composition is put into 100 litres (about 21½ gallons) of water, and the rose plants are syringed with the mixture. The second is that of the Comte de Buisson: 2 or 3 grams (about 1-7 or 1-5-7 drachm) of sea salt is dissolved in 10 litres (about 2-3-16 gallons) of water, and the foliage of the rose plants on both the upper and under sides is syringed with this solution.

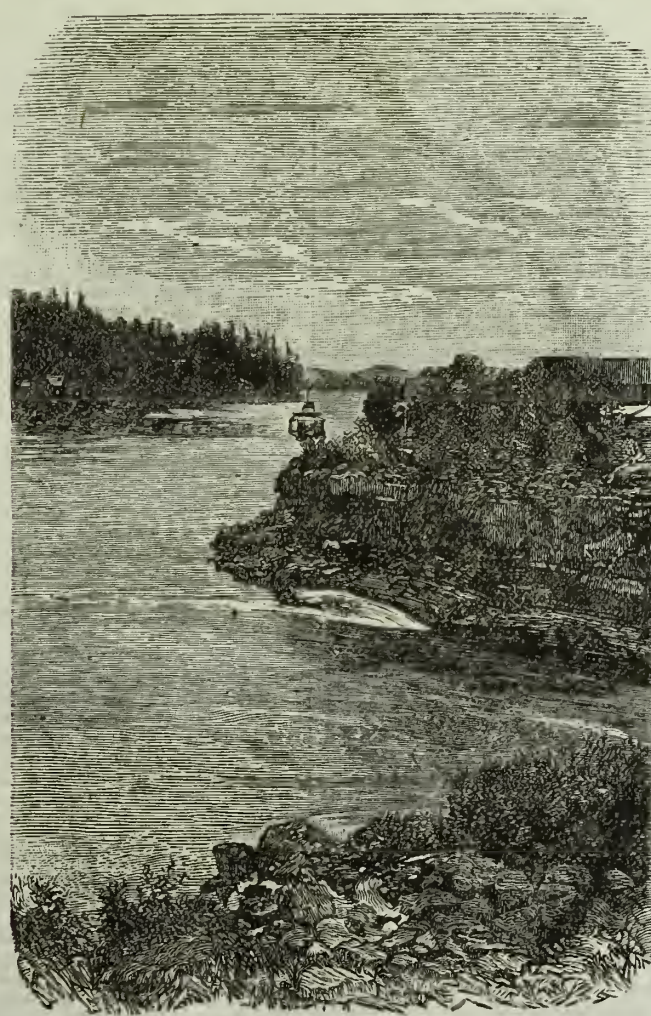
### The Columbia River.

Our engraving gives a glimpse of the Columbia, the great river of the Pacific coast, and one of the great rivers of the world. The view is only one of many which have attracted the eye of the artist, and of course presents only a single phase of the infinite variety which characterize the river and its surroundings. The engraving is from a photograph by E. Conklin, and is to be used in his promised book, entitled "Picturesque Northwest."

In our issue of November 6, 1880, we gave some interesting facts concerning the Columbia river, to which the reader is referred. We find other statements in a recent pamphlet on "Pa-

However, fewer disasters occur than one would imagine, at the entrance of the river, when the magnitude of its commerce is considered.

The river is to Oregon what San Francisco bay is to California. It is navigable to the Willamette, 100 miles from its mouth, and thence eastwardly with two interruptions, at the Cascades and Dalles, where there are railroad portages to Priest's Rapids, in Washington Territory, 396 miles from the ocean, and on its tributary, the Snake river, to Lewiston in Idaho, 470 miles from the ocean. The Willamette is navigable for ocean steamers and small vessels to Portland, the principal city of Oregon, 112 miles from the sea. At Oregon city, it falls over a ledge of rocks for about 40 ft., and locks have been constructed at a large



SCENE ON THE COLUMBIA RIVER.

cific Coast Harbors," by Chas. G. Yale, of this city: The Columbia drains a country along the western slope of the Rocky mountains for about 600 miles, which includes a large portion of Oregon and Washington Territory. Several of its tributaries give access from the ocean to rich mineral and agricultural localities on the coast. The greater part of the lower Columbia is obstructed by shoals and islands. The ship channels are tortuous and narrow. There are usually two channels through the bar but they are always shifting, and there is sometimes only one. The bar is without doubt the most dangerous in the world.

During bad weather and especially in winter the sea breaks with the greatest fury clean across the entrance, and sailing vessels have laid off it for weeks waiting for a chance to enter. Those vessels inside can not get out at such times. This bar is probably one of the wildest of nature's scenes, during a southeast gale, and the hardest mariner will not care to test its power. The currents here are very strong moreover and do their share in making the bad sea which prevails at such times.

expense, allowing the direct passage of steamers. Hence, steamers now navigate the river up to Eugene city, 138 miles from Portland, during high water, and as far as Salem all the year.

The Columbia affords a highway for travel to parts of Washington Territory and Idaho, and as these portions of our domain have attracted much attention of late, the traffic on the Columbia has been unusually brisk, and new and commodious steamers are now plying on the river.

**PACIFIC RURAL PRESS.**—This enterprising, instructive and reliable organ of the farmers of the Pacific coast has just entered its 22d volume. The aim of the publishers is to zealously labor for the best interests of their patrons, and the development of our agricultural industries. Every farmer should subscribe for and read this journal. Each number contains valuable information worth the annual subscription. Address Dewey & Co., San Francisco.—*Douneville Messenger*.

### Maturing of Wheat in Temperate and Tropical Zones.

At first thought one would be likely to conclude that earlier maturity in plants would be found within the tropics than in the temperate zones where the earth is held in icy fetters during a part of the year. It is interesting to know that this is not always the case, but that during the growing season in the temperate zones, say from the vernal to the autumnal equinoxes, there is so much longer days, and consequently more sun heat than at the tropics, where the days and nights are always of so nearly equal length that the wintry districts really grow earlier crops than the tropics.

Observations affirming this conclusion are made by Victor Bart, and printed in the *Journal of the Horticultural Society of the Department of Seine-et-Oise, France*. M. Bart remarks at first that we know that in summer at St. Petersburg the days are very long. The sun remains above the horizon nearly eighteen hours, and the night is thus shortened to about six hours. At Senegal, situated within the tropics, they have alternately and uniformly, during the whole year, about 12 hours of sunlight and 12 hours of nocturnal obscurity. I say *about* because the equator alone presents an absolutely equinoctial line. In observing these two circumstances, it has been shown that wheat ripens earlier in the region about St. Petersburg than at Senegal, and it became necessary to explain this very surprising result. The explanation given is simple and satisfactory, and is as follows:

Wherever wheat is cultivated, in order that it may ripen, it must receive a certain quantity of heat. At St. Petersburg, 18 hours of summer sunshine does not leave sufficient time for nocturnal cold to be produced, and this is nearly equivalent to the non-interruption of the solar influence; at Senegal, on the other hand, this influence is suspended for 12 hours of the 24; from which it follows that the average heat of a summer day at the north, in the capital of Russia, is higher than the average heat of a quasi-equatorial day. We may therefore conclude that it is because it there receives in a less number of days, the necessary amount of heat, that wheat ripens earlier at St. Petersburg than at Senegal.

It is true that in certain years the ripening of crops is earlier or later. But this earliness or lateness is due to causes purely atmospheric, such as the persistence of clouds which, forming a screen, enfeeble more or less the action of the sun's rays, and the superabundance of rain which produces those inconveniences which accompany all excesses. If these modifying or disturbing causes did not exist, and if it only depended upon the greater or less degree of obliquity in different places under which the solar rays are received, the sun, which constantly emits a quantity of heat, as it were, would invariably ripen the crops at a fixed period each year.

**A GOOD WORD FOR THE SKUNK.**—Time, at last, makes all things even. For nearly three centuries the white man in America has been in mortal dread of a very small animal known to science by the emphatic name of *mephitis mephitis*, but much better known as the skunk. But at last he has found a friend. A legislator, from the interior of the State, demands that he be protected in his right to life, liberty, and pursuit of happiness; the reason being that he destroys grubs that would otherwise destroy hop vines, and a bill has been introduced in the New York legislature, for the protection of skunks in the hop-growing counties.

**LAND PURCHASES.**—Mr. C. J. Rifenburg, formerly of the Southern States, and lately sojourning with his sister at Highland Springs, made important purchases of property, in May last, near San Gabriel, his new place of residence. He contemplates improvements within the coming season that will be of notable interest in Southern California.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Notes From Missouri.

EDITORS PRESS:—I receive your paper regularly and am well pleased with it, except one thing I see you often omit, that is the weather report. I would like to see it in every number. I am thinking of emigrating to California, and I would like to see how your temperature runs. We have had very warm weather here this season thus far, the mercury running up to 90° and above for several days at a time. We have had fine rains lately and cooler weather—80° today. The wheat crop is very poor here; the worst for years, and the yield will not be more than one-third of what it was last year. We are cutting our wheat now, and the chinch bugs are very bad, and the heat is drying up the wheat that is not ripe. The winter wheat crop is very poor through the States as far as I can learn. I know it is in this State. I have been through the best wheat section in this State. You in California had better hold on to your old wheat and not sell at such low prices as I see quoted in your paper. Good wheat brings \$1 here; corn, 30 to 35 cents per bushel; fat steers, 5 to 5½ cents per lb., gross; hogs, 4½ to 5½ cents, gross, in the country. We feed from 6,000 to 10,000 cattle in this county each year, and several thousand hogs, and this year feeders have made plenty of money.

The corn crops generally late; some tasseling out and some are still planting. The cut worms were very bad, some planted their corn three times. The season has been splendid for crops, and must remain so if we raise a good corn crop. There is a large crop of corn planted, but much of it is late. Grass is the best we have had for years; timothy is good. I expect to commence cutting next week if the weather remains good. We have considerable flax, and it looks very well; and oats look very well. Our early potatoes are extra, and garden vegetables all good; strawberries and raspberries are short and selling at 50 cents per gallon. Peaches were all winter killed, and apples, I think will be short. Short crop of cherries.

I think I would like to live in your climate. I have a farm of about 500 acres, and can make plenty of money raising cattle and hogs, and feeding the same. It is the best business here, and pays well, but the climate is not good like yours. It is very hot in summer and cold in winter. The hot weather hurts me very much when it gets above 80°, and it is not often below that in summer. I have been trying to sell out at \$20 per acre; and have got as good a stock farm as there is in the county, and all in timothy, clover and blue-grass; and a creek running through it; all fenced into a number of pastures; three good wells, one of them with a good Eclipse 12-ft. wind-mill. My calves, year-olds this spring and summer, weighed close to 600 lbs. April 1st., and not all year-olds until August. Two-year-olds weighed at the same time 950 lbs., and I have some three-year-olds that weigh over 1,500 lbs. They have been fed on corn since February 1st. I expect to make a number of them average 1,800 lbs. by next December. But yet land is hard to sell here in tracts over 160 acres. Small farms are selling from \$20 to \$30 per acre. Land has advanced considerably in the last year.

### Buying Fowls for California.

There is a man from Oakland, California, buying fowls here, paying \$1.75 to \$2 for hens, and \$1.50 for roosters, and 5 cents per lb. for turkeys. Eggs have been selling lately for 5 to 6 cents per dozen. This fowl man has shipped two carloads and is buying the third, and has not been all over the county. Four hundred dozen he counts a carload. We can beat you on fowls and eggs, especially low prices, but we beat you on prices for cattle and hogs. In St. Louis, hogs are selling now at 5½ to 6 cents per lb. gross; cattle, 3 to 6 cents gross; but the 6-cent cattle have to be extra good. I expect to have some of that kind by late this fall or early winter.

I would not think of leaving here if our climate were as good as California's, for an industrious man can make plenty of money here raising cattle and hogs. Good cattle always bring a good price here—better than California, for I see 7 cents was the top price for San Francisco; New York, 12½ cents, net.

I think some of taking a trip to California this summer over the new southern road through Southern California. I was over the Union Pacific railroad, about six years ago. Several of our neighbors sold out last spring and went to Los Angeles county, and some are back. They did not find anything to snit and said it did not rain any there. Land and everything was too high. They sold No. 1 land here for \$25 per acre, and they said it was no place for a poor man or a man of small means. Please excuse all errors, for I am not used to writing to an editor. My business is farming, stock raising and dealing in stock.

HENRY HOWARD.

Shootman, Carroll Co., Mo.

[Our correspondent's notes on crops, stock prices, etc., are of interest and will enable some of our readers to compare notes. Concerning temperature, it may be said that the whole

State must not be judged by the record given for San Francisco, for this city is directly on the coast and is one of the coolest places in the whole State. The interior sometimes shows from 10° to 30° warmer, but the heat is much more endurable than at the East, for the air is dry. We do not have the oppressive summer heat of the East. Our correspondent's friends did not get a very good idea of Los Angeles county. It is a very well watered county, and gets much more rain than some of the adjacent country. It also has immense areas reached by water from artesian wells and the rivers.—Eds. PRESS.]

### Tethering Animals.

EDITORS PRESS:—"Picketing stock" is the exclusive term in use here, and probably nowhere else is it so universally practiced as in the "great valley"—the broad, treeless interior plain of California. Indeed it is a common ranch remark that "everything except wife and children lives at the end of a picket rope." With these "natural advantages," we who live here ought to be competent teachers in the art of tethering animals, and, reader of the RURAL, if you can't tether a horse or other animal, at small expense, so that he can feed throughout the space between two rows of trees of indefinite length—travel rods of distance, the length of the row, without being able to reach or injure a tree close by him on either side—and do this, too, without the use of tie-rope, chain or picket pins, you have something yet to learn in this business.

### Wire Tethers.

Cut your wire the length that you wish your animal to range along the row or space that you wish him to graze upon. Firmly fasten a stout stick, a foot or two in length, to each end of the wire. At one end of the space to be grazed over securely fasten one end of your wire, by completely burying the stick attached—say two ft. deep in the ground, and firmly tamping the earth above it. Then straighten the wire along the row to be grazed—by means of a lever, or otherwise; draw it perfectly tight, and fasten the other end of it securely to the ground by burying the stick attached to it a sufficient depth in the ground that no animal can pull it up when hitched to the wire. You now have your wire drawn taut in a straight line, along the surface of the ground, in the center of the space to be grazed over. Fasten your animal to the wire by means of a movable link, ring, or snap, to which tie the animal's halter.

The length of halter determining the width of space each side of the wire that shall be grazed upon, while the ring to which the animal is tied, sliding freely along the wire, allows him to range from end to end of it, however great the distance may be.

### Advantages of this Method.

1. Wire, in this use, is practically imperishable, and its first cost is not greater than rope, which, at most, will last only a few months.
2. You can graze off the sides of your meadow, keeping the edges of the ungrazed portions in straight lines.
3. Spaces between tree rows can be grazed without the animal coming in contact with the trees on either side.
4. Ditch banks or the sides of roads can be grazed in like manner.

Cost of Wire.—No. 8 wire is the best size for this use; as small as No. 12 or as large as No. 6, however, may be used. This wire is sold in bales of 63 lbs. each. No. 8 is about one-sixth of an inch in diameter; 100 ft. of it weighs 7 lbs. It is worth about 10 cts. per lb.

W. A. SANDERS.

Sandera, Cal.

### Lassen County Notes.

EDITORS PRESS:—Haying is in full blast here now. Some say the hay is not as good in some parts as last year, but grain looks fine. We have had a good deal of wind the last 8 or 10 days; yesterday was the first still day for some time. The thermometer stood 85° in the shade. There will be several headers start up during the next 10 days. We will start our header a week from today. The grain seems to ripen ahead of the hay this season.

Fruit trees are bending to the ground under the load of fruit. I have been quite interested in reading those articles about fraud in eggs. I was thinking about sending for a setting of thoroughbred eggs myself, but since others have had such hard luck, I had better stick to what we have got. I am keeping account of eggs laid and chickens raised for the first time, and would like to compare notes with others and see how mine average. We have 3 dozen hens, and they have laid for the first 6 months ending July 1st, 2,306 eggs, and we have raised 50 chickens. We have sold up to June 14th, \$20.50 worth of eggs, mostly at 20 cents per dozen. The hens have had no care. We feed them wheat screenings once a day, but they have plenty of range and good spring water to drink, and a feed of bran mash and sulphur once in a while, and we are troubled but very seldom with a sick chicken. Times are good, and business of every kind is

booming. The worst trouble at present is the scarcity of harvest hands. Some of the largest hay ranchers have not half hands enough. Wages are \$2 in haying, and some have two months' work, and over. The largest hay-ranch is owned by J. D. Byers. He cuts over 2,000 tons, and a good many others from 600 to 1,200 tons. Hay is generally worth from \$5 to \$10, according to quality—the latter for clear timothy. More anon.—G. R. WALEZ, Milford.

## AGRICULTURAL ENGINEER.

### Notes on Irrigation.—No. 2.

I will as briefly as possible call your attention to the Mokelumne valley and the adjacent country lying between Dry creek on the north and Mormon slough on the south (an area of 150,000 acres), so far as one system of drainage and irrigation can be applied. The Mokelumne river takes its rise in the high Sierras to the east of us, where is stored the annual product of snow and ice, to be melted by the sun of summer and sent down in perennial streams through precipitous and rocky canons of wild-est grandeur to the thirsty plains below.

The elevation of the Mokelumne at Hermit valley as stated by Prof. Whitney, State Geologist, is 7,259 ft. above sea level. The snow is said to accumulate there in the winter to great depths, owing to its great elevation and sheltered position, with high mountains on all sides.

Like most of our large mountain streams, it flows in a deeply eroded channel, and where it debouches from the foothills, lies in a trough 50 or 30 ft. below the level of the plain, until at Woodbridge, in flood-time, much of the stream overflows its banks and spreads through various drainage channels over the plains. Below Woodbridge the river takes a northwestern sweep of 35 miles (or 15 miles in a direct line when it divides, making the north and south fork, and embracing in its sinuous folds Staten island, a body of swamp and overflowed land, with an area of 10,000 acres). The river again reunites and runs four miles, when it finally debouches into the San Joaquin. At the head of tide water navigation, near Mokelumne City, or near New Hope, the waters of the Cosumnes and Dry Creek unite with the Mokelumne. The catchment or drainage area of these three streams combined, amounts to 1,372 miles—that of the Mokelumne alone being 573 square miles.

The mean discharge of the Mokelumne in average seasons, during the months of May, June and July is, approximately, 4,500 cubic ft. per second—sufficient to irrigate 225,000 acres under a duty of 50 acres per cubic ft. per second; or 450,000 acres under a duty of 100 acres per cubic ft. per second; or 675,000 acres under a duty of 150 acres per cubic ft. per second; or 1,350,000 acres under a duty of 300 acres per cubic ft. per second, as Prof. Davidson thinks might be reached, considering our soil as applied to cereals. You will see, therefore, that if we wish to go into the irrigation business on a grand scale, and spread ourselves, we have abundant resources of one of the most important essentials, so far as water supply is concerned. (Probably the water that ran to waste last season reached ten times the amount above indicated.)

### Duty of Water.

I have just used the term "duty" per cubic ft. of water. By this we mean the quantity required to irrigate a superficial area of land of standard dimensions; as, for instance, an acre; or by the statement of an area of land effectively irrigated by the use of a definite volume of water, delivered at a uniform rate through a certain period of time—the irrigating season. Thus, in the case of a stream which delivers water at the rate of five cubic ft. per second through the season, and accomplishes the irrigation of 500 acres of land, we say that the water performs a duty of 100 acres per second ft., meaning that each ft. per second, continuously flowing through the season, irrigates 100 acres of land. This expression is, of course, in terms of the extent in acreage, performed by a standard volume of water—the cubic ft. per second of continuous flow for the season. (Halls.)

But the quantity of water required may be variable, according to the character of the soil and the crops to be cultivated; cereals requiring the least, and hoed crops the most. Although the Calaveras river has a catchment area of 390 square miles, it does not head high enough in the mountains to be perennial in its flow.

The forks of the Mokelumne and Stanislaus on either side lap around and above the Calaveras, whose main supply is the rains of winter. It has, therefore, little value as a stream for irrigation. The Mormon slough fork has been utilized for that purpose, I believe, to a limited extent.

I have referred to the Mokelumne as a stream having abundant aqueous supplies if properly distributed, for all the irrigable lands in San Joaquin county, with a large surplus for several other total abstinence communities.

But from the topography of the country before referred to, it cannot be taken out as cheaply as the waters of some other rivers, and we are obliged to go up into the foothills and bring it along the hill-sides until we can place it upon the crust of the plain at a satisfactory elevation for transmission to the desired points. To reach all the lands susceptible of being irri-

gated from this source, the water should be taken out as high up as the site of the old Wade & Arson bridge, just northwest of Campo Seco, thence to be transmitted in a canal the distance of eight miles to Bear creek; one branch thence to the crest of the plains to reach a drainage channel, Paddy's creek, I believe, where it will intersect the Calaveras at or near Bellota. This branch will irrigate the county east of Stockton.

To construct this main supply channel of 8 miles there are no engineering difficulties to be encountered, no expensive rock cuts of moment; but 2 or 3 gulches to span by aqueducts or cross by pipes, and the soil generally, at the proper season, is easily worked. In the case of the Mokelumne Ditch and Irrigation Co., it was estimated that a section of canal of this length, sufficient to irrigate 50,000 acres, could be constructed for \$20,000, exclusive of dam and headworks. Reaching Bear creek, we utilize that channel as a main trunk for the supply of subordinate ditches that will place water upon all the lands lying between the Mokelumne and Calaveras.

### New Use for Miner's Ditches.

And here I wish to remark that the era of gold mining has left its rich heritage of mining ditches that cost the builders hundreds of thousands of dollars, and having to a great extent served their purpose, may now be utilized for agricultural purposes for a small per cent. of their original cost. Of this character is the Davis ditch that cost \$130,000, that takes its water from Italian bar, north of Campo Seco, and transmitted it along the slopes and crests of hills to Lancha Plana, Winters' bar, Poverty bar and Mike's gulch, southeast of the Poland house.

This ditch has a capacity for irrigating about 30,000 acres, and at any time in the future may be enlarged to any required size. The lower portion—that west of Comanche is not now in use, but I am told may be restored for about \$1,000 and water put into Bear creek within one month. The entire ditch now in good working order, with the reservoirs, pipes and appurtenances can be purchased for \$20,000. An outlay of \$5,000 or \$6,000 will double its capacity. Here is a chance for co-operation and a supply of water at a cheap rate. Why should not the farmers embrace such an opportunity and have a water supply and a water right permanently attached to his land in perpetuity, which no corporation can disturb, rendering certain his crop and enhancing the value of his land. I will take one share or one-twentieth part. Who bids for the other 19? Or divide it into 200 or 400 shares, each share to an individual, which is more democratic, and we can have a water supply at a minimum cost.

Bear creek is the main drainage channel for the section of country lying between the Mokelumne and Calaveras rivers. Its length from where it forms a junction with the proposed canal is about 20 miles, and terminates in Fourteen-mile slough, a tidal affluent of the San Joaquin river.

It is proposed to utilize this as the main supply trunk. Where it intersects the canal the width is 35 ft., but soon increases in size as it receives the drainage of numerous alluvials which make their way from the plains, until in the lowlands, the embankments made to confine the waters from spreading over the country in the rainy season, are 100 to 150 ft. apart. The height of the banks is from four to six ft.

For the first two miles the fall is 11 ft. per mile, then averages seven to five ft. per mile. The total fall is 170 ft., or an average of about nine ft. per mile. With this excessive fall, giving a current from six to four miles per hour, the stability of the channel would be greatly endangered were it not for the fact that the underlying strata along the upper part of the lines is of lava rock, or sandstone, merging on the plains into indurated sand or hardpan, of sufficient compactness to resist the ordinary erosion of water. Bear creek forks at a point half a mile south of the Poland house, and this branch may be continued along the south side of the Lockeford road, thence westerly following the crest of the Mokelumne, on the township line down past Woodbridge to the head of Sycamore slough on land of Sargent Bros.

Another fork occurs near Harmony Grove school-house, and at Brannock's old place on the Cherokee lane road, takes the name of Brannock's slough. This finally spreads upon the plains, but the lower end is now embanked, however, as to confine its waters, and they fall into White's slough in the S. & O. lands.

### Between the Calaveras and the Mokelumne.

You will see, therefore, that in a system of irrigation works for this section Bear creek will occupy a very important position, as it will serve as a supply canal for most of the plain lands between the Mokelumne and Calaveras.

Sub-ditches can be taken thence by the farmer to be applied to his lands, the topographic slope being such that water will reach all parts of it.

A branch canal could be taken out of Bear creek just east of Lockeford and carried south as to intersect Tonoma slough, which it would partly follow, and be dropped into the Calaveras Irrigation Co.'s canal, near Tone's bridge and thence carried 14 miles, where it intersects Bear creek near the Five-mile house, lower Sacramento road. There are numerous other drainage channels in the district which may be utilized to transmit water, or for the purpose of drainage.

And here I would say that drainage of irri-



gated lands is important as respects the healthfulness of a district. Without it, surface water would accumulate and stagnate in pools, causing fevers and other malarious diseases. With good drainage, irrigation districts are not regarded as unhealthy. The question arises as to the amount of land we have to which water may be applied, and the duty which water will perform to such lands; and as a corollary, this will determine also the size of the required canal; for to make irrigation a success, the cost of the works must not be in excess of a profitable application.

The area that may be reached by the system of irrigation above outlined, embraces about 150,000 acres. Of this amount 95,500 acres lie between the Mokelumne and Calaveras. What portion of this area is likely to be irrigated at any one time is a question. Referring to the irrigation districts of Europe, we find that about one-half the number of acres within a district, received the direct application of water. In India, one-third. Allowance must be made for roads, towns, and building sites, woodlands, pastures and lands lying fallow.

(To BE CONTINUED.)

## THE APIARY.

### Notes on Others' Methods.

EDITORS PRESS:—The RURAL PRESS, with its printed pages of information on every branch of California husbandry, comes to hand each week, and in it we can always find something new and interesting which may prove a profit or a loss to the reader, according to the degree of information which the writer may possess of the subject which he selects to write about. The RURAL PRESS is accepted as the agricultural encyclopedia of the Pacific coast, and, outside of actual experience, more information can be derived from it than from any other source. Each week the columns allotted to correspondents collate the results of new modes and experiments in agriculture in every part of the State, so, by a careful perusal of the PRESS, the beginner may derive all the benefit of the pioneer's expensive experience. Therefore when one writes for publication, it is quite essential he should have some actual experience and a little systematic knowledge of the subject he writes about; otherwise the communication may mislead and do harm.

At the present time, bee culture is receiving considerable attention from correspondents of the PRESS. Mr. J. D. Enas, in his communication to the RURAL of March 5th, says he is in constant receipt of correspondence from beginners and others interested in bee keeping, from all parts of the State, Oregon and Washington Territory, and he gives instructions to guide beginners in their work. I do not hesitate to affirm that the directions given by Mr. Enas for the management of bees are the reverse of good bee culture and contrary to the system pursued by apiarians of experience. In the first place, Mr. Enas advises the purchase of a stock or more of bees in the old box hive; then purchase a movable frame hive and transfer the bees to it.

#### The Way to Transfer.

That is very bad advice, for a beginner would be apt to destroy ten colonies in transferring them by the drumming process (which is apt to detach heavy pieces of honey comb which fall on the bees and smother them), before they would save one. If you buy bees, buy good ones; they are always the cheapest. If you have a hive of old box bees to transfer, lift the old hive from its place and put the empty new hive there instead, with a piece of comb in one of the frames for the bees to cluster on. Lay the old hive down, remove both ends, and drive the bees from the old to the new hive with smoke. Then pry the sides from the old hive and take out the comb, carefully brushing the bees from it with a wing. They will all go in the new hive and you need not kill a bee. If there is any good new comb or brood worth saving, cut it to fit the frame, and tack thin narrow strips of shakes or boards on each side of the frame to keep the comb in place, and in two or three days the bees will fasten it as solid as if they had built it there; then remove the slats.

#### Queenless Colonies.

From what page of bee culture did Mr. Enas obtain the instructions he so confidently gives in regard to proper management of a queenless colony of bees? He says, in buying, they should be let alone (we admit that), or if already on hand, should be united with another colony, as the chances are, they are queenless and without brood. That is contrary to the proper management of bees, for the following good reasons. In the first place, it would require 21 days after the loss of the queen to hatch the brood and eggs left in the hive. And if the bees started royal cells, in a day or two after the loss of their queen, which they almost invariably do, they would have a young laying queen, about the time, or soon after the brood in their hive is exhausted. Then the colony would soon build up, for a young queen is more prolific than an old one, and the colony which Mr. Enas says should be united with another hive (which is little less than a total loss), is more valuable with their young queen than they were with their old one. In the fall and win-

ter it would be well to unite a queenless colony with another hive, for it would be needless to raise a queen at the time of year when there are no drone bees. But Mr. Enas gave his advice in March, and spring is the time to save colonies of bees, not to destroy them.

#### Top Bars.

Experienced apiarians of this county, after a thorough trial, have discontinued the use of beveled top bars for frames, they are expensive, clumsy and useless. The frames contain less honey, and a tracing of beeswax along the center of the top bar is better than the bevel. I have used beveled top bars for frames, and loose bottoms for hives in my apiary, and have discarded both; and most of the apiarists in this county discontinued them both years ago.

Mr. Enas says the ends of top bars should rest on rabbets of hard wood, instead of metal. Now, in the name of all the Langstroths and Hubers, what is the use of going to the expense of placing hard wood on pine, where there is neither friction nor wear, but merely to sustain the end of a stationary half-inch pine slat. A narrow strip of tin (called a rabbit) is generally placed on the end boards of the hive as a rest for the frames; they are used to prevent the bees from waxing the ends of the frames tight to the wood, but any tyro ought to know that bees would wax their frames as tight to oak as pine.

#### Catching Swarms.

In the RURAL of June 18th, Mr. Enas describes his mode of catching swarms, which is certainly a new and novel one, but, we judge, few apiarians would care to run the risk of destroying a queen, by the useless folly of swinging her in the air to catch a swarm of bees. For, if the bees had a queen of their own, they would pay no more attention to the caged queen in the box than they would to a caged canary; and if they did not have a queen, they would be likely to cluster for a few moments, and then return to their hive.

When a swarm shows a disposition to leave, we throw a little water in the thickest part of the swarm; and in this way we have saved swarms that were too high in the air to reach with a queen bee on a pole. Mr. Enas says all his old queens have one wing cut half off. We presume he clips off the half of one wing to prevent the queens from leaving the hive with the first swarm, as they surely would if left to their natural instincts. Sometimes a colony of bees will insist on going to the woods, after they have been hived; in that case, if it be the first swarm from the hive, accompanied by the old laying queen, her wings may be clipped, and by detaining the queen, prevent the bees from leaving. But if it be a second swarm, accompanied by a young queen, which is always the case, it would destroy the entire colony to clip the queen's wing, for that colony would never raise a working bee with that queen in their hive. And would not most any inexperienced person after reading "Bee Notes" in the RURAL of June 18th, be liable to destroy his bees by clipping the wings of young unfertilized queens, believing he was following the directions of Mr. Enas, who says all his old queens are thus maimed?

Mr. Enas says he picks his queens from the ground, places them in a wire cage and lays them near the entrance of the hive. He does not say why he caged the queens and placed them outside of the hive, and to save my life I cannot assign any sensible reason for doing so. Mr. Enas says, owing to an accident to his extractor, he was compelled to let 'em swarm; that is certainly a new note in the bee business. In this part of the State swarming is always pretty well over before extracting commences. But it is easy to prevent bees from swarming at all if so desired. If the apiarian will cut the queen cells out before they are sealed, and place another super on the top of the first super, to give the bees room to work and store their honey, they will not swarm, and a greater yield of honey for one season can be obtained that way than any other.

If Mr. Enas permits his bees to swarm naturally what is his object in clipping the wings of his queens. The old queen will leave the hive with the first swarm a few days before the young queen is hatched, and, if she cannot fly with the swarm, she will fall to the ground among the grass or weeds, and be much more apt to be found by marauding birds or ants than the apiarist. The bees, missing their queen, will return to their hive and wait until there is a young queen hatched to go with them, while their natural laying queen would perish in the weeds. And the swarm could leave and return to their hive while the apiarian was eating his dinner, and he would never know the loss of the queen.

Mr. Enas says all his six swarms had young queens with them, out for the first time. Did he clip their wings when he caught them, in dividing? If he did it would have been much better to have clipped their heads off. Any person, reading the communication of Mr. Enas, would infer that it was natural for the old queens to stay in the hive and young queens to leave with the swarms. When two queens come together they will always fight until one of them is killed, and the old queen will always try to leave the hive before a young one is hatched. These fixed laws, which are known to govern the working and swarming of bees, will prevent an old and young queen leaving the hive with the same swarm, and the old queens falling down by the hives and young queens flying off with the swarms, as was the case with the six swarms of Mr. Enas.

Any person who desires to keep bees at all will find it profitable to purchase a good work on bee-culture, such as "Langstroth on the Honey Bee," or Mr. Root's "A. B. C. Book on Bee-Culture," or the monthly pamphlet entitled *Gleanings*, by the same author, (A. J. Root). Any of these works will give reliable information on bee-culture. Those men have spent years in an experimental apiary, and have made the honey bee the study of their lives.

#### Compliments to Another Correspondent.

Mr. S. T. Wells, of Saticoy, says he does not always follow the books and scientific methods with his bees, and his communication is convincing proof of that fact. If Mr. Wells would give a little more attention to bee books, or obtain a little practical information by visiting some of the large and well appointed apiaries in his neighborhood he would be benefited thereby, and so would his readers. Besides, it might prevent the future publication of a good deal of unprofitable bee fiction. It is less than five minutes' easy work to change the bees from an old to a new hive, then what is the use of boring holes in a board, etc. Lift the frames from the old to the new hive with the bees clustering to the frames, shake the balance of the bees out, and carry the old hive away. But Mr. Wells' mode of dividing or swarming bees is the worst I ever heard. He simply removes the lower hive a short distance away, and leaves the supers or upper hives on the old stand. Now if most of the bees happened to be off hunting honey, or in the two upper stories there would not be bees enough with the removed hive to keep the brood warm and it would die. Besides the lower hive would be almost sure to contain the laying queen and the young unhatched queen, and the young queen would be destroyed instead of coming out to take charge of the new colony. The life of a working bee in the busy season is about 60 days, and it would be at least three weeks before that queenless colony could have a laying queen, and then it would take 21 days for her eggs to hatch and by that time, three-fourths of the colony would be dead of old age. And if to destroy a young queen almost hatched in one hive, and leave another hive to raise a queen from the egg, is good bee culture, I don't want any honey.

Mr. Loucks, of Fresno, said he thought of visiting Southern California, to escape the ague and find a bee range. We would gladly welcome Mr. Loucks to Ventura. Here there is an abundance of bee range, and bee plants, and there is not any chills or ague. Bee feed here is much the same as those mentioned by Mr. Loucks. White and button sage, buck brush, sumac and clover are the principal honey plants here. All the extracting is done between the first of May and the first of August. More honey is taken in June than any other month. This season, like 1879, the honey crop will be almost an entire failure in Southern California.

ROBT. LYON.

Cliff Glen; Ventura, July 8, 1881.

## HORTICULTURE.

### The Bird Pest.

EDITORS PRESS:—In common with most fruit-growers I have experienced the exasperation which usually prevails at this season, and for which neither stones, scarecrows, gunpowder or expletives, authorized or profane, afford adequate relief. The birds seemed fully persuaded that the products of our young orchard and berry patch now first bearing were their particular reward for past privations. Apricots and early peaches were nearly all appropriated, and the clusters of raspberries were being thinned as fast as they ripened. Having formerly proved the futility of most known resources, we despaired of relief until it occurred to us to try the effect of tin scraps.

Procuring a quantity from the tinshop, three or four were twisted together by their corners in projecting strips, so that they would radiate from the point of connection, to which a string was attached. The contrivance was suspended from the end of a slender switch, which was thrust in the ground in a leaning position. These were placed at intervals among the berry rows. The wind causes the tins to revolve and swing, and the switch to vibrate up and down, combining to produce incessant flashes of dazzling light by reflection of the sunshine, which, darting in every direction, could scarcely fail to intercept the winged thieves with evident bewildering alarm, from whatever quarter they approach.

A week has passed without evidence of further mischief, and while we do not regard the test as conclusive, until time proves whether familiarity will breed its proverbial contempt, we consider it sufficiently encouraging to report for the benefit of your readers who might appreciate even a temporary or partial protection. For fruit trees the tins could be hung from projecting branches, or from poles lashed to upper limbs and rising clear of the tree.

Those troubled with squirrels climbing their trees and carrying off fruit will find a remedy in a sheet of tin or other metal of 10 or 12 inches length coiled around the tree trunk and raised to the lower limb, to which it should be attached by string or wire.

O. S. CHAPIN.

Poway, San Diego Co.

### Cherry Growing.

At the meeting of the Santa Clara County Horticultural Society last week an essay on cherry-growing was read by Mr. Geiger, from which we take the following statements:

In cultivating the cherry, as well as all other kinds of fruit, the soil is the first consideration. The soil for cherry, peach and apricot should be of a light, sandy loam. Some gravel mixed in will do no hurt. In this kind of soil the cherry is at home, and under this loam, to the depth of two to two and a half ft., the subsoil should be a sandy clay, that, when a piece is dried in the sun, you can rub it to a dust in your hand. In this kind of soil you can plant from six to ten inches deeper than they stood in the nursery; but where the subsoil is heavy and of a sticky nature, you cannot do that.

Go to the nursery yourself and select your trees before they are dug up, and take none but what are strong and vigorous growers, and be willing to pay the price. Cheap stock is money thrown away. Now, having the soil, and having selected healthy trees, and you have them located in your orchard, the next consideration is the training, or pruning. The first six years of the trees' life in your orchard, cut them short, and don't be afraid. The object of cutting short is to bring the forks of the limbs close together. Trees are made up of large limbs, and these limbs are increased in size by smaller branches, like a river is by rivulets. Cutting short causes the branches to become thick and stocky, and causes the fruit spurs to set on the big wood. In cutting short, the first six years of the trees' life, you lay the foundation for a strong, healthy tree, able to bear all the fruit it can hold, and fruit that you would not be ashamed for anybody to see.

After the knife pruning, comes another way of pruning that is absolutely necessary. I mean pinching or spur pruning, which tends to throw the tree into fruit quicker than the knife. And this pinching process is very important on trees that are under eight years old. In order to get the trees in good shape, cut all the leading buds to the north, especially if you are exposed to high winds. In training young trees, where you cut there will be from two to five shoots come out, and if this is not attended to your object will be defeated, because these shoots receive the sap first and will outgrow the one that is intended for the leader. Then, in order to avoid this, pinch all the shoots below the leader and let that have the full strength of the roots, and let that alone, if it grows 20 ft. Then next February or March cut it down to 16 or 20 inches at most.

And right here on this subject is where we all differ, every man has a right to his own opinion. They say by cutting short we will not get much fruit. I will give them the benefit of that point, but will require them to look ahead 10 or 15 years. By cutting short, wood is increased, but at the end of six years the tree goes into fruit very rapidly; and here is a point that is overlooked. As the tree increases in fruit it decreases in wood, and by the time it is 10 or 12 years old there will be but little cutting to do, except to shorten in and thin out, and this requires some judgment and experience, to know where to cut, how to cut and when to cut. To shorten in, never cut down to an old fruit spur. It is very difficult to get healthy wood out of such; but wherever you can find last year's wood there you can cut with safety, or anything that is less than one inch in diameter.

When to cut—here is where we differ again. If it were possible for me to prune my orchard in five or six days, I would not put a knife in it before I could see the bloom. Late pruning is the best for the cherry tree, especially in removing large limbs, because life and vitality is at the place where you cut. But, having so much of it to do, I must begin earlier; but I always commence when the buds begin to swell, and never sacrifice any branch that can be converted into fruit. Convert everything into fruit that you can, by pinching when the shoot is young and tender. Keep all the side shoots back by pinching, and do everything you can to throw the fruit inside.

It is not the largest tree that bears the largest fruit, neither is it the largest tree that bears the most fruit. Work for quality and not quantity; be satisfied with a small quantity of first-class fruit, rather than a ton of an inferior quality, that you do not know whether you can sell at all or not. Heavy pruning will accomplish this end, and nothing else will. Heavy pruning is absolutely necessary in our California climate, where we have seven months of hot, dry, burning sun. Now, if you have not pruned but little, if any, and your trees are heavily laden with fruit, and you are unable to procure water, how is it possible for the trees to mature the fruit and bring it up to good marketable size, and at the same time build on a short growth of wood, and leave the tree in a healthy condition after the fruit is removed? Right here, gentlemen, lies one of the fundamental principles of fruit-growing in all its varieties: Keep the tops of your trees in subjection. On this point the cherry is sadly abused, and a tendency created to shorten the life of the trees. Too much wood and overbearing will soon kill your trees, especially if you have no water. My experience in growing fruit in this country, and especially the cherry, is to keep small tops and large roots;

(CONTINUED ON PAGE 42.)



## PATRONS OF HUSBANDRY.

### Eastern Grange Notes.

Two farmers named Banister and Grace, living near Utica, N. Y., are having a lawsuit over a line fence. The disputed ground is estimated to be worth about \$3, and so far the lawyers' and court expenses amount to \$3,000. Where the light of our Order sheds its rays, farmers on Grange principles are settling hundreds of such cases peaceably and quietly by arbitration. No doubt this case will be settled as soon as their money is exhausted.—*Grange Bulletin*.

THE Grange movement is one of the most important known to history, and the first attempt of the agricultural class of a nation to maintain their social and intellectual equality as the means of social advancement and enlightenment. Our Order possesses a power hitherto unknown and, guided by the light of its principles, it must overcome every obstacle and hold its way steadily onward, bringing all within its influence, nearer to the good, the beautiful and the true. In conclusion, let every member then be inspired by renewed faith, hope and zeal in building up the Order and extending its sphere of usefulness until these quiet Grange halls all over the land shall carry hope and good cheer not only to the husbandman but to the toilers of the world.—*Isaac Freeman*.

THE Patrons of Columbia Co., Pa., are arranging for a supply-house. A lot has been purchased in the village of Bloomsburg, upon which buildings will be erected. They contemplate shipping grain and all farm products.

BRO. J. J. WOODMAN, Worthy Master of the National Grange, addressed a mammoth Grange picnic at Port Stanley, Canada, a few days since; over seven thousand persons were present and much enthusiasm prevailed.

THE Board of Directors of the Kansas State Fair Association have appropriated \$600 to be divided into premiums by the Executive Committee of the State Grange, and to be awarded to the Subordinate Granges making the best display of farm products, at the Kansas State fair to be held at Topeka, September 12th to 17th. More recognition.

"ONE fact prominent in the present revival, and which gives it great force, is that the leaders are in full sympathy with the principles and purposes of the Order. The politicians that at first crowded in and forced themselves into prominent positions have been well weeded out, and the men now in the lead in all the States are true and tried, and are known to have the interests of the cause at heart. Healthful, permanent success under corrupt leadership was impossible. Indeed, it would have been better for the farmers of the country for the Grange to have failed utterly than to have kept up its former growth and power under the lead of corrupt politicians. The danger now is that this class and their tools may again seek admission when they see the Grange gathering strength and marshaling its hosts by hundreds of thousands. This must be guarded against. Every subordinate Grange must be warned that 'eternal vigilance is the price of liberty,' and they should scrutinize closely every candidate for admission."—*Patrons of Husbandry*.

DAIRY FARMING.—"Dairy Farming," the work issued in monthly parts by Cassell, Petter & Galpin (739 Broadway, New York), is proceeding regularly toward completion. Our readers will remember that the author is Prof. J. P. Sheldon, the well-known English writer on agricultural subjects. Prof. Sheldon has brought to his work on "Dairy Farming" a wide acquaintance with dairy practices in England, on the continent and the United States, and he has spared no pains to make his treatise complete. It is complete and a credit to the dairy industry. The illustrations are many, and enable one to look into the dairies and know the utensils in all countries. It is rather expensive, as there will be about 30 parts at 40 cents each, but it is nothing less than an encyclopedia of dairying, and will be welcomed by all whose means will allow them to enjoy and profit by it. Peculiar interest will inhere in the work to Patrons from the fact that Prof. Sheldon is, perhaps, the only Granger in England.

THE GRANGERS AT PORT COSTA.—The California Grangers' Business Association are reported to have commenced work this week on the construction of a wharf and warehouse at Port Costa, to be completed in 90 days. They are to build, as we understand, on the franchise granted to Messrs. Mizner & Shirley, and will this year build 600 ft. of the wharf 120 ft. in width, with a warehouse 100 ft. wide running the whole length of the wharf, leaving an additional 400 ft. of wharf and warehouse for construction another season. These improvements will be about three-quarters of a mile below the railroad ferry slip.—*Martinez Gazette*.

TEMESCAL GRANGE holds a picnic at 10 A. M., to-day (Saturday, July 16th), at the residence of J. V. Webster, P. M. of State Grange, in Fruitvale. The Granges of Alameda and Contra Costa counties, and all Patrons are invited. The committee on a free market for Oakland will make a report before the assembly. The subject is of importance to all citizens of Oakland and farmers in the counties mentioned.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

ALAMEDA VINEYARDS.—*Alta*: Alameda county appears to be coming to the front in viticultural development. For many years the success of the vine has been practically established along the base of the foothills from Niloe to Mission San Jose and the Warm Springs, but the field there is comparatively limited. Following up the Alameda canyon, large areas on the south side of the railroad on the slopes of the streams coming from the south, protected from fogs and frost, are now being brought to notice. The slopes of the Arroyo Valle and the Arroyo Noche, near Pleasanton and Livermore, are now being subdivided and purchased especially for the cultivation of the vine and olive. It is estimated that in the immediate vicinity of the Lachryma Montis section, 300,000 acres will be planted in vines and olives next winter. The geological characteristics of the country are being closely studied, and it is found that they resemble, so far as their soil constituents affect wine products, the choicest calcareous regions of France, which produce wine and brandies, firm, free from earthy or objectionable tastes and excess of free acids, smooth and velvety to the palate. Analyses of soils and subsoils show the presence of a liberal proportion of natural fertilizers, such as carbonate and sulphate of lime, phosphates, iron and potash. Experiments are now being conducted to determine the value of certain great deposits, found stratified beneath the soil as natural fertilizers, hopes being entertained that they will prove sufficiently rich to warrant their use as a commercial article for transportation throughout the State. The finest wines and brandies of France are produced in calcareous soils, or sedimentary and gravelly deposits washed from calcareous hills and mountains. San Francisco will be largely benefited by these rapid developments of the country lying near the bay, and the fame of our products will be maintained by cultivating the choicest soils. The quality of products must not be lost sight of in the eagerness to plant vines. Both the variety of vine and the character of the soil and climate must be considered by those who aim to defy competition through excellence.

#### AMADOR.

NOTES.—Quartz Mountain Cor. *Ledger*, July 9: The farmers are agitating the subject of stopping the boys from hunting doves and cotton-tails in the stubble and dry grass. I have it from reliable men that between 400 and 500 shots were fired in one day around Lower Rancheria. A fire last Monday made a start to wipe out the Eismenger ranch. Sol. was in the woods, but the boys made a rush and got control of the flames before they had done much damage. Messrs. Ford, Styles and Gilchrist did good work packing water, and instructing the boys what to do. It is also due the ditch company to say that they rendered all the aid in their power as quickly as possible. Harvesting is about over in this vicinity. Ford has had 138 tons of hay baled by that lightning horsepower. He has upward of 100 acres summer fallow ready for next winter. Sol. Eismenger has had 43 tons baled by the same machine. We would call that a good showing for the hedrock ranches of Amador county. Hay is held here at from \$18 to \$20 per ton. There is an immense amount of wood and timbers going through Lower Rancheria to the Buiker Hill and Keystone mines. Some of the wood comes from three miles above Oleta.

THE HORTICULTURAL COMMISSION.—*Dispatch*, July 9th: The Board of Horticultural Commissioners for this county met at the Courthouse last Wednesday, the 6th inst., and completed their organization by the election of Mr. R. M. Ford as Chairman, and Mr. S. S. Hartman as Secretary. The members proceeded to cast lots for the long and short term, which resulted in Mr. Ford drawing the long, or three-year term; Mr. Hartman the two-year term, and Mr. J. W. Violet the one-year term. The Board is now ready to enter upon their official duties according to law, and are ready to hear any complaints that may be made by parties who may be in need of their services.

#### COLUMBIA.

EDITORS PRESS:—To-day the mercury stands at 90° in the shade, although, for the past week, we have had uncommonly cool weather. Winter clothing was in demand, especially in the forenoon of each day, as there were strong south winds. Such cool, refreshing mornings put one in mind of Santa Cruz or the Bay city. We would be glad to be able to enjoy such weather continually. Harvesting is drawing to a close and threshing is being pushed rapidly along. Considerable excitement exists among the threeheers, and we have no difficulty in getting our work done at hedrock prices. Taking the present prices of sacks and threshing labor, and comparing with last year, the farmers will clear nearly as much, although the crop is much lighter than last year. The next thing we want now is some kind of cheap transportation to get our produce to market. Perhaps a railroad would answer the purpose.—A SUBSCRIBER, Olimpo.

#### KERN.

ALFALFA SEED.—*Record*, July 9: Mr. J. A. Clark brought to our office on Saturday a wisp of alfalfa, the stalks being literary covered with seed. Mr. Clark says he plucked the handful

from a 10-acre lot which he has reserved for seeding purposes, and thinks it will average 1,000 lbs. to the acre. The lot was pastured down close until the 20th of last April, when the stock were removed and the grass was allowed to seed. Other alfalfa on the ranch was destroyed by grasshoppers, but this piece entirely escaped their ravages.

ARTESIAN WELLS.—*Californian*, July 9: The total number of these wells now flowing, is 11, and two more are partly bored, but are not yet completed. These wells are widely asunder, and one object in boring them would seem to be to ascertain the extent of the artesian belt. This, as far as definitely indicated by these wells, is about 18 miles in length from east to west, and of an average breadth of six, lying immediately to the north and along Kern and Buena Vista lakes and the connecting slough. The tract contains about 70,000 acres and, all things considered, apart from the artesian water, it is the most desirable portion of the valley. The average flow of water is about 0.20 cubic ft. per second and is said to be slowly increasing. Probably this water, if stored in reservoirs to be used when required, each well would irrigate 40 acres. The average discharge, we are told, is greater than the wells of Los Angeles and San Bernardino counties, although none has yet been opened equaling the remarkable flow of two or three in those counties; but probably there will be many such when our wells approximate them in number. With the exception of one at the eastern end of the belt, which is strongly impregnated with sulphur, the water is of the best and purest quality. The business of boring for flowing water is yet in its experimental stage, but it is demonstrated that artesian water may be obtained over an extensive area of fertile land, that further experiments may greatly widen, as well as demonstrate that in many places it may be tapped and found in stronger flow nearer the surface than has been the case with any of the wells referred to. Thus far none of them, we believe, have been utilized for irrigation, but the water is a great boon to many of the tenants of Messrs. Haggin & Carr, for drinking and culinary purposes.

#### NAPA.

GRAFTING.—*St. Helena Star*: J. S. Kister hands us four apples with the following pedigree: He had at first a quince tree; on this a pear was grafted. The pears were not good, being fibrous and hard, like the quince; into the pear he grafted another pear and three kinds of apples. The tree now has three kinds of fruit on it—pears and two varieties of apples—all growing distinct and perfect in themselves. Now if these three grow without difficulty on one tree, how many might be added? Will some of our fruit men answer?

THE VALLEY LIFE.—*Cor. Register*: The writer was borne from lower valley to elevated mountain side a few days ago, and in a quiet nook, in the hills bordering Pope valley, found a haven of refuge. Headers were busy on the broad fields of the Oak Knoll farm as we swiftly passed by. The grain appeared very clean, and the yield fair. Long stacks of hay were discernable in every part of the valley, and there is much left yet in the cock. Corn-fields abound on every hand, and from present prospects the yield of this grain will be very large. In no previous season has the growth of this cereal been more rapid. In many well cultivated fields the blades are as high as a man's shoulders, and the plume-like tassels are already showing themselves. Although in the valley much wheat, late sown, is poor and will yield but little over expenses, yet, taken as a whole, the season will prove a good one, and the husbandmen need not complain. Orchard and vineyards are in a thrifty condition, the latter being well cared for, especially in the St. Helena district. Although there were many vineyards that were planted last spring that look well, it was very unfortunate that so many cuttings were injured by the severe frosts of last fall before they were removed from the parent vine. It is owing to this fact that the majority of the failures occurred. The experience was gained at a costly price, and will not be disregarded in the future. The spirit of improvement is abroad in the whole valley, but is particularly active between Yountville and St. Helena. This has often been noted in your columns, and it should be in the future until the same spirit that animates our brethren up the valley has taken possession of real estate holders below Yountville.

#### NEVADA.

THE CODLING MOTH.—*Transcript*: Felix Gillet, the well-known horticulturist, says that the codling moth is playing havoc with apples and pears in all parts of the county, so far as he can learn. In his own large orchard on Artesian hill, for instance, he anticipates that the apple crop will be a total failure on account of the pest. He is now studying out a plan to lessen the evil in the future by scraping the tree with an ingenious instrument that will expose the pupae of the moth where it is hid under the bark, and thus enable the destruction of it.

#### SACRAMENTO.

THE PLUM AND THE PEAR.—*Record Union*, July 12: The principal fruit shipped to the East so far this year are the plum and the pear. In both of these we excel, and in both, the Eastern States fail. Both are good chippers and pay well to ship green. This is a good year to ship fruit East, from the fact that our fruit is early and fruit East is late. Our fruit ripens this year about two weeks earlier than last year, and Eastern fruit is ripening about two weeks later than last year. This gives us

the advantage of about four weeks in their market. This fact is no small matter to our fruit-growers and shippers, and will tell in the general summing up of the profits of fruit culture this year.

#### SAN BERNARDINO.

FRUIT NOTES.—*Riverside Press*, July 9: A box of apricots was recently shipped from Riverside to Fort Wayne, Indiana, going through in six days by Wells, Fargo & Co.'s Express. Each fruit was wrapped in tissue paper and the box was shipped the same day the fruit was picked. The fruit arrived at its destination in good condition. With reasonable facilities for shipping over the new Atlantic & Pacific line, soon to be completed, it will be quite possible to supply St. Louis, Chicago and Cincinnati markets with apricots from this valley. The Lugonia Fruit Packing Company have commenced on peaches a little this week, and will be in full blast next week with their Alden dryer and facilities for drying several tons per day by the sun process. The Colton cannery has been short of apricots, paying three cents per pound for Riverside fruit and two and one-half cents for fruit from other localities. They are getting plenty of peaches and are now running a large force. Dodge & Seger are running their dryer at present on peaches. Dr. Jarvis is drying his apricot crop.

#### SAN JOAQUIN.

THE NAVIGATION OF THE UPPER SAN JOAQUIN. *Herald*, July 9: Owing to the cool weather of the last six weeks, the water of the river has not fallen as rapidly as usual, and it now seems probable that steamers will be able to make trips to landings on the upper San Joaquin for several weeks to come. Every effort is being made by farmers on the west side to harvest their crops so as to get them to market before the water falls in the river to close navigation; yet it is doubtful whether more than one-half of the crop will be moved this summer. We are informed by steamboat men that the yield in that portion of the State is greater than last year, and the quality of the grain much better. At the present time, Capt. I. D. Hamilton is running the steamers *Clara Bell*, *Clara Crown* and *Empire City* from Stockton to the upper river landings. The steamer *Roberts Island* is running from Stockton to San Joaquin City, and the *Harriet* and *Ceres* are carrying wheat from the upper San Joaquin direct to San Francisco.

#### SAN LUIS OBISPO.

VOLUNTEER.—*Tribune*, July 9: Harvesting is in full blast on the Nipomo ranch. Mr. John Dana has a tract of several hundred acres which last year produced an average of 30 sacks of wheat to the acre. The same land has yielded a volunteer crop this year of 20 sacks to the acre. This is equivalent to 50 sacks at one sowing. The grain will average 130 lbs. to the sack—6,500 lbs. at one sowing is a very good yield for California.

#### SIERRA.

SIERRA VALLEY.—*Reno Gazette*, July 7: The grain crop about Loyalton promises to be larger than at any time during 15 years. It is believed that 125,000 bushels will be harvested in the region immediately around Loyalton and Randolph. The inhabitants turned out recently and fought the hoppers face to face. The pest was making for the grain fields, when the frightened ranchers assembled on the edge of the grain land, and with burning straw, sticks, stones, rags and a large ditch succeeded in repelling the invaders.

#### SONOMA.

RAISE HORSES.—*Petaluma Courier*: Petaluma is now one of the best horse markets of any country town in the State. There have been many sales here within the last few months. Last week a span of draft horses sold for \$600, and we have heard of several sales from \$200 up. Dan Misner has a span of sorrels, five and six-year-old McClellands, well matched and stylish, that he has been offered \$1,500 for. They will probably be sold this week for \$1,600, his price. Many horses have been purchased here during the last year by Sandy Woodworth, for the horse railroad companies of San Francisco. One farmer informed us yesterday that he had sold \$1,300 worth of draft horses this year, all of his own raising. Now, farmers can keep a span or more of good work mares, and the income from their increase, if they are properly bred and cared for, will amount annually to a considerable sum. There is always a market for a good horse or any other kind of stock, especially if it is extra good, and it will cost but little more to raise a \$300 horse than it does to raise a \$50 scrub. Raise less grain and other stuff for market and more stock to feed it to. This will keep up the fertility of the land and increase the farmers' resources.

#### YOLO.

GRAIN FIELD FIRE.—*Mail*, July 7th: A very disastrous grain field fire occurred near Plainfield, this county, Wednesday afternoon. The fire originated from the threshing engine of Bob Harlan, while at work for Frank Bullard, on the old Jackson place, near the town of Plainfield. The day was very hot, and the stubble and grain in the vicinity as dry as tinder, and it was impossible to obtain any control over the flames, which spread with wonderful rapidity. The thresher was soon consumed and with it three settings of grain, and a large barn containing a heavy stock of hay. The flames then spread through a large field of ripe wheat owned by a man named Chandler, destroying a good portion of it and burning 600 sacks of wheat belonging to Eli Hays. A large number of men



did everything in their power to extinguish the demon of fire, but their efforts were unavailing. The fire continued until it had burned itself out. The total loss was very large, although at present it cannot be definitely stated. Several men, including Cheny Olds, were prostrated by the heat and their exertions to put out the fire. Mr. Olds was taken so ill that it was found necessary to send for a physician.

### NEVADA.

**ARTESIAN WELLS OF BATTLE MOUNTAIN.**—Winnemucca *Silver State*: Some 11 years ago, after the completion of the transcontinental railroad, a party of Humboldters, among whom were Robert McBeth, J. A. Blossom, G. W. Fox, J. W. McWilliams, T. A. Rule and others owning mines in Battle Mountain district, and engaged in different pursuits along the railroad, and D. H. Haskell, town-site agent, laid out the town of Battle Mountain, which was to be the supply depot for the Galena and other mining districts in the surrounding mountains. The town-site was supposed to be in Humboldt county, though it proved to be in Lander, and it had no known advantages over any other desert plain in Nevada; several stores were built there and a fine hotel erected by D. Huntsman, became an eating station for passenger trains on the Central Pacific railroad. An unsuccessful attempt was made to supply the place with water from a spring several miles from the town; and water had to be hauled from the Humboldt river which winds through the plain a mile from the village. In the course of time some of the enterprising citizens had artesian wells bored, and at a depth of from 150 to 200 ft. found water that rose above the surface. One of the wells sunk by the Nevada railway company, deserves special mention. The water from this well rises about nine ft. above the surface of the ground, and is conveyed in a pipe an inch and a half in diameter into a building, and discharged on an overshot wheel, causing it to revolve. This wheel works a pump which raises the water to a tank 35 ft. above the surface from which locomotives are supplied, and the water is carried in pipes to any part of the shops. Another well 171 ft. deep, on J. A. Blossom's ranch, something over a mile from town, flows about 50,000 gallons in 24 hours. Other wells have been sunk on Dunphy and Crum's ranches, the latter four miles from the village. This artesian water, of which there appears to be an inexhaustible supply, will undoubtedly be used for a great many purposes to which it has not yet been applied, as it will furnish motive power before it is used for irrigation.

## THE VINEYARD.

### California Raisin Making.

As raisin curing, packing and marketing will soon be in full blast, matters concerning cost and profits are of general interest. The *Riverside Press and Horticulturist* gives an account of these points as brought out by the experience of some in that well-known colony. It says: Our raisin-growers (some of them at least) seem to be rather discouraged by their experience of last raisin season, and perhaps with some reason considering the lateness of the season, the losses by unusual rain and prolonged damp weather and finally, low and diminishing prices, as the season advanced, caused largely by sending an inferior article in some cases to market. We think, however, there are no just grounds for being discouraged as we shall try to show. We know of one raisin-grower who shipped to market through Mr Wright an equivalent of 660 boxes, mostly, however, in halves and quarters, which realized at Colton, net, in round numbers, \$1,100. This was not a large sum, certainly, for the number of boxes, still it is quite a respectable sum. Our raisin-grower in the present instance, however, does not claim to be able to handle raisins as economically as some who have figured large net profits in former years, hence his expenses form a very large percentage of the net returns, amounting to almost 40%, part of which may be accounted for in the quantity of fractional boxes used in packing, which again swells the total figures for last season. Halves and quarters sold much more freely, and in some cases higher, proportionally, than whole boxes.

It has been the custom heretofore to make the expenses as small as possible in sending forth statements to the public. For instance, in the season 1879-80 one grower only made his expenses 19% of the net yield at Colton, while still another had only 14% of expense. Now practical raisin-growers know that expenses can not be reduced below 30% or 33% of the total net returns delivered at Colton, or to speak more plainly and intelligibly, raisin-growers who figure accurately judge their expenses moderate when the cost of picking, boxing, etc., does not exceed 50 cents per box. Of course when prices are high, expenses are not proportionately increased, so that we may assume that all over from 50 to 70 cents per box is net profit, exclusive of water, cultivating, pruning, etc., which will be something like \$20 per acre.

Below we give a general statement of our raisin grower's expenses. We will not go into minute details, but give the figures in round numbers, assuming that the general average is very nearly correct:

Total returns net at Colton from an equivalent of 660 boxes raisins of all grades.....\$1,100 00  
Net average price per box.....1 66

#### EXPENSES.

Boxes, making, etc.....\$150 00  
Paper and labels.....30 00  
Marking.....25 00  
Picking.....130 00  
Packing.....100 00

Total.....\$435 00

Expense per box.....\$ 66

Net proceeds.....665 00

Percentage of expense.....40 00

We admit that this is not as racy a view of raisin-growing as previous statements would warrant, but this view of it will warrant any capitalist in investing \$1,000 per acre in a hearing vineyard. Here we have a return of \$665 from something like 4,000 vines, or say six acres. And this is not all, for our raisin-grower's vines are not all in full bearing, and last season he lost at least 200 boxes from wet weather, which need not have been lost had only a small drying house been provided, which would have kept the raisins from mildewing during the few days of damp weather. So, if we will take the results which might have been, had proper precautions been taken herebefore, we would have had at least \$200 more to add to the net proceeds, and in a year or two more we may safely assume a yield of 250 boxes more when the vineyard is in full bearing. So we think we are justified in saying that a vineyard in full bearing capacity is worth \$1,000 per acre. Not only that, but here is 66 cents per box which in many families might be two-thirds saved if they feel like doing the work themselves.

We think we are justified in saying that raisins are as low as they ever will be. Our best raisins in point of quality were as good as the best Spanish imported, which sell at fancy figures, as the boxes on exhibition at our Citrus fair plainly showed. Advices from Spain for a year or two, state that Spanish raisins were so low that if the same prices continued it would be ruinous to raisin-growers there. Our raisins are at a disadvantage in the markets of the United States at present, as buyers are hardly justified in buying by the marks on the boxes, for here, even in Riverside, one man packs and marks all of his crop London Layers; while still another brands his London Layers but forgets to put his designating numbers on his boxes, so that all trace of the grower will be surely lost. If our fruit growers want to make the most of their opportunity they must be up and stirring and see that their raisins are honestly packed, marked and numbered, and in all cases giving a written guarantee that every box is honestly packed and marked and that the whole lot will be equal to samples. Then buyers can buy in confidence without examining every box and will feel justified in giving a much higher price than where no such guarantees exist.

## QUERIES AND REPLIES.

### Geese.

**EDITORS PRESS:**—Can you put me on the way to get some Toulouse or Bremen geese? I see none advertised in your paper. A little information would be thankfully received by—MRS. IRENE QUINLEY.  
San Jose, Cal.

Such inquiries are frequent. Those having these birds should advertise them.

### For Rose Mildew.

**EDITORS PRESS:**—You ask for the specific proportions of limestone, water and carbolic acid I use on mildewed roses. I vary the proportion as to circumstances. For old bushes and mature wood I take one gallon of water, of limestone about the size of a hen's egg, and of carbolic acid, often a teaspoonful. This is the kill or cure remedy and must be used when dew is on, or in the evening, after the foliage is wet. Young plants that are tender, or valuable roses, I only add acid till the water smells lightly of it. If mildew makes a sudden attack, I cut back, and syringe daily with last solution. There are several new fungi which have put in an appearance this spring on imported plants. I will try and give an article about them in future.—W. A. T. STRATTON, Petaluma.

**THE SACKETT SCHOOL.**—The Sackett school, of Oakland, is about to enter on the third year of its remarkably successful career. It is the youngest of the many private boys' schools across the bay, and has shown a rare vigor and enterprise in looking out for the comfort of its students, and in providing the most competent teachers. Twice has the building been enlarged and beautified until it now stands out as one of the finest educational ornaments of the "Athens of the Pacific." The grounds are as home-like and cheerful as those of any private residence, and one feels at once that the young men who have a school home here, are fortunate indeed. Young men from the interior of the State would do well to send for catalogues, as special advantages are provided for them in the courses of instruction.

**THE LIGHTHALL HARVESTER.**—The new Lighthouse harvester, which was noticed in a recent issue of the *PRESS*, is said to be proving itself quite popular. Machines have been started at Merced, at Sumner, in Kern county, and at Colusa. The company will erect a factory in this city for the manufacture of their harvesters and to supply the orders they are receiving. We are told that one will commence work at Mayfield within the next two weeks.

## The Chautauqua Session at Monterey.

Two years ago the various Chautauqua Circles of California, organized an assembly at Ocean Grove, Monterey, as a branch of the famous Chautauqua Assembly, which for several years has attracted considerable attention in the Eastern States, and which is doing much to add interest to and popularize the study of science and literature there. The objects of this association are as follows:

First.—To encourage the organization of local circles for the study of such works as may from time to time be agreed upon, and have the benefit of mutual aid in considering each week the subjects read or studied. Men and women of ordinary abilities and education are encouraged to take part, and find it at once a source of interest, profit and pleasure.

Second.—To provide a suitable course of summer lectures, where professional men and women, together with intellectually inclined persons of all ranks, can find both recreation and profit. This course of lectures will be given at Monterey, in connection with the meeting of all members of the circles as far as they can be present.

Third.—To make collections of plants, shells, charts, interesting papers on various subjects, and curiosities of all sorts, and to arrange them in a proper form for reference and study.

To aid in this work, the proprietors of the Grove have erected a large and commodious assembly room, to which has been added two smaller and convenient rooms, as laboratory and working, or committee-rooms—to which will also be added a suitable museum building as soon as the collections may require such additional space.

The third annual session of the association was brought to a close on Monday last, after a continuance of two weeks, and is pronounced by those who have been present at all as the most interesting and fullest attended of the series. Lectures of an able and instructive character were given on various scientific and general subjects, among which were included astronomy, microscopy, biology, botany, entomology, physiology, conchology, etc. Among the lecturers may be enumerated Prof. Moses of the State University; Profs. Norton and Moore of the State Normal School; President Stratton of the University of the Pacific; Dr. J. H. Wythe of the Pacific Medical College; Miss Norton and Miss Washburn of the State Normal School; Mrs. Field of San Jose; Rev. C. V. Anthony of this city; Mr. F. B. Perkins of the San Francisco Free Library; Prof. Lemmon and Mrs. Lemmon, the well-known California botanists, and others.

The lectures averaged about three each day and were largely attended, not only by the members of the Association, but by large numbers who are constantly visiting this popular place of resort. In addition to the lectures, classes are also formed for practical instruction in the field, in botany, geology, etc., which are lead by thorough and competent instructors. We have no space in our columns to-day, to make special reference to any of these lectures, but may possibly allude to some one or more of them in future issues.

This Association has now put on the appearance of a permanent institution, as a summer school of science, and one that is likely to exert a great and growing influence on the growth of learning and social improvement throughout the State.

### Seed and Climate.

One of the most interesting questions in plant growth is the effect produced by movement of seed from one climate to another. There may be already some large collection of observations on this point, but we cannot now recall it. So far as experience in this State is concerned, we believe it is true that an advantage is often found in seed brought from a colder climate, the plant maturing earlier and showing signs of enjoying the more genial climate into which it has been brought. It is a relief held by many farmers at the East that earlier vegetables can be grown by getting the seed from the north than by using that grown in their own latitude. We know of an old farmer in New England who always sent to the extreme north of Vermont for his seed corn, and claimed to gain several days in ripening. Whatever experience our readers may have on the matter, it may be interesting to bring forward. It might be expected that taking seed from a mild to a cold climate would yield unsatisfactory results. The latest instance seeming to indicate this is given by a New Yorker, who took a lot of seed wheat from Oregon to the Empire State, and writes to the *Willamette Farmer* his experience, as follows:

A little over a year since while I was in your city, I bought a couple of bushels of white wheat that was raised in the Walla Walla valley, and shipped it home to sow and note the result. The soil was a clay loam fallow. I worked it well and sowed 200 lbs. of phosphate with the wheat. It was sown the 13th of September. At the same time I sowed the balance of my wheat. Result: The winter has killed the whole of it, or nearly so. I am inclined to think our climate is too severe for wheat grown in Oregon.

This experience seems to agree with that gained some years ago when the Commissioner of Agriculture distributed samples of California grown wheat throughout the East. The results were so unsatisfactory that the verdict went forth that varieties succeeding in California were not adapted to Eastern conditions.

## News in Brief.

In a financial point of view, Griscom's fast at Chicago has proved a failure.

THERE are some 200 men employed on the Nevada and Oregon railroad.

BATTLE MOUNTAIN'S artesian wells are making that vicinity a garden spot.

WORK has been resumed to complete the new Mint refinery building at Carson.

THE run of salmon is increasing at Astoria. The run in Frazer river began July 10th.

During the week ending the 8th inst 23 deaths from yellow fever occurred in Havana.

THE first locomotive for the California South-railroad has arrived at San Diego per the *hrg Orient*.

A CHUNK of solid gold, weighing \$65.75 was picked up last week in the Ward mine Trinity county.

THE country above Cloverdale is filled with campers from San Francisco, Oakland and other lowland places.

THE machinery for the new rolling mills at the railroad shops in Sacramento is rapidly approaching completion.

THE California Hosiery Company, Oakland, now employs about 220 hands, and is kept busy filling orders for Uncle Sam.

AN effort will be made to bridge the Sacramento river at Chico this fall, or as early in the coming spring as practicable.

THERE are millions of catfish and perch now in Washoe lake, but they will not be fit for table use until a year from this time.

THE London season has thus far been unusually quiet. Kalakaua, King of the Sandwich Islands, is the fashionable lion and goes everywhere.

ENGINEERS are making surveys for fortifications at Victoria and Esquimalt. The Imperial government intends to make Esquimalt harbor impregnable.

SIR SAMUEL and Lady Baker are visiting Webber lake and vicinity. They are famous travelers, and have been in almost every country of the habitable globe.

ACCORDING to the assessment roll the total value of all property, real and personal, in Tulare county, is \$7,845,610, being an increase of \$1,307,822 since last year.

MEMBERS of the Manhattan Athletic Club of New York, ran a quarter-mile race at Birmingham, Eng., Saturday, in 49 seconds, heating the English records and his own.

A TRACT of 120,000 acres of land in San Bernardino county has just been purchased by a capitalist, and is now being cut up into small farms and put on the market.

MILLIONS of saw-logs are being rafted, and thousands of railroad ties are being loaded for shipment up the Columbia river from Cowlitz county, Washington Territory.

THE body of T. K. Pugh, son of ex-Senator Pugh, who was made captive recently in Chihuahua by Apaches, has been found horribly mutilated, and bearing evidence of torture before death.

THE Russian Minister of War proposes to discontinue the construction of fortifications on the German and Austrian frontiers, heguy by his predecessor, saving 10,000,000 rubles in the budget.

THE *Bee* says there is a Chinese firm in Sacramento engaged in packing and shipping fruit and vegetables to the interior. It employs some white boys in the business, and is paying them good wages.

A LETTER from San Diego states that one of the railroad contractors at San Diego last Sunday went in bathing near the wharf, and suddenly disappeared under the water. It is not known whether he was taken with a cramp or by a shark.

COLONEL MENDELL and Director Knox have returned to Sacramento from an examination of the debris dams on the Bear and Feather rivers. Colonel Mendell says the dams were in better condition than he expected, and he is confident they will do the work claimed for them.

THERE are 11 artesian wells in the neighborhood of Bakersfield, and two more in process of boring. The *Californian* says the artesian belt is about 18 miles in length, from east to west, with an average breadth of six miles. The tract thus watered contains 70,000 acres, and is the most valuable in the valley.

THE bottom lands of the Lower Colorado river, A. T., are receiving the attention they deserve. There is along the course of the river for some 350 miles immense tracts of arable soil, capable of producing sugar, cotton, hemp, tropical and semi-tropical fruits, vegetables and cereals.

SCORES of laborers are coming into Washington Territory from the Canadian Pacific railroad, all complaining of had fare, bad treatment and utter disregard for the lives of men on the part of the management. They say several hundred men will leave soon and come to the States for work.

A NARROW-GAUGE railroad now building in Linn county, Or., recently ordered that all their hands should board at the company's mess house at \$4 a week, instead of with farmers along the line, where they were kept much cheaper. About 40 men quit work, to the consternation of the boss.

THE *Golos* had an interview with Hessa Helfmann, sentenced to death for complicity in the assassination of the Czar, and detained in Petropaulovsky fortress pending her confinement. She stated that she was well treated, and that no pressure had been exercised upon her to identify any person in connection with the crime.





### Growth of California.

We, by these sunset shores, have known the tramp  
Of marching millions; camp, and after camp,  
Broad prairies lit with twinkling fires,  
Hamlets, and towns, until the startled skies  
Are pierced by city towers and spires,  
And smoke-black chimneys—upstosed acres  
Of golden wheat stretched out for miles,  
As if a sea in all its summer breakers,  
Had changed at once to green earth-smiles.  
Next the gray mountains, from their princely places,  
Turned eastward look, with proud, defiant faces,  
For the long lines were rolling as a sea;  
And the new race was beating westward—west—  
With that firm passion which made hard the breast  
Of the first Norseman, struggling to set free  
That deathless hunger, handed down  
From Himalaya's lofty crown.

Then a strange cry was eastward rolled,  
The dreadful savage passes through,  
First faintly faltered by a few,  
Next a host trampled wildly past,  
Finding a land which summer's arms enfold,  
The fairest of the States—the land of gold,  
Soon the swift human tide, afoam with toil,  
Rich with a wide realm's wrested spoil,  
Mines, harvests, cities, wealth of hand and brain,  
Rolled to these shores—and here at last  
We fix our empire brave and fast.  
We bind the ocean in an iron chain,  
We plant our olives and our vines, and wait  
For golden argosies to cross our Golden Gate.  
Food for the toiling throng from out our doors shall pass,  
The Orient's treasure-ships must sail by Alcatraz;  
About our winding shores the temples that we rear  
Shall be the world's delight in days that now are near.  
—Chas. H. Shinn.

### The Young People and the Farm.

[Written for the RURAL PRESS by J. W. BARTON.]

EDITORS PRESS:—Although there has been a great deal said about agreeable and disagreeable women and the education of our girls, I have not noticed one word in regard to our farmers' boys. No fact is more evident among farming communities than that the boys almost universally grow up with a distaste for farm pursuits. No sooner are they of age than they turn to seek for more varied, if not less laborious, duties in town and city life. Thus agriculture is yearly robbed of what should be its strength and hope; the places these boys should have been qualified to fill, and should have filled, with the gathered wisdom of experience, aided by the light of progressive science, are left to doubtful experimenters, while aged parents, deserted at a time when filial care is most needed, can only look upon their loneliness and say, "There must be something wrong somewhere."

Yes; in regard to farmers' boys, there has been "something wrong" for a great while. In the first place, many of them never should have been farmers' boys at all; at least, not farm boys, though they may happen to have been born upon a farm. It is not every nature, even among boys, that is or can be accommodated to the requirements of such an occupation, though parents are far too prone to think that, being boys, a farm is the only proper place for them, and the weapons best suited to them in the warfare of life, the shovel and the hoe. Their physical, mental and intellectual peculiarities are seldom taken into consideration. The strong, rough nature, the delicately organized, sensitive one, and the one with a craving hunger for the intellectual and scientific, are all kept together upon the farm that they may grow up and be taught to work, out of temptation's way. The farmer invests them like so much capital, on which he is to receive a per diem interest in the improvement of his farm, and works them to the limit of endurance under sanction of a short-sighted interpretation of that aphorism of "securing the greatest good to the greatest number."

The necessities of the family, it is thought, justify the sacrifice of individuality. The usual expectation is that when the pecuniary ends of a farmer are accomplished, or the boys grown out of his hands, they will accept a portion of so many acres each, and settle down to plod through the same routine with the next generation. Much seeming wisdom and parental affection are thus manifested; but the wisdom too often proves unwise, and the affection only a mistaken form of well-developed selfishness.

The possibility is that out of a family of three or five, one may fulfill the desires of anxious parents, accept the acres, and, with the homestead in prospect, settle down to be the stay of their old age; but the greater probability is that as soon as legally free, nature will assert her claims in each, and they will go out into the world seeking for the life that should be theirs through early years of preparation for it; but having been cheated out of that preparation, neither the world nor parents need wonder if they come forth ill developed, discontented spirits, seeking their places and finding them not.

As farming has heretofore been considered a business that any ignoramus might engage in successfully, it has not been thought necessary to lighten or brighten the labor of the farm by any rays of science or gleams of intelli-

gence from the world of thought and action without. Work was the one thing wanted from sunrise till bed-time, and the physical nature, often overwrought, had neither strength nor sympathy to give to the mental, which, of course, grew dwarfed and distorted in the unnatural atmosphere. Struggle against it as they might with bits of candle and lighted fire-brands in the chimney corner, overworn nature has been more than a match for fancy, philosophy and metaphysics; and where one boy with such culture has come forth a perfect man mentally, morally and physically, 999 have proved unhappy failures. Boys on the farm, as well as in the college, have a future before them, and should be educated in reference to the place in that future which their natural abilities entitle them to fill. Parents who do not act upon this principle, but simply drive their boys like horses or oxen to the plow, will find their farm improvements paid for at a dear rate, and need not wonder at finding themselves deserted and left to a lonely old age. The class of farmers now coming upon the stage are beginning to learn that they must progress with the times, that they must admit science and intellect into their fields and barnyards where they want their boys to work, or the boys will soon grow restless, performing their labor like so much mere drudgery and longing for their days of freedom, when they can go out into the world and be like other people; and they will go, as generations past have found to their sorrow, unless employment is given to the brains as well as to the hands.

Formerly it was not thought necessary for farmers to have brains at all, at least, it was not supposed that there was any necessity for using them in connection with farming operations. The main thing was the work, and anybody with ordinary senses and two good, strong hands could do that. It all did very well, perhaps, in those quiet old times, when one generation trudged on after another, oblivious of the existence of elements in water, earth and air, that were waiting but the electric touch of science to make them burst forth into the blaze of light, flash after flash of which has startled the agricultural world with new developments almost numberless during the past 20 or 30 years. How obstinately the mass of those old-time farmers shut their eyes against the light. They had their hounds and hoes and plows and oxen; what use had they for brains or brain work in books or papers? They closed their doors against knowledge, and put up their bars and padlocked their gates against any threatened innovations of science. It was work they wanted of the girls in the house, and work they wanted of the boys in the fields. And the boys and girls did work, but they were listening and looking, too, and thinking; listening to the new life waking in the world without, looking with great longing toward the distant and forbidden lights, and thinking—not as they should have been taught to do—how they might kindle new fires on their own hearthstones, not how they might open the gates of prejudice to let in something of the life that so tempted them from without—but only of the day when they should be legally free from parental control, and at liberty to turn their backs upon the old homestead and the monotonous drudgery of farm life together and for ever.

This has been what thousands of farmers' sons and daughters have done, and is what thousands more will do, till farmers, as a class, are willing to welcome improvements, to seek for light, and use it when they get it. They are learning to do so gradually and individually. The good leaven thrust into the old meal tubs by diligent and earnest thinkers is working and spreading. Men see that only in the light of science can labor, such as the farm requires, be made attractive and elevating. It is true men and boys can dig and plow, and sow and reap in the old way, and make a living at it; but the farther behind the times they are, the more frequent will be the desertions from their ranks of the young and strong, who bend toward the excitement of change and improvement as young plants bend toward the light of day. Changes, innovations, improvements are going on everywhere else; why not in the fields and household of the farmer as well?

Santa Rosa, Cal.

FATAL PERSISTENCY.—One of the singularities of this city is that business men never retire from business. They stand at the desk and die with the column of the day's profits half footed up. Though vast fortunes are made by hundreds, and a competency acquired by thousands, they never think of withdrawing from business and spending the remainder of their lives in comfort and quietude. There are many old men now in business in this city who should abandon the counting-house to younger people. These old fellows are rich. They have stood in the harness for more than a quarter of a century; they are stiff and worn, yet six days of the week they are at the store as anxious to make as though the only thing they had in the world was the only thing they have not—a 20 year's lease of life. They hold on to trade with the tenacity of a tax-collector, and when their summons comes to join the innumerable caravan that moves on to the pale realm of shade, the grim messenger goes not to their quiet homes but to their business places down town to find them. He does find them though, and often comes five or ten years sooner than he would if he did not have to hunt around among the stores and warehouses for the man he is sent to call away from business.—Golden Era.

### Housekeeping as an Art.

The following essay was read before the meeting of the Alumnae of the Young Ladies' Seminary at Benicia, by Clara Deming, of Vallejo. It was furnished at our requests for publication in the RURAL PRESS:

Kind friends, a teacher of mine used to say, "Oh! If you were not so practical and matter of fact, you might write an essay." Five years have not changed me much, and I bring for your consideration a plain, practical subject, homely in all of its bearings.

No matter what other calling a girl may have, she will be expected to keep house at some period of her existence. This department in life always has been assigned to her and always will be, unless the minds of her brothers undergo a radical change. This change is not probable. When gentlemen are confined in the house, on account of sickness, for a few days, they become restless, and I am sorry to say, sometimes irritable. When we, thinking to make them more contented, tell them that we have to stay indoors most of the time, we are met by the convincing argument that we are used to it, and that is very different. Because we are used to it, is not to say that we like it particularly well, or that we must have no other aspirations.

The constituents necessary to make up a good housekeeper are many. First, she must be intelligent, accomplished if possible, but not necessarily; she must be proficient in cooking, in all its branches; in laundry work, sweeping, dusting, cleaning; in the department of the seamstress; and in the sick-room more depends upon her efforts than upon the physician.

Even if a lady is not compelled to perform these duties, a knowledge of them is important, in order that she may have complete command over her servants. It is as essential to a mistress as a thorough knowledge of military tactics, to a general in the army. If the soldiers were more familiar with the duties of the officer than the officer himself, do you think he would have any command over them? No! Mutiny and disobedience would follow. So we find it in the household. If the lady of the house does not understand how her work should be done the servants will laugh her authority to scorn, and will be wasteful and extravagant; often causing bankruptcy to the family.

A lady who is perfectly familiar with the duties of her servants, is apt to be more lenient towards them, commanding and teaching them with more patience than one who has not her knowledge.

Not long ago I found an anecdote of a young lady who had graduated from a seminary and had become engaged. She suddenly became aware of the fact that she knew nothing whatever about cooking, and was filled with a desire to learn, at least, to make a cake to surprise her lover with. Her mother sent her to the kitchen. The girl asked Bridget the names of the different utensils, and was told in Bridget's own dialect. These names the young lady tried to arrange in her mind. Bridget was preparing some edibles for the noonday repast, and the girl asked what they were. "Faith 'n' they're praties," was the laconic reply. She had never heard of them. However, if they had been prepared and placed upon the table, she would have known that they were potatoes. After a while the lady informed the mistress of the culinary department that she would like to make a cake for her lover. Bridget brought her the articles she called for from her cook book. I was so disgusted with the mother for leaving the girl to the mercy of a servant, instead of teaching her in a gentle and pleasing manner, that I did not read far enough to see whether the cake was a success or not.

As I thought the matter over I came to the conclusion that there was "more truth than fiction" in this anecdote. There are many who never intend that their daughters shall do household work, and think that if they do have to perform these duties they can learn them. Now, this seems to me a gross neglect and abuse of one of the fine arts.

The abuse of this one art is a cause of ruffianism and hoodlumism, for which mothers alone are responsible. Why? Because they bring up their children to despise honest labor in youth and to think they cannot be ladies and gentlemen if they perform manual labor. "As the twig is bent so doth the tree incline." Consequently, if children are educated in idleness, they will be apt to follow it when they have attained manhood. We must eat to live, and food cannot be obtained without money; money cannot be had without labor; so these would-be ladies and gentlemen must either steal or starve.

Shall the mothers of the coming generation continue to sow these seeds of discontent, communism, socialism and nihilism? We hope not. It will take years of patient labor to eradicate these false ideas of life; but I am thankful to say that there are some who are beginning to mend their ways of thinking and there will be a few among the present generation, who will inculcate different ideas upon these subjects than those of the past.

Ladies who are best qualified to shine in society and be leaders in the busy whirl of life, who are the most highly educated and cultured are also perfectly able to look well to the ways of their households. Queen Victoria is said to be a very excellent housekeeper; and she has educated her daughters in the same manner. These ladies are noble women, and much loved wherever they go. If queens and princesses find

this knowledge necessary in their lives how much more do the daughters of all classes need it. Even if wealth and ease may be their portion now, riches sometimes take wings, and those who are millionaires to-day, to-morrow are penniless.

Good servants are always in demand and the American people would rather employ their own poor than import those of other nations. American girls seem to think it a disgrace to earn their living in a kitchen where they can have a good home in the family, but prefer to be shut up from day to day in a close factory room with many others in a stifling atmosphere that is certain ruin to health.

"Housekeepers are born, not made." This is true of all artists. Music, painting and all others are gifts from a kind Father, but all can be cultivated more or less, even in those who do not possess them. None are so easy of acquisition as housekeeping. A little practice under the guidance of an efficient hand, and the results are surprising.

I have said and maintain that housekeeping should be placed among the fine arts. It requires, in the first place, taste, tact and skill to furnish a house tastefully and in harmony. Taste, tact and skill are necessary to produce pleasing effects in painting, music and sculpture. Education is as important in household arts as in the others. This is proven daily here in California by those who have been suddenly transported from poverty to wealth. We find in their homes everything that money can buy; with all this glitter they lack the beauty of the home of one whose coffers are but scantily supplied, who combines with a refined nature, culture and industry. When we have refinement and wealth combined, the result seems like the fairyland of our childish dreams; then we realize to its fullest extent the beauty of this despised art.

Cooking, of all the branches of household art, is probably the one that requires the most knowledge and practice. Poor cooking endangers the health of the whole family. Eating indigestible food disarranges the system and causes the dreadful dyspepsia, dyspepsia, to reign with august power over mind and body. When the body is affected with disease it renders the mind unhealthy and unfit for proper action. In all of Carlyle's life and writings, we find the influence of this malady, which was caused, in the first place, by fasting; an abstinence, which the system is not capable of sustaining, unless especially prepared. We have yet to see the evil effects of Dr. Tanner's great fast. He has, most assuredly, shortened his life by this unusual trial of the vital powers.

Where we find the body in perfect health, we find a clear intellect, pure morals and a happy, genial countenance. Diseased bodies cause morose and irritable dispositions.

If the American people could possibly exist without eating, they would not take the time to do so. We, as a race, are painfully aware of the fact that the time which has been allotted to us to remain upon this earth, is but short, and we must accomplish a great deal before yielding to the dread messenger of death.

I am glad that the present age is advancing in the art of cooking, and that schools are being established in all of our large cities, where instructions are given in this science alone. This will do more towards destroying the shoddy idea that we cannot be ladies and do our own cooking.

Cooking should be taught in the seminary. It is an art and a science, and should be taught along with various arts and sciences taught there. It would be a pleasure to the pupil to learn under an able teacher, who will not only teach the compound, but will explain the chemical effect of each ingredient. The young mind naturally inquires into the reason why.

One of the finest charities ever established is that in New York City, known as the "Kitchen Garden," under the proficient management of its founder, Miss Huntington. Here, housekeeping is taught by the Kindergarten system. And there is another at the "Old Brewery Mission of Five Points."

In these schools poor children are taught in a simple and amusing manner, all the principal rudiments of housekeeping and politeness. These children are not only founding principles for future use, but carry them into their present homes, and peace and order now reign where discord and disorder held complete sway. Not only are these girls taught good and useful things but are kept from idling upon the streets and learning the evil that there abounds. Places are found for these girls as fast as they are found capable. Those who hire them find them trustworthy, efficient and polite. Their homes will never be the abode of poverty and vice. What a blessing it would be if in every city there could be established such institutions under the management of such noble women as Miss Huntington. It would do more toward making men and women of those who are spending their time upon the streets than any other one thing.

I cannot close this already lengthy article in which I have endeavored to prove that housekeeping is a necessary and a fine art, without adding a small tribute to the memory of the dear sister, who has joined the heavenly throng since our last meeting. She was ever ready to lend heart and hand to advance and better the condition of the human mind. This society owes its very life to her efforts. Although we have loved her and miss her, still we would not be so selfish as to call her back only to suffer. Oh! rather should we rejoice in her happiness!



## It was Another Daughter.

EDITORS PRESS:—Allow me to correct a mistake I noticed in the RURAL PRESS of June 23th. It is in a paragraph headed "Kissing in Diphtheria," and reads, "The oldest daughter of Queen Victoria and wife of an Austrian Prince." It should be the "Second daughter of Queen Victoria and wife of a German Prince" (of Hesse Darmstadt). The oldest daughter married the Crown Prince of Prussia. Pardon this seeming interference. I felt prompted to make the correction, as the statement might lead people astray who are not familiar with these matters.

St. Helena, Cal.

AN ENGLISHMAN.

HOW ARTEMUS WARD SILENCED A JACKASS. Half a dozen of his associates were sitting one day in his room at the village hotel where he boarded, when an old woman drove up to the store opposite with two donkeys—a jack and a jenny—hitched to a little wagon. Jack was the noisiest brute in the county. He had a voice worse than the handle of the town pump on a frosty morning, and was proud of it. In a minute his tail rose to a horizontal, his nose was thrust forward, his lips parted, and the beast blew his infernal blast. A second and a third time it was repeated. Artemus quietly thought "that thing might be fixed," and disappeared from the room. He went over and appeared to make a careful inspection of the fore wheels of the wagon, the harness and the hitchup, and came back saying that the donkey was all right; the brute must have made a mistake about something. Presently there were indications of a move on Jack's part; the neck was extended, the lips curled, and the tail rose—to the pivotal point and no farther. The trumpet didn't sound. Jack thought there was a mistake somewhere—hesitated—reflected—and tried again. The front part, some of it, was all right; but the equilibrium could not be reached. After a time another attempt was made and failed. Jack turned his head around to ascertain the cause of the failure, but could not see any. The fifth vain attempt to bray was followed by a spiteful kick at Jenny, and it didn't cure the matter. At last he gave it up and stood at that store door the most neglected looking, discontented donkey in existence. Meantime, Artemus enjoyed the fun and discharged a rattling fusillade of pungent humor that kept the party in a roar and made the whole affair one of the most ludicrous that I ever experienced. Artemus had attached a stone to the donkey's tail, leaving just play enough to the cord to allow the beast to get his tail nearly up to "concert pitch."

MINHO PEASANT GIRLS, PORTUGAL.—Nowhere among the peasants of any nation that we have seen in person or in picture have we met more barbaric brilliancy of costume than at a meeting of Minho country girls in holiday attire. The flashing colors of the very full, many-pleated stuff petticoats, the immaculate white sleeves and dark bodices, with its embroidered border, the gay kerchiefs over the dark locks and about the neck, and the profusion of filigree jewelry, a little gold being hammered out so as to go a great way, and expanding itself into cowbells of delicate tracery, waffle-iron earrings as large as the palm of a man's hands, and several pairs worn at once, the entire corsage covered with a cuirass of chains, beads, crosses, and other ornaments, make up a *tout ensemble* which even Solomon in all his glory would have found it hard to rival.—*Harper's Magazine*.

## Chaff.

A LADY in Albany has a little dog called Sport. She has taught him a number of tricks and this among them. She will say: "Sport, which would you rather be, a dead dog, or a member of the legislature?" Instantly he will throw himself down, stretch himself out, close his eyes and be, to all appearance, dead.

A COMMERCIAL paper informs us that "eggs are going down." This is a ridiculous statement, for are not eggs always going down?

ONE of the greatest trials of a young lady's life is when she tries to get a half-gallon foot into a quart shoe.

OLEOMARGARINE is sold by the grocer, who tells you it is just from the cow. And so it is, but the cow is dead.

"FAREWELL" is the title of a poem sent in from Ohio yesterday. It is a good thing that the gifted authoress said good-by to the little gem, because she will never see it again.—*Chicago Tribune*.

A FAMOUS lawyer, having been so for more than a quarter of a century, was scooped by a man, who said: "I have a boy whom I want you to take and make a lawyer of." "How old is he?" said Mr. —. "He is 18 years old, stout and rugged; he's got a pair of lungs like a bellows," replied the father. "Has he any other qualifications?" "Yes, sir, he's got the one great qualification of all," said the other; "he's the confoundest liar in our town I thought when I heard you in the court-room just now that it wouldn't take very long for him to come pretty high up to you."

"DOCTOR," said a lady patient, "I suffer a great deal with my eyes." The old gentleman adjusted his spectacles, and with a Socratic air replied, "I do not doubt it, my friend; but then you ought not to forget you would suffer a great deal more without them."

## Young Folks' Column.

## Boy-Divers in the Red Sea.

"Here we are at last, Mr. Kerr," says the captain, as we cast anchor off the coast of Arabia, a little after sunset, about two-thirds down the Red Sea. "It's too dark to make out much to-night, but you'll see a rare sight when you come on deck to-morrow morning."

When I awoke the next morning, I find the captain's promise amply made good. The sun is just rising, and under its golden splendor the broad blue sea stretches westward as far as eye can reach, every ripple tipped with living fire.

"You were right, captain," says I, as the burly skipper rises and stretches his brawny arms, like a bear awaking from its winter nap. "This is a sight worth seeing, indeed."

"Ah, this ain't what I meant," chuckles the captain; "the best 'o the show's to come yet. Look over yonder—there, just 'twixt the reef and the shore. D'ye see anything in the water?"

"Well I think I see something swimming—sharks I suppose."

"Sharks, eh? Well land-sharks you might call 'em, p'raps. Take my glass and try again."

The first look through the glass works a startling change. In a moment the swarm of round black spots which I have ignorantly taken for the backs of sharks are turned into faces—the faces of Arab children, and (as I perceived with no little amazement) of very young children too, some of the smallest being apparently not more than five or six years old! Our vessel is certainly not less than a mile from the shore, and the water, shallow as it is, is deep enough at any point to drown the very tallest of these adventurous little "water babies;" yet they are evidently making for the ship, and that, too, at a speed that will soon bring them alongside of her.

"Are they really coming all this way out without resting?" ask I.

"Bless you, that's nothing to an Arab!" laughs the captain; "these little darkies are as much at home in the water as on the land. I've heard folks talk a good deal of the way the South Sea Islanders can swim; but I've seen as good swimming here as ever I saw there."

And now, as the Lilliputian swimmers draw nearer, we begin to hear their shrill cries and elish laughter; and now they are close enough for their little brown faces, and glittering teeth, and beady black eyes, to be easily distinguished; and now one final stroke of their lean sinewy arms carries them alongside, and the blue water swarms with tiny figures, looking up and waving their hands so eagerly that one might almost expect to hear them call out, "Shine, boss!" and see them produce a brush and a pot of blacking. But instead of that, there is a universal chorus of "Piaster, Howadji!" (a penny, my lord!)

"Chuck 'em a copper, and you'll see something good!" says the captain.

I rumage a few remaining pockets of my tattered white jacket, and at last unearth a Turkish piaster (five cents) which I toss into the water. Instantly the smooth bright surface is dappled with a forest of tiny brown toes, all turning upward at once, and down plunge the boy-divers, their snipple limbs glancing through the clear water like a shoal of fish.

By this time nearly all the crew are looking over the side, and encouraging the swimmers with lusty shouts; for, used as Jack is to all sorts of queer spectacles, this is one of which he seems never to tire.

"There's one of 'em got it!"

"No he hain't!"

"Yes, he has—I see him comin' up with it!"

"And there's the others a-tryin' to take it from him—hold tight Sambo!"

Sure enough, the successful diver is surrounded by three or four piratical comrades, who are doing their best to snatch away the hard-won coin; but he sticks to it like a man, and as he reaches the surface, holds it up to us triumphantly, and then pops it into his month—the only pocket he has got.

But this is a sad mistake on his part. In a moment a crafty companion swims up behind him, and tickles him under the chin. As his month opens, out drops the coin into his assailant's hand, from whom it is instantly snatched by some one else; and a regular bear-fight ensues in the water, which splashes up all around them like a fountain-jet, while their shouts and laughter make the air ring.

"Aren't they afraid of sharks?" ask I of the captain, who has just increased the confusion ten-fold by throwing another copper into the very midst of the screaming throng.

"Not they—they make too much row for any shark to come near them. Sharks are mighty easy scared, for all they're so savage. You'll never catch 'em coming too near a steamer when she's goin'—the flapping of the screw frightens them away. See there's two of 'em comin' along now, and you'll just see how much the boys'll care for 'em."

And, indeed, the sudden uprising of those gaunt black fins, piercing the smooth water as with an unexpected stah, seems to produce no effect whatever upon these fearless urchins, who paddle about as unconcerned as ever. Moreover, it soon appears that the sharks themselves have other business to attend to. A shoal of flying

fish come driving past, glistening like rainbows in the dazzling sunshine as they leap out of the water and fall back again. Instantly one of the "sea-lawyers" dashes at the rear of the column, while the other, wheeling around its front, heads back the fugitives into his comrade's open jaws; and in this way the two partners contrive to make a very respectable "haul."

But at this moment the garrison boat is seen putting off from the shore, with one of the pasha's officers in the stern sheets. At sight of the well-known official flag, our water-babies scatter like wild fowl, and the next moment all the little black heads are seen bobbing over the shining ripples on their way back to the shore.—*Selected.*

## DOMESTIC ECONOMY.

## Starvation by Cookery.

[Written for the RURAL PRESS by SANITAS.]

Starvation by cookery is, I believe, chiefly a modern sin, and less the fault of the cook than of the public. Cooking is for man a necessity and quite a saving of vital energy. For, were it not for the cook, it would take so long for us to digest our food, that, like the cattle, we should have to spend half our time in eating, and the other half in resting that we might digest it. But while our best and our daily thanks are due the cook, it is high time that he or she give up kitchen hypocrisy, and send no more to our tables things having the appearance, but lacking the reality of food. I wonder how many die of hypocritical cooking? Perhaps half of us: for while gluttony and other sins cause much disease, yet were our food real, we might the better resist their temptations and suffer less by transgression.

But we must hurry up and not keep the cook in suspense as to the charge against him, which is briefly this: that he or she removes the natural salts from our food, and hides the loss by common salt, which, far from replacing them, rather aggravates the vital failure that comes from saline starvation. Not that common salt is bad of itself; it, too, has its uses in food.

Whilst this spoliation of food has been frequently complained of, and protest made against it by health reformers, it is only of late years that pointed evidence of the nature and extent of the danger has come to light. Degeneration of various tissues and organs in the body has long been recognized as the source of nearly all chronic disease and the fertile cause of that lack of stamina or endurance that characterizes modern life. Those in whom there is much degeneration, say the kidneys or the liver must walk through life gently; like a shoddy garment, they are safe enough for careful wear, but sure to give way under any strain.

The causes of the various types of degeneration have hitherto been very obscure, but one type has proved, on analysis, to be simply such tissue as the body can make in the absence of potassium and phosphates. This discovery of Dr. Dickinson's, of de-alkalized fibrine, as he calls it, is a startling one. This tissue has an excess of common salt; but, as compared with the natural tissue, which it has replaced, it is exceedingly poor in just those food salts which our cook does not send up to our tables. Every tissue in the body has a certain length of existence, after which it dies and is replaced. But this only slowly and cell by cell, fiber by fiber. To make each tissue capable of all the various services demanded of it, requires not only nitrogenous and carbonaceous foods, but also those saline elements that are so abundant in milk, vegetables and fruits. Sailors, it is well known, cannot undertake a long voyage without a daily supply of lemon juice or preserved vegetables, otherwise the terrible scurvy will disable or kill them. Scurvy is the acute disease due to this saline starvation; whilst waxy degeneration is the chronic disease due to a less violent and more prolonged starvation from the same elements.

It is estimated that man requires 40 grains daily of potassium oxide to carry on the nutrition and health of the body; but few of the working classes in our large cities get more than 25 to 30 grains per day. For instance, white bread, of which many consume a pound daily, furnishes only 7 grains of potassium, whereas the same amount of Graham or brown bread contains 25. Again, the salt pork, salt fish or ham which forms their staple meat, has lost most of the potassium to the brine, or will lose it (like salt fish) in the washing and steeping it undergoes before cooking.

Even the wealthier classes, with all their abundance, have been, by our modern habits of food and cookery, reduced to about the minimum quantity of potassium, and every little strain, as well as every little error, hastens on the decline of life and the day of physiological fatigue. Potatoes are rich in potash, but should our cook first peel and steep them in cold water to whiten them before boiling, we are cheated in every 8 ounces we eat of 9 grains of potash: for boiled in their skins, 20 grains, instead of 11, would have come to table. Should we partake of cabbage the loss is still greater, because the leafy vegetable presents such an extended surface to the water. Again, corn-starch pudding is also an emaciated food, all the potash, nitrogenous and tissue-building matters having been removed in the manufacture, leaving pure starch, the most deceitful of all foods.

These losses of potash are small, but so numerous, repeated and constant that the poor body is often at its wits' end to replace the cells and fibers of each tissue as the old cells die out. So, cell by cell, fiber by fiber, our livers and blood vessels are rebuilt of shoddy—of de-alkalized fibrine—a substance that, while able to keep up the form and movements of the liver, is totally unable to perform its functions of digestion and of blood depuration. So we are slowly crippled in our vital power, and especially in our ability to endure fatigue and to recover from disease or other unusual strain. At the same time our blood is imperfectly purified; it circulates imperfectly digested food and effete matters that would have been expelled had our food been natural. These degraded matters irritate the brain, making us nervous and excitable; they weary the muscles, making us easily fatigued, and they render us more liable to rheumatic and inflammatory diseases.

Dentists, too, have attributed to this spoliation of food the toothlessness of this generation. White bread and corn-starch were not common foods to our ancestors. And 50 years ago, vegetables were more commonly cooked in soups or broths, which gave us all the good they contain.

But not every person suffers equally from this waste of food salines. Out of 100 sailors on board a scurvy-stricken ship, 10 or 20 may escape the worst features of the disease. The causes of such individual peculiarities are beyond our skill. Why, out of 20 equally exposed to the contagion of small-pox only 15 should take the disease, is a mystery. Or, why again, in a family, where, as regards heredity, habits and food, all the children are equal, why should one or two escape, whilst the majority suffer from an epidemic of scarlet fever? Echo answers, why?

Those, then, who desire that they and their children should walk this world in no shoddy suits of flesh and blood, should inherit no sham teeth, no feeble livers and no languid limbs, must, in two respects at least, return to the ways of their fathers. First, Graham bread must entirely replace white bread; and secondly, soups rich in vegetables must be freely used. Clear soups are, of course, inferior, but still there is less waste in rejecting the boiled vegetable itself, than in rejecting the clear soup it was boiled in. Potatoes, beans and peas form a good basis for soups, being all rich in potash as well as in the more solid constituents of food.

Physicians, especially in the army, are well aware of the wonderful power of potassium salts to remove fatigue and exhaustion, and frequently, on a march, serve out a ration of special soup or Liebig's extract of meat for this quality of their potassium salts.

Santa Rosa, Cal.

## GOOD HEALTH.

## Incurable Insanity.

To be hopelessly insane, how terrible; worse than death itself. There are some singular facts in reference to insanity. New England gives the largest per centage of all sections of the Union, and the extreme Southern States the least. In some Northern localities, there is one insane person to every 600 of the population, while in the South, especially among the negroes, there is not one in 6,000.

Another striking fact is, that the asylums in this country have a larger number of inmates from among the farming population than from among any other calling. This is accounted for in the sameness, the horse-mill life of a farmer; he trudges along in the same track from one decade to another, bringing into requisition a single set of mental energies, while all the rest remain dormant to a certain extent; and grow wild like an undisturbed field. The fact is, no man was ever made to be a loafer, not even as to a part of his faculties, corporeal, mental or moral. There is enough to do in these ages of the world, to keep every son and daughter of Adam at work all the time of his waking existence, not at mind work alone or body work alone, but mind and body both at work all the time of working hours. It is because of the partial loafism of the multitude that so many of the truly good among us perish before their time. Often is it that when men find a competent and willing worker they impose on him the duties of a dozen men, and the inevitable result is that in a few years he is literally worked to death.

The true lesson is, let the multitude do more and the few less, then will not these few die before their time, and then too, will not the multitude overcrowd our Innate asylums as they now do, no less than 561 being in a single hospital in Massachusetts.—*Hall's Journal of Health*.

THE TEETH.—All mineral as well as vegetable acids act promptly on the teeth. In 48 hours acetic, citric and malic acids will corrode the enamel so that you may scrape a great portion of it away with the finger nail. Acid tartrate of lime, having a greater affinity for the lime of the tooth than for its own base, will rapidly destroy the enamel. Grapes, in 48 hours, will render the enamel of a chalky consistence. Vegetable substances are inert till fermentation takes place and acetic acid is formed. Sugar has no deleterious effect, only in the state of acetous fermentation. Animal substances exert no injurious effect until putrefaction is far advanced.—*Scientific American*.





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## The Week.

The probable result of the assassin's shot, which has brought into imminent peril the life of the President of the United States, has been the uppermost topic in people's minds for another week. From day to day the tidings has come that there is a fair chance for recovery, and anxiety is changing to assurance of his ultimate return to the high trust and duties entrusted to him by the people. This assurance makes glad the hearts of all good citizens, and there is already on foot a movement among the Governors of the different States to call for a day of rejoicing and thanksgiving as soon as the life of the President is pronounced out of danger. The Governor of California has acceded to the proposition, and there is now every prospect that such a day will be generally and gladly observed by the people. At such a time there will be occasion to rejoice not only in the continued life of a good man, but that the people have been awakened from the evil spell which seemed to be pervading the politics of the country. There is every reason to believe that the vale of the shadow through which the nation has walked during the last two weeks will arrest many an evil and selfish thought and impart to all a purer, truer idea of the duties and privileges of citizens of so great a country.

The harvest proceeds apace. The fields have been free from great conflagrations during the last few days, and fatal explosions which have been frequent at this season have thus far, this year, been conspicuous by their absence. The city is resuming its united activity in trade, and masses of the earlier fruits are keeping multitudes busy from the orchard to the can-  
nery. And soon come the grapes, glorious in quality and exceptional in amount, for the season's promise is grand, and money will be plenty in the vine districts.

THE San Diego Union says the assessment roll of that county will double in amount that of last year.

## California.

California is a peculiar land in a peculiar clime. California is a problem yet unsolved. Some of the factors seem to be discerned; others are still out of sight. Intellectually eccentric, socially unripe, morally undefined, our future, as a people, is a puzzle to philosophers. Our plant life is a treasure-house of novelties to the hotanist; our zoology from the fish in the wave, the mollusk on the shore, the insects that devastate orchard and field, defoliate the foot-hill oaks or bore the Sierra pine, is *terra incognita* to the naturalist. Our meteorology defies the prophet at whose call fifty millions Americans beyond the mountains, fly the coming storms. Our industry is a youth whose present growth foreshadows an Hercules in strength; a Proteus in range of accomplishment. With her sky unknown, her soil almost untried, her manufactures just born and her people determined and yet bewildered by the novelty of the conditions and materials which surround them, California is indeed a mystery to herself and to the world at large.

Such being, in very outline, our place among the things which are, it is little wonder that California is often misunderstood and sometimes misrepresented. Even those who know California best know her but in part; no single man knows California wholly, even in her present state. Passing the California chapters in the sciences which have hardly their introductory paragraphs written, there is no one who knows wholly the single branch of our industry known as California agriculture—a branch with a thousand twigs and unnumbered leaves. This fact should be borne in mind by the thousands abroad who are prone to judge of California by the reports of individual successes or failures which come to their eyes or ears. In believing either the good or evil things which are said of our State, it should be understood that good might be evil and evil good, if either were moved up or down a valley, from hillside to plain or from coast to mountain.

Occasionally there is a man with keen observation and wide grasp of deduction who, even during a short acquaintance with our State, appreciates our conditions and sets them forth in language fitting their character. Such a one is Bishop E. O. Haven, who, writing to an Eastern journal (the *Christian Advocate*), thus freely chats of California:

California is the most mysterious of all the States I have yet seen; and I have traveled, more or less, in all but three. No brief description can give any adequate view of it. The encyclopedic pictures are, as usual, monotonous and cadaverous, while the sketches by travelers often fall into the error of representing the whole as like some little spot that happened for a time to fill the eye. California is full of contradictions. To those who wish to study it before seeing it we would recommend two precepts, namely: 1. Believe all that you read and hear about it. 2. Believe nothing that you read and hear about it; for all is probably true of some place, and nothing is true of a majority of the places. It is 700 miles long, north and south, and nearly 200 east and west—an immense nation of itself. It is a land of mountains, some perpetually snow-clad, and of valleys and plains, in most of which snow is never seen—except at a distance—a land, some of which is as barren as Sahara, and which yet could furnish several Egypts fully as fertile as the original valley of the Nile; a land of corn and honey and wine; of oranges, lemons, plums, apricots, peaches, almonds, and English walnuts and apples; of potatoes and beets, and squashes and melons; of treeless and grassless prairies and dense jungles, and shrubs and trees that began to grow before the times of Noah, and seem never to have found a stopping-place; a land of coal and silver and gold; of grizzly bears, coyotes and gophers, and of men and women from all parts of America and Europe, and not a small sprinkling from Asia. Take it for all in all, it seems about impossible to write what is not true about it. Still we will not try, but, as usual, endeavor to keep within the limits of fact.

One can see at a glance that California has mountain ranges extending crookedly north and south, with valleys and plains of various width between them. These are crossed by numerous passes and river courses east and west. Over all blow the west winds from the ocean, dropping their showers on the valleys and plains, and their snows on the mountains in the winter, and their water on the mountains in the summer.

Sometimes in your travels you will find yourselves sweeping over immense plains like those of Illinois and Texas, only not like the former in being actually boundless to view, nor like the latter in the border of forest trees, but terminating in mountains on one side clad in snow. These plains sometimes will be covered with fenceless wheatfields, the most prolific anywhere to be seen; in others raised over by cattle in others arid and useless; in others, broken into numberless orchards of every kind, and small farms; in others, covered with patches of forest; in others, narrowed down into valleys; in others, broken into hills and vales. The kind of agriculture suited to one place would be utterly useless in another.

Thus, California, with the usual variety of soil, becomes just about the most mixed up and infinitely various country of its size probably anywhere on the round earth. It is most of all like ancient Palestine, the Holy Land, only it is more than 50 times as large! Think of that—material enough to make 50 Palestines, and yet the one Palestine is giving character to the world! California ought to be able by and by to govern at least 50 continents.

We have indulged in a long quotation. We could not make it less, nor would we either, for these are facts which should be prominently set before the world. And if it be added that what Bishop Haven has written with chief reference to our agricultural conditions could be as well said, though in different words, of the varied character and development of all our resources and all our industries, the one who seeks to know California from a perusal of recorded facts or from a flying visit, may appreciate the problem which he attacks. California is great and is destined to be greater far. The tendencies now exerting their full force upon our people are of a most salutary kind. There has been a wonderful sweeping away of fallacies during the last few months and years. The real is putting to flight the unreal at every point. The shoutings of the demagogues have sunk to hoarse whispers and a busy people no longer listen. The fever for speculation has run its course, and the large on paper has been broken up into a thousand littles, in fact,

The clamor in the stock market has well nigh died away, and one hears not of hypothetical values, but of honest ore and of billion bars. The din of the auctioneer has given way to the measured pounding of the quartz mill.

In agriculture, too, there has been a no less important transformation. The eloquent language of the immigration orator concerning what may be done, has yielded to more telling words of what has been and is now being accomplished. The extension of orchards and vineyards, the tread of dairy herds in unaccustomed places, the smoke of the fruit-driers and the clatter of the canneries where not long ago the fruit fell to the ground, the lading of cars with fruits and vegetables for Eastern markets—all these and many more indications of actual progress, are discernible on every hand. Thousands are inquiring for farming lauds and are establishing humble homes, which will grow into abodes of prosperity and comfort. It is apparent to all that California has entered upon an era of quiet and sturdy advancement, which carries its own surety of endurance.

## ENTOMOLOGICAL.

## The Army Worm.

Caterpillars akin to the pest known as the "army worm" at the East have appeared in different parts of the State during the last few weeks, and have wrought not a little injury to vineyards, fodder fields and gardens. We have heard of them in the upper Sacramento valley, also in the grape district of Yolo county, in the Russian river country and in other places. They are well-fed caterpillars an inch or an inch and one-quarter long, with smooth velvety skin, and with bright stripes of brownish yellow or bright yellow extending lengthwise of the body. They vary considerably in color of head and body. They may be recognized by the marks given and by their appearance in multitude and steady concerted movement in a given direction, whence comes the name "army worm."

Prof. Dwinelle, of the College of Agriculture, has prepared for the *Healdsburg Flag* a resume of the ways found most successful in dealing with the army worm, from which we shall quote for the benefit of our readers who may find their fields or gardens on the point of invasion. The caterpillars cannot cross a dry ditch, if its sides are steep and composed of finely pulverized earth. To make this quickly, run a heavy plow along the line to be protected. At the end of the furrow, turn about and return on the same line, putting the plow down as deep as possible, and throwing the earth on the opposite side from that first loosened. Next hitch the team to a heavy log that will fill the furrow made, and drag it back and forth once or twice, to pulverize and smooth the sides. When a suitable log is not at hand, a drag of brush may be used in its place. Take another turn about with the plow, and finish off with the log, or, if need be, with a shovel or hoe, leaving the slope as steep and loose as possible on both sides. The object is to keep the caterpillars from passing on, or returning when once in the ditch. There they perish and dry up, if exposed to the sun's rays in the ditch during the heat of the day. If from their great numbers, or other cause, there is danger that they will cross the ditch, those in it should be destroyed at intervals by dragging a log or brush through it. Some prefer to have a hole a foot or two deep and several inches across at the bottom of the ditch, one in every three or four rods. Such can be easily made with a post-hole digger or auger. Into these the caterpillars fall in great numbers and can be crushed with a rammer, or buried, and a new set of holes made. Straw is sometimes laid in the ditch on the caterpillars and burned, but this would be dangerous in most parts of our State, in the dry season. To make sure of stopping the army worm, it is well to have a second dry ditch at a rod or so beyond the first, and parallel to it.

Where water in sufficient quantity is available, it may be used as a barrier, leading it in a ditch across the line of march. In that case the sides of the ditch should be as perpendicular as possible, and there should be considerable current to carry the caterpillars along. At intervals, a screen of coarse sacking is stretched across to catch them. Here they collect in great quantities, and may be scooped out and fed to hogs or poultry, or otherwise destroyed. A ditch of standing water, may be made fatal to them, by pouring a little petroleum, just enough to form a thin film on the surface. Be careful about using this last too near the roots of trees or vines.

A heavy field roller may be used with good effect in fighting them on smooth ground, so too can a flock of sheep, driven back and forth in a compact body.

Chickens and turkeys will destroy a great many army worms. The latter were used to protect the sugar-beet fields near Sacramento some years ago. They are said to tire of the diet, however, particularly if there are grasshoppers in the neighborhood. Probably ducks will stick to the work better. Crows, blackbirds, and the like, should be welcomed as man's best friends in the fight.

In Yolo county, this army worm travels for a few hours at a time twice a day. Beginning at 7 A. M., it moves until about 9 o'clock, when it becomes too warm for its comfort. It then rests until 4:30 P. M., when it marches until it becomes cool, about dusk.

## The Olive in Italy.—No. 5.

[Translated for the *RURAL PRESS* from *L'Italia Agricola*, by DA. J. I. BLAIRDALE.]

## Oil Making Continued.

Crushed kernels (*Sansini*).—After the second pressing, the cake is commonly sold as a combustible, especially for heating ovens and such like.

While this may be said concerning the pressed matter from hydraulic machines, which by their great pressure leave little or no oil in the stuff, it is not always to be recommended to so dispose of it when it comes from any ordinary press, since more oil may be gotten out of it by putting it a third time through the mill, and treating it with actually boiling water, and giving it another pressing. From this third pressing, sufficient is always obtained to pay expenses, labor, and wear of utensils.

Washing (*Lavatura*).—The residue, after hydraulic pressure, is not worth submitting to a third pressing. Industry, however, has found means to extract out of it a very useful matter, even some oil, by means of washing in the cold, and by the so-called *frullino*, and which the Ligurians called *folatore*. Into a cistern of water, just after the crushing, it is cast, and there left to ferment for one or two weeks, covered with water. The stuff, then, is ground once more, and steeped in fresh water. When the grinding is done, the resulting cake is put into the tank (*frullino* or *folatore*), where a continuous jet of water falls upon it, whilst a small iron rake, agitated by the water, mixed it all up again to such an extent that the little pellicles attached to the particles getting loose, rise to the surface, leaving the crushed kernel-stuff below. From time to time, as the pellicles rise to the surface, a man collects them and puts them in a kettle to boil, after which they are collected and pressed. The refuse of the oil press thus created is in request for certain agricultural industries, and for some time it has been in great demand in England.

Care of the Oil During Clearing.—On the following day, after placing in the clearing room, the oil first drawn from the little vat (*tinello*), it is desirable to have ready new jars, well glazed on the inside to receive oil which has already become clear in the other vessels. This operation has to be conducted with much care, not to allow any of the thicker oil lying below, to get mixed with the clear.

When the oil has been collected in the new vessels, it should remain two days longer in the clarifying room, after which it may be sent to the so-called *coppaio*, *deposito*, *ovaiata*—store houses in reality.

Places where oil is kept are distinguished with the above names in parts of Italy. All the requisite conditions of a first-class cellar are demanded by the *coppaio*, that the oil may not suffer from one or other of the many consequences arising out of variations of temperature.

The very best vessels are those of terra cotta, well glazed on the inside, in the shape almost of a melon, called *ars (giarri)*. Other kinds are mentioned, of marble, ardesia, or tin; but of whatever they may be made, they need to be securely closed.

About the end of June, before the very hot weather sets in, the oil ought to be racked; and if it is intended to be kept for a year or more the following will have to be observed:

a. To keep the oil, properly so called, that is to say, that which came from the first pressing of the olives, in separate receptacles, well closed.

b. To deposit in other receptacles that derived from the pressings.

c. To keep separate that which was obtained from the bottom deposits, that is, from the *coppaio* and the clearing.

d. In fine, to keep the oil collected in the dark chamber (*inferno*) in a place apart; because almost always it emits disgusting exhalations which may injure the fine oil.

In closing this short essay, it does not appear foreign to the purpose to give some data relative to the products ordinarily obtained by the simple oil-mill, in comparison with that worked by steam.

From an experiment instituted in Tuscany in 1875, the following results were obtained: The olives to be crushed were about 11.70 Hectolitres. One-half was submitted to the action of the simple olive-mill, the other to the steam one.

## 1. With the simple mill:

Time employed.....	Hours.....6.40
Work { Men.....	.....8.
Horses.....	.....1.

## PRODUCTS.

	Kilo.
Oil from the olive.....	33.30
Oil from the seeds.....	18.40
Oil from the spent seed.....	3.60
Residual seed exhausted.....	161.80

## 2. With the steam oil-mill:

Time employed.....	Hours.....1.12
Work { Men at the mill.....	.....5.
At the motive power.....	.....2.

## PRODUCTS.

	Kilo.
Oil of the oliveulp.....	55.80
Oil from the crushed seed.....	11.60
Oil from the spent seed ( <i>Sansini</i> ).....	5.00
Quantity of spent residual matter.....	143.50

The above figures speak for themselves, and save the trouble of reasoning about the relative advantages of the two plans. With this we will conclude what we have to say, suggesting that were the manufacture of oil in Italy a little less neglected—and the most perfect mechanism brought into use, the production of oil, although by no means small with the primitive implements still used, could not only be increased



very largely, but much improved in quality and recover its character in foreign markets, which appears to have suddenly been somewhat shaken by the discovery of its adulteration with cotton-seed oil.

We add some statistical data upon the production of oil in the different regions of Italy.

	Etol.
Neapolitan.....	656,000
Sicily.....	256,000
Liguria.....	283,500
Sardinia.....	4,000
Tuscany.....	160,000
Roman Provinces.....	130,000
Venice.....	7,840
Emilia (Modena).....	5,131
Lombardia.....	2,996

Total Etol.....1,555,437

#### Progress of Olive Cultivation in Italy.

Among the products necessary to Italy, whether for home consumption or for export, wine and olive oil stand in the front rank. The average consumption per head of the Italian people is of wine 120 litres per year, and only 5 litres of oil in the valley of the Po, and 10 litres in southern Italy, where it takes the place of butter. But the value of olive oil is commonly five times that of wine, thence arises the interest in the production of it. In 1879 Italy exported wine to the value of 45,000,000 lire; of oil the export did not reach 100,000. The wine of Italy is threatened by many concurrent circumstances, not alone by the agricultural progress of Hungary, Spain and Greece, but as years pass on even by the produce of California, the interior of the Argentine Republics, and Australia, while the best olive oil not only for food but also for machinery fears no such concurrence. For the zones suited to its cultivation are far more restricted in area; and it is a more difficult matter to make good oil than good wine.

In Italy the vine can be cultivated only from 700 meters (a metre 40 in) to 1,500 above the level of the sea, (in the Sicilian Alps) while the olive zone ranges no higher than 400 to 600 meters, and requires a soil in which there is no stagnant water.

The vegetable products of the extreme geographical zone are more exquisite, therefore more remote from the Equator.

On this account the olive oil of southern and even northern Italy is excellent; and Italy is the land of the best wine and the best olive oil, notwithstanding that both the vine and the olive tree came from climates warmer than the central region.

Generally speaking, the olive is considered to have come from Syria according to the Noachian tradition of the olive branch brought back to the ark by the dove. But now in opposition to the dispersion of the Gentiles from the plain of Senuaar and from the tower of Nimrod, there has set in a reaction in favor of Africa, which in civilization preceded Asia by at least 2,000 years, and which always had relations with Spain and Italy more than with Asia. In Kabalia and in Kollar dependencies of the Sciva of Abyssinia, may be seen forests of indigenous trees, and to anoint the human body is both general and very ancient in Africa.

On the banks of the lakes at the foot of the Alps, in old Roman times, was planted the tree of Minerva, probably by those Greeks whom Cæsar sent to the Lake of Como. The olive trees on the bank of Lario were celebrated by Claudian, about the close of the fourth century, in the hymn, "De Bello Gothico," in this verse: *Nembrosa qua vestit litus oliva Larius*. Christianity, come from the East with sacred rites in which olive oil and the olive branch were used, recommended everywhere the cultivation of the olive, to which, with special affection, the Benedictine Fathers bore testimony. Rotari, in an edict published in 643 A. D., bestowed high praise on the olive trees, some of which he probably had at Sermione.

M. Constance, the most recent and the greatest illustrator of the olive in France, in 1877 wrote to M. Camillo Bianchedi: "Through my studies of the olive tree, I was able to admire Italy, and returned with a conviction that that tree will become, most certainly, one of the elements of her future prosperity." And Bianchedi, encouraged by him to compose a monograph on oil-making, which was published at Brescia in 1877, this year (1880) published a little work, "The Olive Tree on the Parmesan Hills," to show how, in that province, 1,180 acres of hill land might be reduced into olive groves.

The dying out of the mulberry trees and the vines and the natural rotation in both southern and northern Italy go on bringing the olive tree back, which, in spite of a thousand reproductions, by cuttings has not degenerated. Nevertheless, it might be opportune to prevent decadence by grafting it upon wild stock raised from seed; plants which the southern Italians should bring up and place in commerce. At present on the shores of Benaco plantations are being made by putting out suckers and layers, because the love of the olive tree has been awakened once more, and is now re-peopleing even the poor lands of Brescia. The schools for oil-making which the State has opened at Bari and in Tuscany conduce to the love of this most noble tree.—G. Rosa.

LICENSE COLLECTOR SINTON has forwarded to Sacramento \$2,400.90, to be placed to the credit of the State Mining Bureau, being collections for that purpose during the quarter ending June 30th.

ANDERSON SPRINGS PICNIC, on the Fourth of July, was a pleasant affair. The dancing party, we learn, was a lively and "protracted" one.

#### A California Beet Sugar Factory.

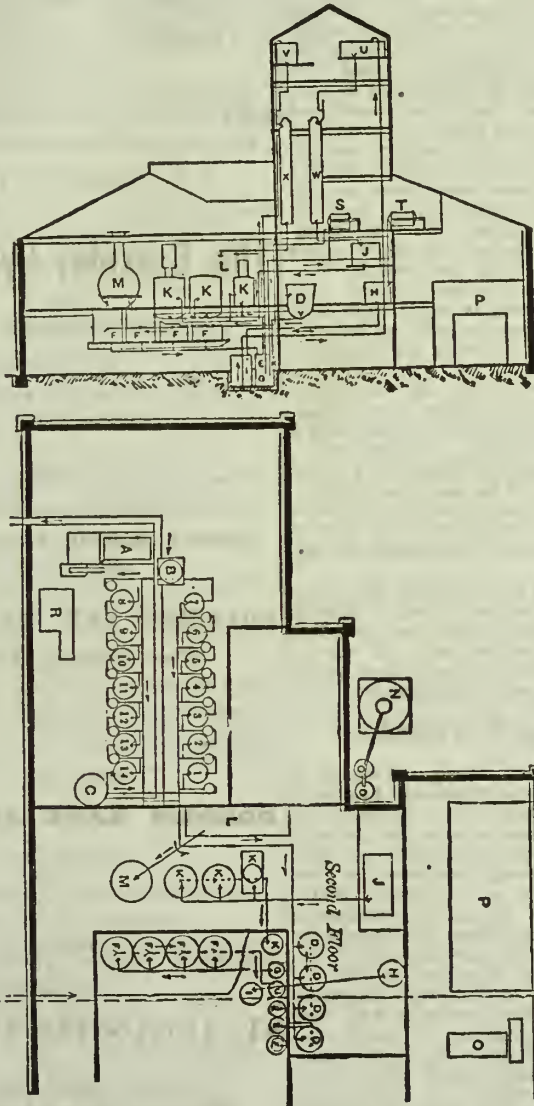
The successful manufacture of beet sugar in California has attracted much attention from those who are promoting experiments in beet sugar making at the East. The factory at Alvarado, Alameda county, is the establishment which is winning the State a reputation in this respect.

We find in *The Sugar Beet*, a Philadelphia quarterly devoted to the beet sugar industry, an engraving showing a section of the elevation of the Alvarado factory, and the ground plan of the same. The engraving is accompanied by a description of the progress of the juice from the beet to the sugar box. As this is of interest as showing one of the newer industries of our State, and as it will also give the general reader some idea of the process of beet sugar making, and the means employed, we shall reproduce from *The Sugar Beet*, the engraving and leading points in the description.

Some years ago the Alvarado factory was started under bad management and failed. Later, it was completely reorganized, and in 1879 was owned by the Standard Sugar Manufacturing Company, from which time excellent sugar has been made. This factory is situated on the Alameda Creek at Alvarado, and has

provided they lay immediately behind the first cylinder to be used to diffuse the beets.

Now, desiring to make the first diffusion in No. 1, we will fill Nos. 12, 13 and 14, which communicate with each other, with water raised to 60° or 65° C., as it passes through the heaters attached to these cylinders or tanks. Then, a connection is made with No. 1 filled with sliced beets, the water passes from tank 14 through heater No. 1 at a temperature from 60° to 65° C., into tank No. 1. The pressure of the water supply forces the water from No. 13 into No. 14, which we have just emptied, and fills No. 12 with cold water; thus the hot water is kept in advance of the cold, and is forced around the battery in the circuit as it is required. The water may be heated in the first instance in the heater of the tank which is to diffuse the beets, but this would take too long; so a supply is heated at first, and passed around as we have indicated above. When tank No. 1 is full of water of the required temperature, close the top cover and open air valve at top, and allow all the air to escape, then let it remain 15 minutes with full pressure of water. Now connect tank No. 2 (this has previously been filled with sliced beets) with No. 1, and pass the juice into the former, keeping the temperature from 60° to 65° C., as it passes through heater No. 2 in its course (tank No. 1 is again filled through pressure with the warm water from No. 14, and 14 from 13, and so on). When tank No. 2 is full of juice,



SECTION OF ELEVATION AND GROUND PLAN OF ALVARADO BEET SUGARIE

connection with a siding about a half mile in length of the South Pacific Railroad. The buildings cover an acre of ground, but about thirty acres are used for various purposes. The main building is 80x250 feet, several stories in height, and surmounted by a tower seventy-five feet high.

The beets that arrive in the factory are thrown into the washer, A, which is 8½ ft. long, 4 ft. diameter; capacity, 100 tons in 24 hours. The dirty water and all the debris from the beets is discharged into a sewer, into which all the condensed water of the factory is collected, and is carried by a flume on to the adjoining lands belonging to the company (see plan). From the washer the beets are carried upon a moving apron 27 ft. long, to the floor above, when they are thrown into the slicer, B, that makes 160 revolutions per minute. It has eight plates (16 blades or knives). The knives are changed only once in 24 hours, as a general rule. No stones are ever found in the beets. It will cut from 100 to 150 tons a day. The resulting cosettes pass into small two-wheeled wagons that hold about 300 lbs., and run on the floor; these may be placed in proximity to one of the cylinders of the diffusion battery. Fourteen of the latter are in the series, and are in two lines of seven each. Their dimensions are 4x6 ft., and have between them a heater. The battery is made to work from right to left in the order in which the cylinders are numbered. The water for supplying the battery has a fall of 60 ft. Before commencing, it is necessary to have a supply of heated water. For this purpose any three cylinders and their heaters may be taken,

close top and open air valve as in No. 1, then allow it to stand under full pressure of water 15 minutes; then open the valve and pass the juice by pressure through heater No. 3 to tank No. 3, with temperature as before from 60° to 65°; now close the tank and proceed as in case of Nos. 1 and 2. After the juice has stood in No. 3 15 minutes, if it has a sufficient degree of strength—say, 10° to 12°, about 300 gallons are drawn off, or a little more than enough to fill one tank with water; when the beets are in, this juice is sent to the defecating tanks. Should the juice not yet be of sufficient strength, it should be passed into No. 4, and stand for 15 minutes longer. After having drawn the quantity of juice indicated from No. 3, connect tank No. 4 with No. 3, keeping the juice at the proper temperature as it passes through the heaters, Nos. 2, 3 and 4; now allow No. 1 to gradually cool as the cold water passes through it. After No. 4 has stood 15 minutes, draw off it 300 gallons, as in case No. 3; then connect tanks Nos. 4 and 5, keeping the water at the proper temperature, as it passes through heaters Nos. 3, 4 and 5. Continue in this manner to draw off the juice every 15 minutes after filling, and open the connection with the succeeding tank, the pressure of the water advancing the strongest juice from tank to tank as they are opened, and so continue until all the tanks are full; then as fresh ranks are needed, shut the water supply from No. 1, and put No. 2 in communication with No. 14. The tank No. 1 is then emptied, which operation requires but five minutes; it is then cleaned, and five minutes are required to fill it with fresh cosettes. Three cylinders are

out of the series at a time. The capacity of the cylinders of the battery is 2,400 lbs., and 100 tons may be diffused in 24 hours.

C is a tank that holds the waste water from the machines throughout the factory. When this overflows, it carries with it the refuse pulp which unfortunately, as we have said, has not as yet had any application, but it was thought that in 1881 it would be purchased by the farmers. From the battery the juice passes into the first defecation tanks, D (have for dimensions 5' 6" in diameter, and 4' 6" in height), and marks 6° Baume. There are four of these, and 2% of lime is added. The carbonic acid from the lime kiln (N) that has previously passed through the washers, O, is brought into contact with the defecated juice for about 18 to 20 minutes; the total is heated by a steam jacket. The juice, on leaving D, falls into the montjus (capacity, 300 gallons), E, and is forced through to the filter presses, S, at 6 lbs. pressure to square inch (see section). There are five of these, which are of a German design and have 18 compartments. From there the juice runs into the second defecation tanks, F, four in number; these are of the same size as those of first defecation, heated by a steam coil; a small quantity of lime is then added, after which the juice flows into the montjus (same dimensions as E), G, and is forced through it into the second filter presses (same as F), T. The juice then collects into the tanks (capacity, 400 gallons), H, and is drawn into a montjus, I (there are two of these, each having a capacity of 400 gallons); the juice is then forced into the receiving tank, U, which is on the top of the tower. The object of having this at such a height is to obtain an easy flow of juice through the (6) bone filters, W; these are 20 ft. high and 30 inches diameter, hold 98 cubic feet of juice; the bone-black is returned every 12 hours. The juice, after leaving these, flows into a tank, J; there are two of these, having each a capacity of 1,122 gallons; from these into the double effect, K; the juice marks 4° to 5° B. upon entering, and 25° when leaving. The vacuum pump that communicates with this double effect is attached to a walking-beam engine of 50 horse power (this engine also drives several other pumps; of these we may mention a Cameron pump for the vacuum pan). The juice then is run into a montjus of 300 gallons capacity; then into tank, V, capacity 600 gallons, placed at the top of tower; from this latter, it passes into six thick juice bone filters (X) of the same design as the first—the juice marks 25° upon entering, and 23° to 24° upon leaving; then into the tank L (two of these of 1,000 galls. capacity each); then into the vacuum pan M. The working of the bone-black is, in some respects, rather original; as the superintendent has invented a cylindrical washing-machine that can wash 18 to 20 tons in 24 hours, rejecting a German apparatus that had the same functions. This machine is said to work well, but before passing into it, the bone-black is fermented on the ground floor in vats; when the washing is completed, it is subsequently raised to the bone-kiln P—which is capable of burning 10 tons in 24 hours, requiring five men—by a moving apron 20 ft. long; after being thoroughly burned it is hoisted to the top of the tower and allowed to fall by a chute into the filters. Thirty barrels of sugar may be boiled at a strike in the vacuum pan; and after the strike is complete, the granulated mass is taken into the tanks by elevator to the fourth floor. After the proper crystallization is complete, it is thrown into the mixer and from there into the centrifugals (these have a velocity of 1,000 revolutions per minute, and are 30 inches in diameter and 13 inches in height); the sugar, when taken from these, is carried up to the second floor to the packing-room.

The above gives our readers a general idea of the working of the juices. Upon the grounds are the buildings, blacksmith-shops, store-houses, etc., which are most useful. The water for the factory is supplied from two artesian wells that have the respective depths of 212 and 270 ft. The boilers of the establishment are placed in a special building known as the boiler-house, which consumes about 20 tons of coal a day, furnishing sufficient steam to run a 30-horse power slide-valve horizontal engine, and 40-horse power beam engine with eight pumps attached, and 20-horse power Cameron vacuum pump. There are six boilers altogether; two of these are 15 ft. long, while four are 14 ft. in length. Of the pumps throughout the establishment, there are no less than 23.

NEW ZEALAND SHEEP-KINGS.—The *Colonist* and *India* remarks that the following return of sheep held by "squatters"—taken from the *Government Gazette* for Canterbury and Otago, New Zealand—gives an idea of the vast flocks owned by single individuals in the Australasian colonies: New Zealand and Australian Land Co., 300,000 sheep; Mr. Robert Campbell, 386,000 sheep; Mr. George Henry Moore, 90,000 sheep; Messrs. Dalgetty and Co., 208,000 sheep; Messrs. Clifford and Weld, 80,000 sheep; Sir Dillon Bell, 82,000 sheep; Hon. William Robinson, 68,000 sheep; Sir Cracroft Wilson, 48,000 sheep; Mr. Kitchen, 80,000 sheep; Mr. Aljan M'Lean, 500,000 sheep.

WHAT have been known to the residents of Como, Nev., for some years as orickets have made their appearance in the Como mountains again. They are eating the sagebrush and greasewood. Most of them are a little over an inch in length, and about one-third of an inch thick. Of this size, there are two colors—a blueish-gray and brown.



## Cherry Growing.

(CONTINUED FROM PAGE 35.)

or, in other words, a large-feeding surface and a small one to be fed. Have no more on the top of your tree than the roots can support in a good, healthy condition, and then you will pick a large quantity of first-class fruit from a small area of top. Short cutting not only tends to produce large fruit, but increases the fruit surface by bringing out dormant buds on the large limbs, which is very important. It is claimed that the cherry is a short-lived tree. If that is true, we are helping to kill it by not pruning. What is the object of pruning any other tree? You say, to make it bear large fruit and to keep it from going wild. If that is so, why not keep the cherry from going wild? Why not prune it so that it will be able to bear large fruit? Why the partiality?

## Oakland Harbor Improvements.

The greatest engineering work now being done on this coast by the Government is the improvement of Oakland harbor. We gave a short time since a report of progress on the work. The method of placing the rock, which we then described, is still being carried on. The training walls are fast assuming respectable proportions, and it will not now be very long before the whole tide flow of the harbor will be confined between the walls. The inner end of the north wall has been faced up, and both barges are now being daily unloaded on the north wall. The rock seems exceptionally good in character, though, for the price at which the contract is taken, it is difficult to see where much money is to be made. Dredging is going on constantly, and, though the dredger seems to be in a chronic state of break-down, it does good work, when at work. At present the material is carried out on barges and dumped in the bay. We hear, however, that arrangements are being made to deposit some of it on the adjacent shore. For this the contractor receives a higher price. The point where it is to be deposited will be on the C. P. R. R. Co.'s land, back of the freight slips.

The Government engineers have now in prospect another part of the work on this harbor improvement, which is an important one, and bids have been invited from contractors to do the work. The work to be done consists in the excavation of the flats of the tidal basin lying east of Fifteenth avenue, in Brooklyn, between low water line and the line of the marsh which forms the shore line, and in putting the excavated material ashore.

Here now is a chance for some enterprising persons. They can have 75 days, from the date of award of contract, to build a machine which will dredge and deliver the material ashore. Inventors of dredging appliances can here have an opportunity of proving the superiority of their devices. As most of the land near by belongs to the Oakland Water Front company, it is probable they will have no objection to having the material put ashore where it will improve their land. This remains to be seen, however.

The part excavated is to be taken out at least to one ft. below low water, and not deeper than 3 ft. below low water. It is supposed that the contractor can make arrangements for deposit with parties who wish to have land raised. The flats are shown by survey to extend to a height of 4 or 5 ft. above low water, sloping gently to the basin. Borings made show the material for the first 4 or 5 ft. in depth to be soft mud, which extends in places to much greater depth. In other places, the mud below is firmer, and has sand mixed with it. Bidders may choose their own place for excavation outside of the line of marsh, subject to approval and under the conditions that the area excavated shall be reasonably compact in shape and outline, having a width of not less than 500 ft., and provided it shall be made to connect with the existing low-water basin by a channel 200 ft. wide, having about 3 ft. in depth at low water.

This work, it is supposed, will be followed by more of the same character, as appropriations become available. The amount to be applied under this contract will be what remains of funds now available after existing contracts shall be fulfilled. It will probably not be less than \$80,000, and may be as much as \$100,000. No particular method of excavation is required in the specifications, and the intention is to give the contractor the fullest latitude in his operations, if this shall result in cheapening the cost of the work. The measurement of material will be in place as it now lies.

The deposit on shore will be subject to such regulation in the way of berms or levees as shall, in the judgment of the engineers, be sufficient to prevent the material being returned to the basin. The place of deposit must, however, be approved. The points of marsh land that make out from the two shores below Sixteenth avenue are not admissible as places of deposit. The rate of excavation required is not less than 30,000 cubic yards per month. It may be as much in excess as the contractor may choose to excavate.

Bonds to the extent of \$30,000 will be required at the signing of the contract from two sureties, each qualifying in this amount.

The work will be supervised by an inspector, whose decision on any controverted points, when confirmed by the engineers, shall be final, and binding on all parties. Payments will be made monthly by checks on Assistant Treasurer

United States to the amount of 90% of the work done, 10% being retained until the completion and acceptance of the work.

When this work is completed it will leave a large tidal basin at the upper end of the harbor, where many vessels can lie securely in the winter months. It is not safe for them to lie in the open bay, and Mission bay, once a favorite place, is now shut off by the bridge, the piling and the filling in. Coasters have, therefore, to go to Antioch or Oakland. The new basin will doubtless be a very useful one.—*Scientific Press.*

## Stored Electricity.

An exceedingly long step from the theoretical to the practical was made when that "box of electricity" was sent from France to England. Many years have the scientific men of all countries been theorizing on the application of electricity to the purposes of every day life, aside from the important ones of telegraphing, lighting, etc. Above all things was it wanted for a motor, and now it seems, suddenly, this application is made. The box was sent to Glasgow, to Sir Wm. Thomson, having been stated to have been charged at Paris with a store of active electric energy to the amount of 1,000,000 foot-lbs. It consisted of four of Faure's batteries charged with electricity from an ordinary Grove's battery. The four batteries were enclosed in a wooden box, about a cubic foot in measurement, and weighed about 75 lbs. Sir Wm. Thomson now makes the important announcement that all that has been stated has been more than borne out by experiment. No appreciable loss could be ascertained to have occurred during the delay from transit and until the stored energy was applied to working purposes in Glasgow. One battery was detached from the other and carried to another place to supply the force for an electric cautery; and a single battery, after having been left alone for ten days, yielded to Sir Wm. Thomson 260,000 foot lbs., being some 10,000 above the original estimate. The first result Sir Wm. Thomson looks for is the use of Faure's batteries in private houses, as reservoirs of electricity for domestic purposes, such as lighting, heating, the driving of sewing machines, and many other objects.

We obtain electricity from the atmosphere by simple mechanical means, the principal expenditure being for power. Now, with a means of storing electricity, we store power; for it can be generated by wind, by running streams, etc., and saved for use when required. We thus chain up powers hitherto free from more than a passing restraint. The cost of storage does not seem to be material in this application.

Of the hundreds of ways in which this power can be utilized, it is useless to speak. Already a tricycle weighing 400 lbs., has been propelled along the streets for an hour and a half continuously. This one practical experiment points out the way to thousands of applications.

## Electricity and Wool Spinning.

In spinning dry wool, mohair, and alpaca, of a high class, the process is seriously hampered by the electricity developed in the fibers by their friction on one another or on the parts of the machine. The repellent action of each electrified filament on its neighbors causes the yarn to get into a blowy or "stickleback" state, which renders it very difficult to manipulate, and is productive of numerous other drawbacks of a serious nature. The new method of electrifying the wool, described by Mr. E. Bright to the Society of Telegraph Engineers and Electricians at a recent meeting, is at once a scientific and economical one. It simply consists in putting the bobbins for a short time into an exhausted chamber where the rarified air, which is well known to be a conductor of electricity, permeates all the pores of the yarn and discharges it. The chamber is of iron, put in metallic connection with the earth, and the bobbins are ranged on a small truck running on rails into its interior. When the air-tight door is closed upon the supply of bobbins, a valve connecting the chamber with the exhaust bulb and air pump is opened and the pump operated. A pressure gauge shows how far the exhaustion has been carried. From 10 to 30 minutes are required to thoroughly discharge each bobbin, and this is equivalent to several months' exposure to the damp air of a cellar. Carding can also be facilitated by a modification of Mr. Bright's process, which has already been successfully introduced with a notable saving of working expenses, labor and capital.

**IMPORTANT DISCOVERY.**—It is said that cotton seed oil forms a most satisfactory substitute for lard. If so, it will effect quite an important revolution, not only in household economy but in the profits of cotton culture as well. Col. O. O. Nelson, of Huntsville, Ala., says he has repeatedly used the oil at his house, and finds it equal to the best article of lard. A hotel-keeper, at Memphis, publishes a statement to the same effect. It has been tried by several citizens of Tusculum, Ala., who say they can discover no difference between the oil and the lard. The refined oil is only about one-half the cost of lard. This vegetable substitute for lard cannot meet with any similar objection to that which is encountered by the oleomargarine manufacturer in his substitute for butter. Should this alleged discovery prove a reality, it will effect a most important revolution in two of the leading industries of the country.

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Next School Year will commence July 11, 1881.

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Washington Corners, Alameda County, Cal.

## THE FALL TERM WILL BEGIN

Thursday, July 28th.

Catalogues can be had at the Bookstores of A. L. Bancroft & Co., San Francisco, and W. B. Hardy, Oakland.

For Catalogues or other particulars, address

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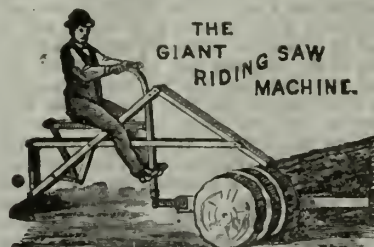
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I have a solid body of 9,200 acres in Zavalla County, fronting Leona River.

Plenty of Grass, Timber and Water,

At \$1.25 per acre, unfenced, and 15 miles from Railroad. Also tract in Frio County, of 10,000 Acres, fronting on Frio River. NEVER-FAILING water, well coated with Grass; ALL FENCED. Well adapted to Cattle, Sheep, Swine or Farming, five miles from Railroad Station, at \$3 per acre, one-half cash, balance in one and two years at 8% interest.

Also 4,605 acres on same river, two sides fenced and near County seat at \$2 per acre.

Also some 640-acre tracts of rich land at \$2.50 per acre, and near Railroad, besides many other pieces in other counties.

JAMES M. THOMPSON,  
San Antonio or Frio Town, Texas.

275 Acres of No. 1 Bottom and 225 Acres  
of No. 1 Upland for Sale,

Known as the Her Ranch, and situate three and a half miles from the town of Elk Grove, on the Cosumnes river, 350 Acres Growing Grain, well improved, large House and Barn and plenty of Timber.

PRICE, \$40 PER ACRE.

Inquire of GEORGE H. ILLER, on the premises, or of ILLER & SONS, at the town of Galt, or of

JAMES H. FERRIS, Agent.

## FRANK RITTER'S RANCH FOR SALE.

It is well improved, and consists of 100 Acres of No. 1 Bottom and 140 Acres No. 1 Upland, and is situated nine miles east of the town of Galt, on Dry creek, California.

Price \$12,000. Terms one-half Down.

Deferred payment to draw 10% per annum, interest. Time to suit purchaser. Inquire of FRANK RITTER on the premises, or of

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## FRUIT RANCH TO RENT.

The undersigned wishes to rent his Orchard and Ranch to a responsible man with a family, who understands the Fruit business and can give good references. On the place there are between

5,000 and 6,000 Trees

Of the best quality of Fruit. The place is situated in the foothills three miles from Auburn, Placer Co.

[Correspondence solicited]

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Twenty-five acres Old Bearing Vineyard; 100 acres New Vines; 200 Old Bearing Orange Trees; 75 acres prepared for Setting Vines; 200 acres in all with a good site for a Wine Factory. All good Vegetable Land, without Irrigation. Adjoins Mr. Rose's Vineyard, and is half a mile from the Railroad depot at San Gabriel, Los Angeles county, Cal. Income this year, \$3,000, and when all is in good bearing, income will be from \$10,000 to \$20,000 per annum. Price, \$20,000. Inquire of

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Bred from the first importation of Spanish Merino Sheep to California, in 1854. Thoroughbred and High Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

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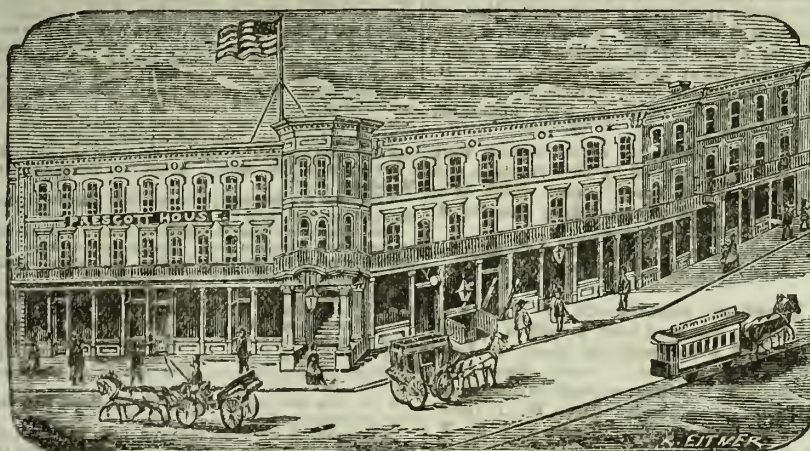
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And make money by saving time and working your fallows before harvest. Our new size six foot ORCHARD or VINEYARD HARROWS are provided with handles, rendering them as easily controlled as the Cultivators. These implements are acknowledged by all who are familiar with their work, to be the most practical for general use in the orchard or vineyard of any yet offered to the public. Manufactured only by

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Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to **MATTESON & WILLIAMSON**, Stockton, Cal.

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AND

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Having recently purchased the entire stock, tools and machinery of the late Kimball Manufacturing Company's works, and having the best appliances in the way of machinery for Wood and Iron Working, also Painting and Trimming, on the Pacific Coast, I am enabled to fill all orders promptly, such as Carriages, Farm, Freight and Ore Wagons, also all kinds of Agricultural Implements, R. R. Horse Cars, and R. R. Hand Cars, Scrapers and Excavators at short notice.

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Header, Farm and Freight. Manufactured expressly for the Pacific coast. SEND FOR CIRCULAR AND PRICE LIST. Also the following masterpieces of mechanical skill: The Davis Steel Douleur. The Davis Spring Tongue Support. The Davis Spring Bolster. The world-renowned La France Steam Fire Engine.

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Admitted by those who have used it, for regularity of Feeding, Simplicity, Cheapness and Durability to be Unequaled by any other Feeder in use. Call and examine before purchasing elsewhere. Threshing Machines Repaired on short notice.

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A Pleasant and Profitable Fancy Work. Patterns stamped in colors on heavy hurlaps; Animals, Flowers and Scrolls. Can be made of rags or waste yarn. Full printed directions furnished with pattern. Send for Catalogue. Address

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Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the **Mining and Scientific Press**, San Francisco, at favorable rates.



### Highland Springs.

These springs are charmingly and fortunately situated among the sunny and airy high lands of Lake county, 27 miles northeasterly from Cloverdale (the nearest R. R. station), and eight miles south from Lakeport, the county town. Five hundred and twenty acres are embraced in the premises, which include a dairy, vegetable, stock, hay and grain farm. The springs were first brought to public notice about 12 years ago. At times, 100 to 200 boarders and campers have been quartered here. There are ample and finely shaded camping places. A pleasant grove adjoining the commodious hotel and cottages contains fine croquet grounds, lounging hammocks, and rural seats in shady nooks. The springs and a clear stream are close by. Warm, tepid and cold water baths, from natural and medicinal springs, are supplied free to boarders. A pouring stream and shower bath, of tepid, mineral water, is one of the most decidedly beneficial as well as enjoyable features of the bathing department.

We are aware of no more justly celebrated springs in California. Across the foot-bridge, which spans the creek a few steps from the hotel, is the "Magnesia spring." It has a large flow of tepid water, which, although slightly disagreeable to the taste, is decidedly agreeable to the health of many. A little further along is the "Magic spring," the water of which is slightly warm, but sufficiently impregnated with magnesia, soda, lime, iron and other ingredients, to render it tolerably palatable. This is freely drunk by visitors, especially before eating. It has made remarkable cures from rheumatism, kidney and nervous diseases, and there are many who will bear decided testimony to its wonderful restorative powers. It supplies a large flow of water for the "pouring" and other baths. The "Dutch" spring comes out of a rock a little further down the creek, about 50 rods from the hotel. This gives a small volume of cooler water, highly charged with iron, etc., with a slight after taste, resembling coal-oil. This is also a choice spring and the favorite of many. Most extensively patronized is the Soda spring, situated on the opposite side and more nearly in front of the hotel. Its water is almost universally popular with both pleasure and health seekers. It is also renowned for its curative qualities. Large quantities of it have been bottled and distributed far and near to those who, from time to time, have become acquainted with its restorative virtues and palatable taste. It holds its strength and flavor in a remarkable degree when transported, and ought, in time, to become a popular drink abroad. While it is necessary for persons to visit these springs in order to fairly realize the advantages of the place, it is pleasant for the writer to be able to say that the proprietress, Mrs. Astoria C. Goods, succeeds admirably in rendering to her numerous and worthy class of guests pleasant and homelike accommodations, in a degree affording general satisfaction to them and credit to herself.

"Highland" post-office, located in the hotel, is a real convenience. Mails arrive in 10 hours from San Francisco daily, via Cloverdale. Visitors by this route have 27 miles of staging over a grand and picturesque route. They can return via St. Helena mountains and Calistoga, if they desire further views of wonderful and delightful scenery in Lake and Napa counties.

### Horticultural Society Meeting.

The last meeting of the State Horticultural Society, held June 24th, was well attended and interesting. We have already given our readers the essays of Mr. Coates on peaches and the report of the committee on plants worth trying in this State. The minutes of the meeting yield a few other points of general interest.

The chair was occupied by E. H. Rixford until the arrival of Vice-President Webster. Joel Russel, of Haywards, was elected a regular member. Copies of the Journal of the Horticultural Society of Seine-et-Oise, France, and of the Meteorological Observations of the Adelaide Observatory were received.

Exhibits of peaches were made by J. Shinn and Leonard Coates. After the reading of Mr. Coates' essay (printed in RURAL of June 2) J. Shinn made some remarks on peaches. Concerning the extra early ones he pronounced the Beatrice good. Briggs' May, Alexander and Amaden ripened so nearly alike that he could hardly distinguish between them. Briggs' May may have been a trifle earlier. Alexander is largest, but he considered Amaden's June best of all for quality but small in size. The Waterloo he found sweet and good, perhaps, all things considered, the best of all the extra early peaches.

Mr. Shinn named a succession of fine yellow peaches, curling little or not at all, and ripening in the following order: Early Crawford, Foster, Richmond, Mary's Choice, Sequenahanna, Honest Abe, Jones' Seedling, Piquet's Late, Smocks' Late (Beers' Strain) and Solway. All these are large yellow freestones, and none of them curl enough to hurt. Mr. Rock approved the list.

On the subject of prunes, J. Lewelling, in answer to inquiries, stated that according to his experience, the best prunes to plant were the Petite d'Agen, German, Fellingberg and "Sacramento

prune." He would plant these for profit. To prevent prunes dropping from the trees he irrigates thoroughly from June 15th to June 20th, and the fruit does not fall. He would plant prune trees 20 ft. apart and might grow some small stuff between the trees at first. The plum or prune worked on cherry plum stock makes a very vigorous tree and does not sucker.

Mr. Lewelling considered the white nectarine as one of the coming fruits for canning, and it is quite important that propagators of new varieties should give some attention to securing the best white nectarine.

J. M. Hixson made some forcible remarks concerning the need of a uniform package for prunes and other dried fruit, and urged the society to agree upon some size or sizes, that all might adopt it who chose. On motion a committee was appointed to examine and report upon this subject at the next meeting. W. H. Jessup, of Haywards; A. T. Hatch, of Cordelia, and J. M. Hixson, of S. F., were appointed such committee.

The subjects chosen for next meeting were "Apricots," to be opened by Dr. Strentzel, and "Mildew on Fruit Trees," upon which it is hoped to hear from corresponding member, J. P. Moore, of San Rafael.

The next meeting will be held July 29th, at the Academy of Sciences' hall, S. F.

AT HIGHLAND SPRINGS.—N. P. Perine, of East Oakland, returned from a visit of several weeks at this noted watering place, in Lake county, on Tuesday last. Among those from Alameda county who have recently visited these springs may be mentioned Mrs. W. J. Owen and family, Miss L. Groffelman and A. T. Dewey and family, of Oakland, and Mrs. W. M. Mendenhall, of Livermore. A. C. Dietz and family, Capt. Travers and other friends are camping there for the fifth season. They have six tents and a very complete outfit for a two months' stay. Mr. Dietz leisurely hunts in the adjoining mountains, and, in addition to plenty of smaller game, has already captured five fine deer the present season. A masquerade ball was given at the hotel on the first of July, in which several Oaklanders sustained prominent parts. The whole was a real enjoyable country affair, and an entire success.—*Oakland Tribune.*

DIRECTOR of the Mint Burchard has left Washington to be absent about two months. He will visit San Francisco and the Territories for the purpose of attending to the collection of statistics of the product of gold and silver.

### Highland Amusements.

The fun-loving visitors at Highland Springs took it into their heads to get up a masquerade ball, and with the ready assistance of the popular proprietress, they made a pronounced "success" of it on the evening of the first. No more "perfectly wonderful and ludicrous" costumes could have been secured for a San Francisco affair than seemed magically produced at Highland. The aim was to have a strictly temperate, old-fashioned country dance, with all the innocent enjoyment possible, and there wasn't a bit of fun left out of the programme from 9 p. m. to daylight. The Lakeport Bee gives an interesting account, over one column in length, from which we quote the list of the characters and by whom sustained; also the guests present:

"Somnambulist and Chambermaid," Mrs. S. N. Joseph; "Squaw," Mrs. W. J. Owen; "The Press," Miss Alice Owen; "Wood Nymph," Miss Mesi Mason; "Irish Belle," Miss Dixie Meen; "Hotel Gazette," Mrs. A. C. Dietz; "Witch of the Highlands," Miss J. R. Harrell; "Night," Mrs. A. D. Wilcox; "Roman Belles," Misses Elston and Alden; "Twin Babies," Misses Annie Kellogg and Alice Dietz; "Princess," Mrs. J. C. Goods; "French Gentlemen," Mrs. E. W. Joy; "German Flower Girl," Mrs. A. W. Dowe; "Dona Maria," Mrs. R. D. Beauvelt; "Ethiopian Countess," Miss Graffelman; "Sitting Bull," Judge S. C. Hartings; "Grandmother," N. P. Perine; "His Satanic Majesty," Chas. Riffenberg; "Negrees," C. H. E. Hardin; "Sheet and Pillow Case," W. J. Gavigan; "Roman Emperor," A. C. Dietz; "Aunt Dinah," E. W. Joy; "Topsy," Charlie Dietz; "Priest," Frank Owen.

Guests—Jno. R. Cook, L. L. Bowen, A. C. Jackson, Mr. Lee and family, Mr. Jenny and family, Mrs. Judge McHenry and daughter, J. H. Fayard, Ed. Cohn, Fran K. Greene, W. D. McGee, Dr. J. S. Downes and wife, Joseph Levi, W. Slocum, W. D. Dunn, D. Backer, Wm. Poole, L. E. Mohr, Mex Dunn, A. T. Dewey, Mrs. Lufkin, W. H. Guild, Mrs. J. A. Hardin, Miss Ethel Hardin, Miss Eliza McNeal, Mrs. Mason, Miss Maud Mason.

### TRUSTWORTHY TESTIMONY.

Some Vital Facts Concerning the Welfare of the Community Made Public.

What Californians Say, and How Their Statements are Confirmed.

(San Francisco Chronicle.)

No fact has been made more plainly manifest during the past few years than the important effect which climatic changes have upon the constitutions of American people. The steady-going habits of Europe tend to longer lives, but the influence of European climate is towards apoplectic and other similar diseases. On the other hand, the bustling habits of the American people necessarily tax the nerve centers and other important portions of the body, while severe and sudden changes of the atmosphere add still more to the difficulties to be overcome.

San Francisco, as well as all cities in this and more southern latitudes, is especially subject to these difficulties, and the necessity for the utmost care, particularly at this season of the year, is clearly manifest to everyone who stops to reflect. These facts are especially true with reference to the human kidneys and liver, and the alarming increase of Bright's disease and all minor kidney difficulties has caused this subject to be a theme of almost universal conversation. Knowing these facts, and in order that our readers might be more

thoroughly informed upon the subject, a representative of this paper has taken pains to collect some new and important data, which is herewith presented: Having learned of a remarkable illustration of the subject under consideration, a call was made upon Mrs. N. H. D. Mason, at 37 Liberty street, who, upon being questioned, said:

"For a long time my daughter had suffered with Albuminuria, and she was treated by the best physicians in this city and in Oakland, but they failed to afford her any relief. When odema of the lower extremities set in, we were in despair, and considered her disease incurable; in fact we felt that her case was utterly hopeless. Thinking that a change of climate might in some degree alleviate her sufferings, and being the only remaining effort that I could make in her behalf, I started with her for Southern California. While on the steamer we met with a Dr. Showerman, of New York, who earnestly recommended the use of Warner's Safe Kidney and Liver Cure for my daughter's disease, and told of several remarkable cures that had come under his observation in the East from its use. Although strongly opposed to the use of proprietary medicines, and having but little faith in their efficacy, I was persuaded by the Doctor's faith in this remedy to at least give it a trial. She commenced to improve after taking the first three bottles, and from that time on her improvement was rapid, until we now consider her cured. Her general health is now excellent, and I feel that too much cannot be said in favor of this remarkable remedy which has done so much for her."

At this point of the interview a young lady of bright and animated appearance entered the room and addressed a few words to Mrs. Mason. After her departure Mrs. M. said:

"That was my daughter, who was once an invalid; does she look very sick now?"

The reporter expressed his surprise that a person once so hopelessly ill could ever present such a fresh and healthy appearance, but was assured that such was the case.

"Do you feel, Mrs. Mason, that you owe her recovery entirely to the use of this remedy?"

"I do, most assuredly. I do not think she could have lived six months had I not used it; and so great is my faith in it that I unhesitatingly recommend it to all who are in any degree suffering from kidney or liver complaint."

A call was then made on Mr. C. A. Page, No. 1305 Leavenworth street.

"I understand, Mr. Page, that you have had some experience regarding the effects of our climate upon the kidneys and liver. Can you give any information on the subject?" "Yes, sir; I have suffered severely from an affection of the kidneys and bladder, and I have no hesitation in stating the facts. As the world grows wiser people learn that they have kidneys, and that they must take care of them. The climate renders us liable to constant colds, and a cold will certainly affect the kidneys if they are at all weak. Three years ago I was taken sick with pains in my back, loins and kidneys. The doctors pronounced it Sciatica and treated me for that disease; but when I commenced to pass gravel they decided that it was kidney and bladder difficulty. Two years ago I was in the French hospital in this city and had the operation of lithotripsy performed, gravel and fungus being taken from me at that time. I have consulted with the best physicians and visited all the mineral springs, but nothing gave me any permanent relief. I suffered continual pain; I have spent over \$4,000 in doctor's fees and traveling expenses, but all the time the disease seemed to be making progress and getting a stronger hold on me. My weight was reduced from 155 to 120 pounds. A friend knowing my condition advised me to try Warner's Safe Kidney and Liver Cure. Anxious to get relief, if nothing more, I concluded to try it. Two days after commencing it I experienced decided relief and continued to grow better from that time."

"Then you think you owe your present health to this cure?" "Yes, sir. It has done more for me than all the doctors or springs combined. I consider it the greatest medicine of the age for Kidney and Bladder difficulty."

The next person visited was Mr. Charles E. Burgan, No. 1211 Broadway, who said: "For six years my wife has been troubled with derangement of the kidneys. She was all the time steadily growing worse, and at times was completely prostrated. Her limbs had become stiff, and the desire for natural relief was as often as every ten minutes. For the last ten months her sufferings have been beyond description, and she has often prayed to die. I have employed six different physicians during this time, some of them the most prominent in this city, but they could give her no help. One day I found a pamphlet of Warner's Safe Remedies in my front yard, and took it in to my wife. She had formerly lived in Albany, N. Y., and recognized some of the names attached to the testimonials in it. She thought she would like to try the medicine, and so I got her a bottle of Safe Kidney and Liver Cure, and also a bottle of Safe Nerve. It took three doses of Nerve the first night to put her to sleep, the next night only one. The Safe Kidney and Liver Cure has relieved her so much that she can now sleep all night without taking anything. She has taken three bottles of Kidney and Liver Cure, and now feels perfectly well, although she will continue to use it for some time to completely eradicate the disease from her system. I feel that the results of such a wonderful cure should be known to the thousands throughout the land who are suffering from Kidney and Liver Complaint, and anyone suffering from such complaint, or wishing to know more of the results of this remedy, is at liberty to call upon me, or address me upon the subject, and I will cheerfully tell them all it has done for my wife."

Mr. J. L. Knapp, of Santa Clara, said: "I was taken sick with catarrh or acute inflammation of the bladder. My sufferings were intense and I was often obliged to get up from 10 to 15 times during the night, when my agony would be so great that I was almost bent double. I employed the best medical aid, both homoeopathic and allopathic, but was pronounced by all incurable. They said I could not live long, and I thought myself that my time on earth was drawing to a close and gave up all hopes of recovery. My son in St. Louis, knowing how sick I was, sent me some papers containing reports from several of the St. Louis leading physicians and testimonials from a number of citizens concerning the cures resulting from the use of Warner's Safe Kidney and Liver Cure, and urged me to try it. I got some of the medicine and immediately commenced its use. After taking a few bottles I found myself rapidly improving until I can now say I am cured."

"What do your physicians say about your recovery?" "Only a short time ago I met Dr. Carpenter and said to him, 'What do you think of the effect of Warner's Safe Kidney and Liver Cure?' He answered, 'I think that medicine one of a thousand, the way it has acted in your case.'"

In an interview with Mr. William Sessor, of Stockton, the following facts peculiar to his case were stated:

"Four years ago I was obliged to give up my business on account of sickness, which soon proved to be a complication of Kidney and Liver complaint. My liver was greatly enlarged and appeared to be growing hard, until at last it felt like a stone. It was also appearing growing fast to my side. My right side was almost paralyzed. My body was so bloated I could not wear my clothes, and I was confined to my bed. My sufferings were intense; the best physicians pronounced me incurable, and said it was only a question of time when I must die. While in this condition I commenced the use of Warner's Safe Kidney and Liver Cure. The first bottle gave me relief, and I continued to take it, and steadily improved. The swelling gradually grew less, and the hardness to leave my liver, until now it has reached its normal condition. My right side is again strong. If it had not been for this medicine I should now be in my grave."

But one conclusion can be drawn from the above facts by any fair minded individual. That conclusion must be that while Kidney and Liver difficulties are so alarmingly increasing, still there is a safe and certain means by which they can be avoided; or, having been contracted, a way by which they can positively be cured.

ADVICES from Venezuela are to the 30th, ult. It is positively asserted that a revolution has broken out in the interior. Pres. Guzman Blanco has nearly 10,000 men under arms. Pres. Boas is reported quite ill.

### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. F. OGDON—San Francisco.  
A. C. KNOX—Napa and Lake counties.  
G. W. McGREW—Santa Clara county.  
M. P. OWEN—Santa Cruz county.  
J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
JACOB C. HOAG—California.  
B. W. CROWELL—Yuba and Sutter counties.  
D. W. KELLER—Solano and Sacramento counties.  
GEO. W. FAHION—Plumas county.  
GEO. H. HOPKINS—Amador county.  
A. LEONARD MEYER—Utah and Idaho Ter.

### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

### Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on, or address H. F. D., this office.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

## S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, July 13, 1881.

There is a little more interest manifest in the produce trade. Ships are coming in and Wheat shipping will soon revive. Choice lots are now reported scarce, as holders of such have probably resolved to let the inquiry improve before bringing it forward. The general opinion seems to favor an improvement of values before long. Abroad the markets are quiet. The latest is the following:

LIVERPOOL, July 12.—Good to choice California Wheat, 9s 6d @ 9s 9d.

#### Freights and Charters.

The latest charters reported are the British ship *Thomas Stephens*, 1,507 tons, Wheat to Cork, £3 7s 6d, prior to arrival; British iron ship *Knight of the Garter*, 1,494 tons, Wheat to Cork, £3 15s, prior to arrival; German bark *Cardinal*, 358 tons, Wheat to Cork or the Continent, £4 2s, spot charter; British iron ship *Scottish Minstrel*, 1,572 tons, Wheat to Cork, £2 15s, prior to arrival.

#### The Foreign Review.

LONDON, July 11.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The sudden and violent reduction of temperature about the middle of the past week has unfavorably influenced the maturing crops. White frost was reported on Friday night. The copious rainfall, however, has greatly favored the spring-sown crops. In London the supply of Wheat has amounted to only 1,648 quarters during the week, and then sold quietly at unchanged prices. The tone of the trade has not been influenced on account of the smallness of business. At a few provincial markets improved rates were obtainable. Foreign continues quiet, but is not materially changed. There was less pressure to sell Friday despite the increased supply, the greater half of which was American. The floating bulk has decreased 111,000 quarters. The supply of off-coast consists of 20 cargoes. Until Friday only four cargoes were reported sold during the present week. Thirty cargoes are due, mostly White Wheat. The forwarding trade has been very quiet. The flour supply is small, the demand weaker and the prices firmer; foreign has been firm, and certain grades rather dearer. Native and foreign Barley and Oats have been slow of sale and unchanged. Maize was also slow and unchanged. The sales of English Wheat in the past week were 16,141 quarters, at 46s 8d, against 15,753 quarters, at 43s 9d, in the corresponding week of last year.

#### Eastern Grain and Provision Markets.

NEW YORK, July 8.—The business of the week has been broken into by the public excitement over the Washington news, the subsequent holiday and the excessive heat. The consequence was a reduced volume of trade and some irregularity in prices, but with a speculative demand in several staples. The general feeling of confidence in the mercantile community is unshaken. The Grain market was active and firm. There was some excitement in Wheat, and advanced prices. Lard made a further advance, but closed weak at somewhat lower prices, although the decline is reported as but temporary.

#### Eastern Wool Markets.

BOSTON, July 9.—The demand, at good prices, continues well sustained. The sales of the week have been 220,000 lbs, which may be considered a large business from the broken week and interruption of trade generally, caused by the attempted assassination of the President. Ohio and Pennsylvania fleeces, XX, have been selling at 42¢@43¢; No. 1, 45¢@47¢. Michigan X ranges from 39¢@41¢; No. 1, 45¢@46¢. The principal demand has been for combing and delaine selections. Sales of fine delaine have been 345,000 lbs, at 44¢@45¢ for Michigan; 45¢@46¢ for Ohio. Unwashed combing has been selling at 33¢@34¢ for medium; 25¢ for coarse. In unwashed fleeces business has been fair, and there have been sales of some 550,000 lbs at 22¢@23¢ for fine; 20¢@25¢ for medium. California, after large transactions for some weeks, has been quiet, with no sales of any importance. Pulled Wools are in light stock and steady demand, the prices indicating no change.



Australian has been more inquired for. Sales of heavy at 38c; good at 42c@45c; Montevideo, 34c@35c per lb. There have been sales of Cape, in bond, at 20c and duty paid, and 22c for Cordova carpet Wool. New Wool is arriving quite freely; receipts of domestic have been upward of 6,000 lbs for the week, and the market is now well supplied with all grades and qualities.

New York, July 8.—Wool has been in good request at about previous rates, the new clip being taken up about as fast as it comes to market.

**BAGS**—The corner seems to have more in it than was supposed. Dealers report an active demand and have squeezed up the prices another notch during the week, and promise to give them another twist. Dealers' agents say that farmers supplies of Bags are less than usual this year, and consequently more must be purchased. We trust this will not be the case again when Bags range near 8c all winter.

**BARLEY**—Barley has been quiet and sales small this week. We note 1800 sks good Feed sold at 95c.

**BEANS**—Large Butter Beans are 10c below the outside rate, being now \$1.30 @ ctl.

**CORN**—There is little doing in Corn and rates are unchanged.

**DAIRY PRODUCE**—Butter supplies have been sufficient and trade has proceeded without change, except, perhaps, an occasional fancy lot at 27c. The rule is 26c. Cheese is unchanged.

**EGGS**—California Eggs are 1c better, and fresh Utah Eggs are also advanced.

**FEED**—Hay is unchanged. Oil Cake Meal has advanced to \$24.50@25 per ton.

**FRESH MEATS**—Prices have advanced, as shown in our list. Pork is higher and scarce. Spring Lamb has also advanced. Mutton showed upward tendency a day or two ago, but is easier to-day.

**FRUITS**—Peaches have sold well from day to day. The canners paid 85c for Yellow Crawford some days—quite a contrast to the 25c of 1876. Choice Apples are high to-day. Pears are cheaper and Blackberries are abundant and very low. Raspberries are doing better.

**HOPS**—Hops are still 20@25c in small lots to brewers. Emmet Wells, in his New York circular of July 1st, says:

A fair trade has been doing this week considering the advanced stage of the season. Prices show no alteration, 23 cents still being the figure asked and obtained for a choice article of the last growth. The reports from the districts are still somewhat conflicting; some making the vine look good, while others report it backward and spindling. The continued cool weather no doubt causes a temporary check to its growth, but a change to warmer temperature would soon work wonders. Complaints of grubs and worms come from Coopers town, Cobleskill, Oneonta and Hamilton this State. From Wisconsin and Michigan our reports are favorable, as also are those from the Pacific coast. A fire occurred in a warehouse on Tuesday night on Greenwich street, this city, in which 300 bales of Hops were cremated.

**OATS**—Oats are low and dull. Values have dropped off considerably during the week.

**ONIONS**—Onions are doing better; Reds have sold up to 85c, and Silverskins up to \$1 per ctl.

**POTATOES**—Potatoes have advanced to \$1 @ ctl for the best, both in sacks and boxes; from this sales have been made down to 75c @ ctl, according to quality.

**PROVISIONS**—Medium and Light Bacon are higher and Lard has improved notably. Trade is quite active for the interior, as usual during the harvesting season.

**POULTRY**—Roosters and Turkeys are higher.

**VEGETABLES**—Cabbage, Cucumbers and Corn are higher; Summer Squash has also sold better. Tomatoes have fluctuated considerably. On Monday they rose to \$1.25 @ box, but have receded again to 37c @ 50c.

**WHEAT**—The market is quiet and prices unchanged. The best Wheat is held out of the market and is scarce. Poorer qualities are in large supply. We note sales: 1,600 sks Milling and 60 tons Shipping, Port Costa delivery, \$1.42; 6,000 and 250 sks No. 2, \$1.37; 1,500 sks do, Port Costa, and 1,600 sks do, \$1.35; 500 and 360 sks off grade, Port Costa, \$1.30, and 300 sks do, \$1.27 per ctl.

**WOOL**—Prices are unchanged and the market is quiet. Good Wools are firm.

Fruits and Vegetables.

[WHOLESALE.]

FRUIT MARKET.	
Apples, bsk.	25 @ 30
do, Astracan, bx	50 @ 10
do, bsk.	75 @ 10
Bananas, bsk.	2 50 @ 5 00
Cantaloupes, crt.	1 50 @ 2 50
Cherries, chest.	9 00 @ 10 00
Cocoanuts, 100.	6 00 @ 7 00
Crab Apples.	50 @ 65
Cranberries, bbl.	4 50 @ 5 00
Currants, chest.	4 50 @ 5 00
do, black.	— @ —
Fig, bx.	60 @ 75
Gooseberries.	— @ —
do, English.	— @ —
Grapes.	75 @ 1 25
Limes, Mex.	8 00 @ 10 00
do, Cal, bsk.	40 @ 50
Lemons, Cal, bx	2 00 @ 3 00
do, black.	— @ —
Sticky, box.	8 50 @ 9 00
Australian.	— @ —
Oranges, Cal, bx	1 00 @ 1 50
do, Tabiti M 20	20 @ 22 50
do, Mexican.	— @ —
do, Loreto.	— @ —
Peaches, bx.	75 @ 1 00
do, bsk.	35 @ 75
do, Crawford.	75 @ 1 00
Pears, bsk.	25 @ 50
do, bsk.	50 @ 75
do, Bartlett.	75 @ 1 00
Pineapples, doz	6 00 @ 8 00
Plums, bx.	40 @ 50
Prunes, German.	60 @ 1 00
Quinces, bx.	— @ —
Blackberries, ch.	2 75 @ 4 00
Raspberries, ch	6 00 @ 8 00
Strawberries, ch.	4 00 @ 5 00
Sugar Cane, bbl.	— @ —
Watermelon, 100	16 @ 25 00
DRY FRUIT.	
Apples, sliced, lb.	5 @ 6
do, quartered.	5 @ 6
Apricots.	18 @ 20
Blackberries.	12 @ 15
Citron.	28 @ 30
Dates.	9 @ 10

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, July 13, 3 P. M.

SILVER. 1. GOLD BARS, \$300@310. SILVER BARS, 10@18 @ cent. discount. EXCHANGE on New York, par; London, 49@49 1/2; Paris, 5.20 francs @ dollar; Mexican dollars, 91@92. NEW YORK (4 per cent. 116).

General Merchandise.

WHOLESALE.

WEDNESDAY M., July 13, 1881.

Crystal Wax.....	16 @ 18	Cement, Rosen-	dale.....	2 00 @ 2 25
Paraffine.....	20 @ —	Portland.....	4 00 @ 4 50	
Patent Sperm.....	25 @ 28	NAILS.		
CANNED GOODS.				
Ass'd Pie Fruits.	— @ —	Ass'd sizes.....	@ 5 00	
2 1/2 lb cans.....	2 25 @ —	Pacific Groc Co's	Neatsfoot, No.1.1	00 @ 1 00
Table do.....	3 50 @ —	Castor, No.1.....	00 @ 1 00	
Jams and Jellies.....	3 75 @ —	do, No.2.....	1 00 @ 1 00	
Pickles, hf gal.....	3 25 @ —	Baker's A.....	— @ 1 30	
Sardines, q box.....	1 67 @ —	Olive, Plagnoll.....	25 @ 5 75	
Hf Boxes.....	2 50 @ 1 90	Possel.....	4 75 @ 5 25	
Merry, Faulk & Co.	— @ —	Palm, lb.....	9 @ —	
Preserved Beef	— @ —	Linseed, Raw, bbl	70 @ —	
2 lb, doz.....	3 25 @ 3	Boiled.....	75 @ —	
do 4 lb doz.....	5 50 @ 6	Cocoonut.....	60 @ —	
Preserved Mutton	— @ —	Cherm., nut, cs.....	40 @ 60	
2 lb, doz.....	25 @ 55	Sperm.....	— @ —	
Beef Tongue.....	5 75 @ 60	Coast Whales.....	35 @ —	
Preserved Ham	— @ —	Polar.....	— @ —	
2 lb, doz.....	5 50 @ 60	Lard.....	80 @ 80	
Deviled Ham, 1 lb,	doz.....	Petroleum (110°)	18 @ 20	
do.....	3 00 @ 3 50	Petroleum (170°)	28 @ 30	
do Ham 1/2 doz 2 1/2	50 @ —	PAINTS.		
Boneless Pigs Feet	3 50 @ 3 75	Pure White Lead.....	6 1/2 @ 10	
3 lbs.....	2 75 @ —	Whiting.....	1 1/2 @ —	
2 lbs.....	2 75 @ —	Putty.....	4 @ —	
Spiced Fillets 2 lbs	50 @ —	Chalk.....	14 @ —	
Head Cheese 3 lbs	50 @ —	Paris White.....	2 1/2 @ —	
COAL Jobbing.				
Australian, ton.....	@ 8 50	Ochre.....	3 1/2 @ 4	
Coos Bay.....	6 50 @ 7 00	Venetian Red.....	3 1/2 @ 4	
Bellingham Bay	— @ —	Averil mxd Paint	gal	
Sattle.....	7 50 @ —	White & Tints.....	2 00 @ 2 00	
Cumberland.....	@ 13 00	Green, Blue and	— @ —	
Mt Diablo.....	— @ —	Ch Yellow.....	3 00 @ 3 50	
Lehigh.....	— @ —	Light Red.....	3 00 @ 3 50	
Liverpool.....	— @ 9 00	Metallic Blue.....	3 00 @ 3 50	
West Hartley.....	— @ 8 50	RICE.		
Scranton.....	— @ —	China, Mixed, lb.....	5 @ —	
Vanconver Id.....	— @ —	Hawaiian.....	5 1/2 @ —	
Wellington.....	— @ 9 00	SALT.		
Charcoal, sack.....	@ —	Cal. Bay, ton.....	14 00 @ 22 00	
Coke, bush.....	@ —	Common.....	6 50 @ 14 00	
COFFEE.				
Sandwich 1d lb.....	@ —	Carmel 1d.....	10 00 @ 22 00	
Costa Rica.....	13 @ 14	Liverpool fine.....	14 00 @ 20 00	
Guatemala.....	13 @ 14	SOAP.		
Java.....	24 @ 25	Castle, lb.....	9 @ —	
Manilla.....	15 @ —	Common brands.....	4 @ —	
Ground, in cs.....	22 1/2 @ 25	Fancy Brands.....	7 @ —	
FISH.				
Sac'd Dry Cod.....	— @ —	Cloves, lb.....	37 @ 40	
do in cases.....	— @ 5 1/2	Cassia.....	19 @ 20	
Eastern Cod.....	— @ 7 50	Nutmegs.....	85 @ 90	
Salmon, bbl.....	7 00 @ 7 50	Pepper Grain.....	15 @ 18	
Hf bbls.....	3 50 @ 4 00	Pimento.....	10 @ 20	
1 lb cans.....	1 12 1/2 @ 1 22 1/2	Mustard, Cal 1/2	lb	
Pk'd Cod, bbls.....	@ —	Glass.....	@ 1 25	
Hf bbls.....	@ —	SHRUB, ETC.		
Mackerel, No. 1	— @ —	Cal Cube lb.....	— @ —	
Hf bbls.....	9 50 @ 10 00	Powdered.....	@ —	
In Kils.....	1 75 @ 1 85	Fine Crushed.....	@ —	
Ex Mess.....	3 50 @ 4 00	Granulated.....	@ —	
Pickled Herring	3 00 @ 3 50	Golden C.....	@ —	
box.....	3 00 @ 3 50	Cal Syrup, lgs.....	65 @ —	
Boston Smoked	— @ —	Hawaiian Milk.....	25 @ —	
Herring.....	65 @ 70	TEA.		
LIME, etc.				
Plaster, Golden	— @ —	Young Hyson.....	— @ —	
Gate Mills.....	3 00 @ 3 25	Moyune, etc.....	40 @ 60	
Land Plaster.....	3 00 @ 3 25	Country pkd Gm-	powder & Im-	
ton.....	10 00 @ 12 50	perial.....	35 @ —	
Lime, Santa Cruz	1 25 @ 1 50	Hyson.....	27 @ —	
bbl.....	1 25 @ 1 50	Foo-Chow O.....	30 @ —	
Domestic Produce.				
WHOLESALE.]				
WEDNESDAY M., July 13, 1881.				
BEANS & PEAS.				
Hayo, ctl.....	1 00 @ 1 15	Fecans.....	13 @ —	
Butter.....	10 @ 13 00	Filberts.....	15 @ —	
Castor.....	3 00 @ 3 50	ONIONS.		
Pea.....	2 00 @ 2 30	Silver.....	75 @ —	
Red.....	85 @ 87 1/2	Silver Skin.....	95 @ 100	
Pink.....	85 @ 87 1/2	Oregon.....	— @ —	
Small White.....	2 00 @ 2 30	POTATOES.		
Lima.....	2 25 @ 2 50	New.....	75 @ 80	
Field Peas, bbl.....	40 @ 45 00	Petalums.....	— @ —	
do, green.....	1 35 @ 1 40	Tomatoes.....	— @ —	
BROOM CORN.				
Southern.....	3 @ 3 1/2	Humboldt.....	— @ —	
Northern.....	4 @ 6	" Kidney.....	@ —	
CHICORY.				
California.....	@ 4 1/2	" Peachblow.....	@ —	
German.....	6 1/2 @ 7	Jersey Blue.....	— @ —	
DAIRY PRODUCE, ETC.				
BUTTER.				
Cal. Fresh Roll, lb.	25 @ 27	Switzerland.....	— @ —	
do Fancy Brands.....	26 @ 27 1/2	River, red.....	@ —	
Pickle Roll.....	26 @ 27 1/2	Cuey.....	@ —	
Firkin, new.....	25 @ 26	Butter.....	@ —	
Western.....	18 @ 22	Spring.....	@ —	
New York.....	@ —	Teal.....	@ —	
CHEESE.				
Cheese, Cal, lb.....	11 1/2 @ 12 1/2	Widgeon.....	@ —	
do, boxed.....	@ 13	Geese, pair.....	1 00 @ 1 01	
EGGS.				
Cal. Fresh, doz.....	23 @ 26	Wild Gray, doz.....	@ —	
Ducks.....	19 @ 20	Wild.....	@ —	
Oregon.....	@ —	Turkeys.....	15 @ —	
Eastern, by exprs	18 @ 19	do, Dressed.....	@ —	
Pickled here.....	22 1/2 @ 23	Solpe, Eng.....	2 50 @ 3 00	
Utah.....	22 1/2 @ 23	do, Common.....	1 00 @ 1 01	
FEED.				
Brant, ton.....	@ 14 00	Quail, doz.....	1 25 @ 1 26	
Corn Meal.....	24 00 @ 25 00	Rabbits.....	2 00 @ 2 01	
Hay.....	6 50 @ 12 50	Penut.....	@ —	
Middlings.....	@ 19 00	PROVISIONS.		
Oil Cake Meal.....	24 50 @ 25 00	Cal. Bacon, extra	clear, lb.....	
Straw, bale.....	40 @ 45	Medium.....	13 1/2 @ —	
FLOUR.				
Extra, City Mills.....	4 87 1/2 @ 5 00	Light.....	12 1/2 @ —	
do, Country Mills.....	25 @ 4 75	Leaves.....	13 @ —	
do, Oregon.....	3 75 @ 4 00	Cal. Smoke Beef.....	10 @ —	
do, Walla Walla.....	4 00 @ 4 25	Shoulders.....	8 1/2 @ —	
Superfine.....	2 50 @ 3 25	Hams, Cal.....	11 @ —	
FRESH MEAT.				
Beef, 1st quality, lb.	6 @ 6 1/2	Dupees.....	@ —	
Second.....	5 1/2 @ 6	Whittaker.....	@ —	
Third.....	4 1/2 @ 5 1/2	Royal.....	@ —	
Mutton.....	4 @ 5	Golden G.....	14 1/2 @ —	
Pork, undressed.....	5 1/2 @ 6	SEEDS.		
Dressed.....	8 @ 8 1/2	Alfalfa.....	15 @ —	
Veal.....	7 @ 7 1/2	do Chile.....	@ —	
Milk Calves.....	7 1/2 @ 8	Canary.....	4 @ —	
do.....	8 1/2 @ 9	Clover, Red.....	14 @ —	
GRAIN, ETC.				
Barley, feed, ctl.	90 @ 95	Cotton.....	@ —	
do, Brewing.....	1 10 @ 1 20	Flaxseed.....	2 1/2 @ —	
Chevalier.....	1 15 @ 1 20	Hemp.....	7 @ —	
do, Coast.....	85 @ 95	Italian Rye Grass.....	25 @ —	
Buckwheat.....	1 60 @ 1 75	Perennial.....	25 @ —	
Corn, White.....	@ 1 12 1/2	Millet, German.....	10 @ —	
Yellow.....	1 02 1/2 @ 1 07 1/2	Wild.....	7 @ —	
Small Round.....	1 05 @ 1 07 1/2	Mustard, White.....	14 @ —	
Oats.....	1 40 @ 1 47 1/2	Brown.....	14 @ —	
Milling.....	1 50 @ 1 65	Rye.....	3 @ —	
Rye.....	1 37 1/2 @ 1 45	Kap Blue Grass.....	20 @ —	
Wheat, No. 1.....	1 40 @ 1 45	2d quality.....	16 @ —	
do, No. 2.....	1 35 @ 1 37 1/2	Sweet V Grass.....	@ —	
do, No. 3.....	1 30 @ 1 35	Wheat.....	20 @ —	
Choice Milling.....	@ 1 45	Red Top.....	@ —	
HIDES.				
Hides, dry.....	19 @ 20	Hungarian.....	8 @ —	
Wet salted.....	9 @ 10 1/2	Lawn.....	30 @ —	
HONEY, ETC.				
Beeswax, lb.....	20 @ 24	Mesquit.....	10 @ —	
Honey in comb.....	11 @ 13	Timothy.....	10 @ —	
do, No. 2.....	8 @ 10	TALLOW.		
Dark.....	6 @ 7	Crude, lb.....	8 1/2 @ —	
Extracted.....	6 @ 7	Refined.....	7 1/2 @ —	
HOPS.				
Oregon.....	@ —	WOOL, ETC.		
California.....	20 @ 25	SPRING—1880.		
Wash. Ter.....	@ —	Oregon, Eastern.....	24 @ —	
Old Hops.....	@ —	do fine, heavy.....	21 @ —	
NUTS—Jobbing.				
Walnuts, Cal.....	8 @ 9	SPRING—1881.		
do, Chile.....	7 1/2 @ 8	San Joaquin, seed.....	19 @ —	
Almonds, bbl.....	12 @ 14	do fair.....	17 @ —	
Soft shell.....	12 @ 14	Southern Coast.....	20 @ —	
Brazil.....	12 @ 14	Burry and Seedy.....	18 1/2 @ —	
PAINTS.				
Pure White Lead.....	6 1/2 @ 10	Northern choice.....	25 @ —	
Whiting.....	1 1/2 @ —	Burry or Seedy.....	22 @ —	
Putty.....	4 @ —	Sonoma.....	20 @ —	
Chalk.....	14 @ —	Humboldt.....	— @ —	
Paris White.....	2 1/2 @ —	Caro.....	31 @ —	





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2d dam, Duchess 7th, by Duke of Airdrie..... 2743  
3d dam, Duchess, by D'Otley..... 432  
4th dam, Henrietta, by Sir Alfred..... 569  
5th dam, Lucilla, by imported Romulus..... (12019)  
6th dam, Helen, by Bertram 2d..... (3144)  
7th dam, Ruby 2d, by Bertram..... (1716)  
8th dam, Ruby, by Young Sir Dimples..... (271)  
9th dam, Daisy, by Wellington..... (678)  
10th dam, Beauty, by Duke..... (234)  
11th dam, Lucy, by Young Cornet..... (905)  
12th dam, —, by J. Brown's Red Bull..... (97)  
Grand Commander 12055, by imported Royal Commander 10914, out of imp. Goody Two Shoes, by Lord Lyons (26877).  
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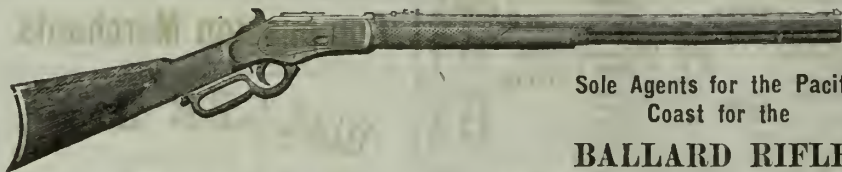
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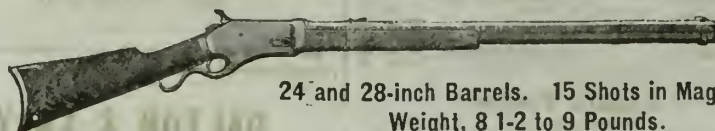


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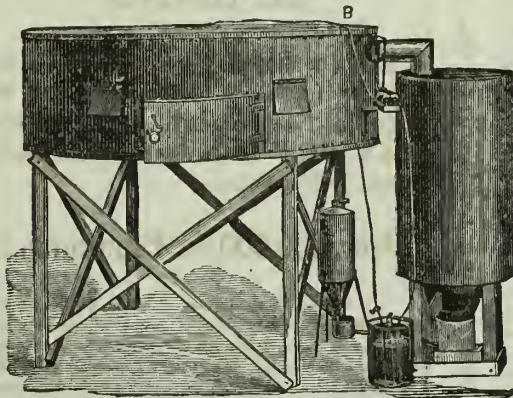
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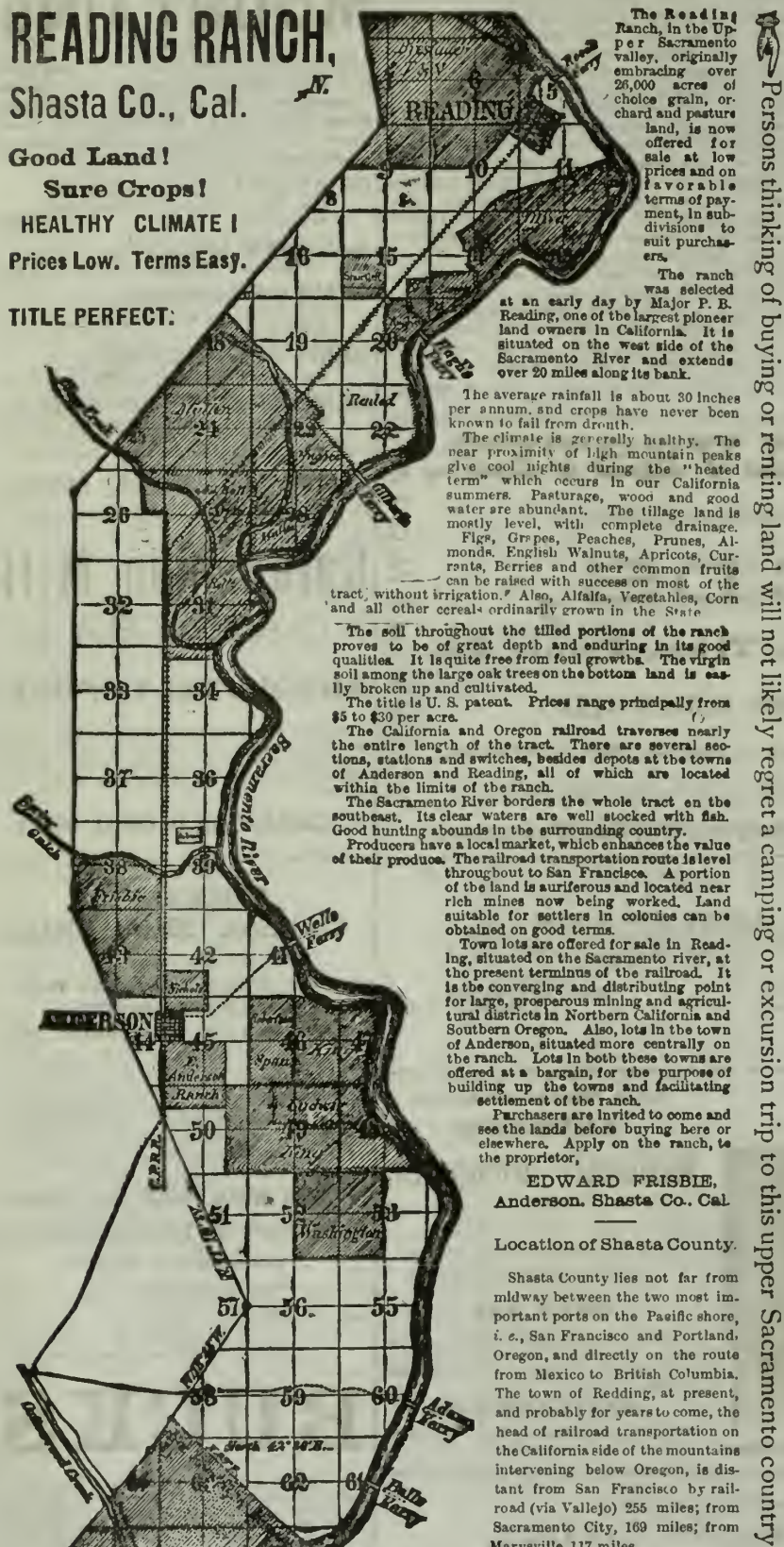
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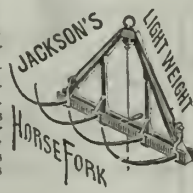
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The Reading Ranch, in the Upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drouth.

The climate is generally healthy. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers. Pasture, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Apricots, Currants, Berries and other common fruits can be raised with success on most of the tract, without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growth. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,  
Anderson, Shasta Co. Cal.

Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the route from Mexico to British Columbia.

The town of Redding, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville 117 miles.

Persons thinking of buying or renting land will not likely regret a camping or excursion trip to this upper Sacramento country.

## Grangers' Business Association of California

ifornia - Principal place of business, No. 38 California Street, San Francisco, State of California.

Notice is hereby given, that at a meeting of the Directors of said corporation, held on Monday, the Twenty-seventh (27) day of June, A. D., 1881, an assessment has been levied of ten (10) per cent upon the capital stock of said corporation, amounting to the sum of two and one-half (\$2.50) dollars upon each and every share of said capital stock, payable July Twenty-eighth (28), 1881, to Amos Adams, the Secretary of said corporation, at his office, No. 38 California Street, S. F., State of California.

Any stock upon which this assessment shall remain unpaid on the Sixth (6) day of August, A. D., 1881, will be delinquent, and advertised for sale at public auction, and unless payment is made before, will be sold on Monday, the Twenty-second (22) day of August, A. D., 1881, to pay the delinquent assessment, together with costs of advertising and expenses of sale. AMOS ADAMS, Secy. Grangers' Business Association of California, office, No. 38 California Street, S. F.

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Wanted, from TWENTY to FORTY GOOD DAIRY COWS that will come in between August and October.

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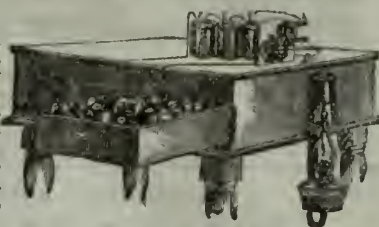
Invaluable for Young Chicks and Moulting Fowls. It comes packed in various sized packages, and being a powder, is easily mixed with the customary feed. Give it a trial. Send Stamp for Circular and Testimonials.

Price.-Single pound, 50 cents; Two and a half pounds, \$1.00; Six pounds, \$2.00; 25 pound keg \$6.25. Address,

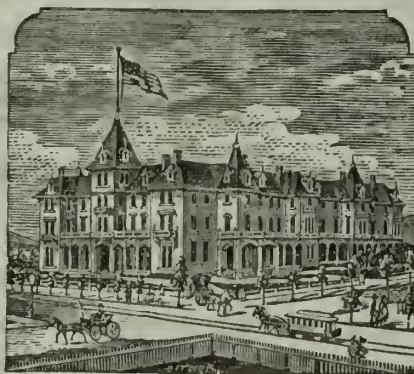
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Sacramento, Cal.

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The Twenty-Eighth Annual Fair of the State of California will be held at Sacramento, from MONDAY, Sept. 19th, to SATURDAY, Sept. 24th, 1881.

Over \$30,000 in Premiums!

The attention of Exhibitors is called to the liberal Premium List. Every accommodation will be provided for all exhibitors. Motive power furnished for Machinery exhibited in motion. The Farmers, Business men and Mechanics of this State are respectfully invited to make displays of their Products, and are called upon to aid in making the exhibit of 1881 surpass all previous efforts, and guarantee the continued success of an institution that has been of so much benefit to the State. The C. P. R. R. Co., will transport all articles to and from the Fair FREE OF CHARGE. Fruit need not be returned to obtain free transportation, as charges paid to the Fair will be refunded upon Secretary's certificate.

For further particulars address the Secretary at Sacramento.

EDWIN F. SMITH, J. McM. SHAFTER,  
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P. O. BOX 726 SACRAMENTO.

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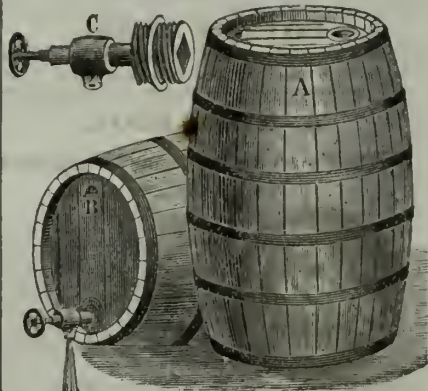
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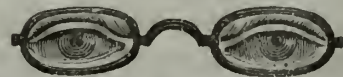
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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, JULY 23, 1881.

Number 4

## The New Commissioner of Agriculture.

We give on this page a portrait of the lately appointed Commissioner of Agriculture, Dr. George B. Loring, of Massachusetts. We have long known Dr. Loring by reputation through his prominent position in agricultural movements and enterprises in New England. His appointment to the Commissionership seems to meet the approval of most of the Eastern agricultural censors. As he is already in his seat, his deeds will soon give the agriculturists of the country generally an opportunity to judge of his qualifications for the important trust committed to his hands.

Dr. A. S. Heath, of the New York Farmers' Club, has written for the *American Dairyman* a sketch of the life and works of the new Commissioner, and we shall take therefrom the following leading points: George Bailey Loring was born at North Andover, Mass., November 8, 1817, graduated at Harvard College in 1838, and at Harvard Medical College in 1842. In 1848 he became Surgeon of the Marine Hospital at Chelsea, where he remained till 1850. In 1853 the Doctor was made postmaster of Salem, Mass. During nearly all this time he was ceaselessly active in writing, making addresses and studying practical and scientific agriculture. It was at this period that he distinguished himself as a rare and ready debater, a cogent reasoner and a graceful speaker.

Soon after the Doctor became widely known to the prominent agriculturists, scientists, statesmen and literary men of that day, a fatal cattle disease broke out in Massachusetts and the neighboring States, causing great loss and producing wide-spread consternation. His professional and agricultural studies, and his ability and energy pointed him out as the fittest commissioner to extirpate that fearful scourge—*pleuro-pneumonia*. He was commissioned in 1860, and most nobly did he perform the onerous and difficult task of stamping out that contagious malady among cattle. The plans he successfully pursued then can now be profitably and successfully followed by a United States Commission for ridding the country of a contagious scourge that may cost us hundreds of millions of dollars worth of cattle.

About this time Dr. Loring was extensively engaged in farming, and though his boyhood and youth were not agriculturally neglected, again he devoted his time and talents to the practical work of the farm. The chief products of it were milk, vegetables and hay. In 1859 Dr. Loring imported some of the finest Ayrshire dairy stock that could be found in Great Britain, and he has continued to breed them successfully ever since.

He founded the Northeastern Agricultural Society in 1864, became and is still its President. This society is in a most flourishing condition. He was a trustee of the Massachusetts Society for Promoting Agriculture from 1858 to 1863. He has published his numerous addresses, papers, lectures and articles on literary, agricultural and scientific subjects, which largely contributed to the literature of the times. As a lecturer, Dr. Loring is dignified, graceful, effective, pleasing and entertaining; as a writer, earnest, clear and instructive, and as an orator, distinctively forcible, eloquent and convincing.

In 1870 his address at the opening of the scientific course of the American Institute in New York was widely copied. He is not only a member of the American Institute, but for many years he has been a member of the Farmers' Club of that institute, which is the oldest farmers' club in the United States. The Doctor is also a member of the American Agricultural Association, and contributed a valuable paper on "The Problem of American Land Holding."

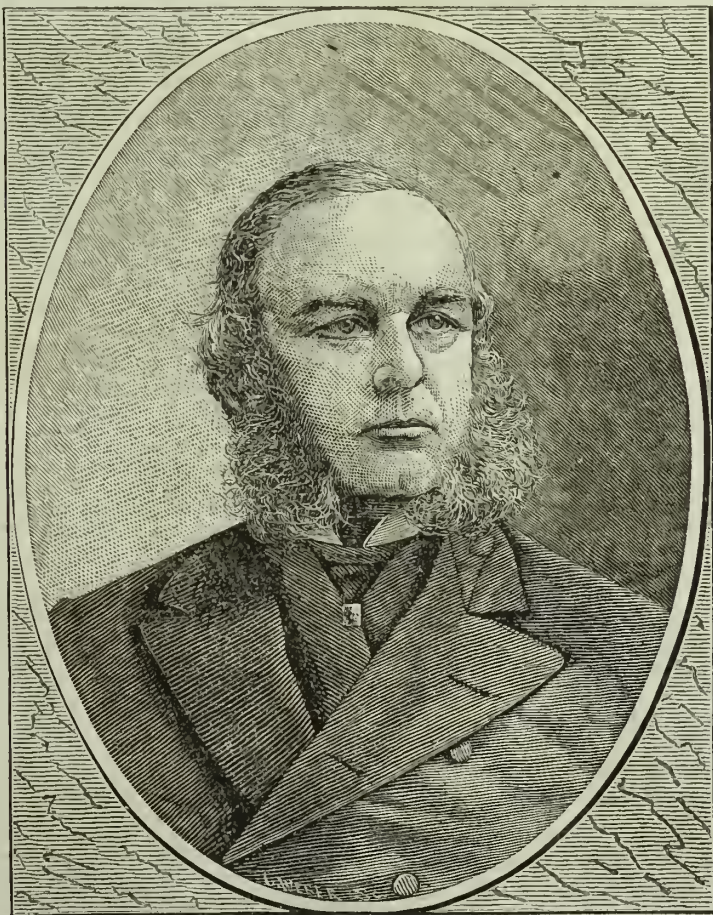
Dr. Loring was in the Massachusetts House of Representatives in 1866 and 1867; and was President of the Massachusetts Senate from 1873 to 1876 inclusive. It was here that the Doctor's eloquence was most brilliantly displayed in a speech in behalf of his old friend, Prof. Agassiz, on scientific education; and in a grand and masterly defense of the immortal Sumner. His eloquence is fervent, fluent, forcible and glowing; his voice is strong and

musical, his countenance is expressive, and his physique perfect, large, manly and graceful; his gestures simple and impressive, and his broad and high forehead and handsome face make him universally admired by the audience; and his pleasing style and manner make an hour seem as but a few minutes. As a member of the 45th and 46th Congresses, no one's views on the great problems of agriculture were more earnestly sought than were Dr. Loring's. In fact, few men at any time during the existence of our republic have done more for agriculture:

For nearly 20 years Dr. Loring was a member of the State Board of Agriculture, and for a long time President of the State Agricultural Society of Massachusetts. Dr. Loring has been associated with such men as Agassiz, C. A. Flint and others, in agricultural and scientific labors. His acquaintance with the prominent men of the day is remarkably extensive.

Dr. Loring's contributions to agricultural

DEATH OF JERSEY BELLE.—The most noted Jersey cow in the world, "Jersey Belle," of Scituate, Mass., died on the 12th inst. She has produced 705 lbs. of butter in one year, and 25 lbs. in one week. She leaves three daughters and two sons. Two of the former are owned by Mr. Ellms of Scituate, the owner of "Jersey Belle," the other one is owned by Col. Russell of Boston, who paid \$2,500 for her. Henry Pierce of this city owns "King of Scituate," one of the sons (which stands at the head of Mr. Pierce's herd at Scituate, Mass.); the other, "Duke of Scituate," is owned by Mr. Darling of the Fifth Avenue hotel, New York. Mr. Pierce has lately purchased bull-calf "Aristocrat," grand-son (through sire and dam) of "Jersey Belle," for \$1,000, and intends this fall to bring him to California. "Belle of Scituate," dam of "Aristocrat," in her fourth year



DR. GEORGE B. LORING—COMMISSIONER OF AGRICULTURE.

literature were large and valuable; his experiments were accurate and useful, and, as a practical farmer and breeder, his good judgment, extensive knowledge, and good common sense have proved that farming can be made to pay. But what renders Dr. Loring's services to the department and to the country most valuable, is his broad and liberal views, and his perfect freedom from hobbies. These he neither imports, breeds, raises nor rides. The whole field of national agriculture, under his superintendence, will be practically and faithfully cultivated.

HORTICULTURAL FAIR AT REDWOOD CITY. We notice that the San Mateo Horticultural Society has decided to hold a horticultural fair at Germania hall, Redwood city, at a date to be named hereafter. Fruits, flowers and vegetables will be the leading exhibits. We are glad to hear of this movement on the part of the San Mateo society. The county contains some of the most skillful horticulturalists of the State, and for fine gardens and greenhouse plants, ranks very high. The proposed exhibition, if it receives the co-operation of the growers as it should, will be worth a long journey to see. We wish the enterprise the fullest success.

has been making 18 lbs. of butter per week, thus proving that after like comes like in breeding from well-bred Jerseys. Mr. Ellms had a standing offer of \$10,000 for "Jersey Belle," and if her life was not insured, is a heavy loser. The death of "Jersey Belle" will no doubt give occasion for many interesting comments in the Eastern stock journals, and as the cow is to be so intimately connected with Jersey breeding in California, we shall doubtless have more to say about her record hereafter.

STATE HORTICULTURAL SOCIETY.—The next meeting of the State Horticultural Society will be held at the Academy of Sciences hall in this city, on Friday, July 29th, at noon. There may be expected an essay on "Apricots," by Dr. Strentzel, and an address on "Mildew on Fruit Trees" is looked for from J. P. Moore, of San Rafael, who is one of our best authorities on fungoid growths.

WALKER BLAINE, Assistant Secretary of State, is at Gloucester, Mass., paying out money received from Great Britain on account of unlawful interference with the American fishing fleet at Newfoundland.

## Horses for East India.

There is quite an active demand for fine, useful horses in East India, and animals are being brought from long distances. A writer in the Auckland, New Zealand, *Weekly News* states that the Indian Government has, from time to time, dispatched agents to Sydney, Melbourne and Adelaide to select and purchase on the spot chargers suitable for the service of their cavalry and artillery. Late Australian accounts tell us that certain Melbourne men are about to take up "extensive pastoral and agricultural properties in the northern territory of South Australia" when, besides cattle-breeding, they intend horse-breeding for this particular export. They mean to take with them "500 head of well-bred mares, and the necessary stallions, as the beginning of a large stud to breed horses for the Indian market." The project of forming a great breeding establishment in that now country at the north side of the continent—which, among other advantages, would shorten the voyage to India, by saving the distance round the coast—was contemplated in Melbourne some years ago, and we see it is now about to be carried into effect.

The Indian authorities have always been in strait for the supply of horses for the army, and so it has been their habit to import, not only from the neighboring countries, Persia, Afghanistan and Arabia, but also from the South African colonies, as well as the Australian. And the demand is not confined to the government, but is shared by private persons, the Europeans living in India. It may seem odd that there should be such a necessity in a region so extensive as Hindostan, which includes all sorts of country with every variety of temperature—mountains and cool tablelands, as well as tropical plains. One would imagine that in a country with so much variety of surface and climate, if good breeds do not already exist, they could be established. Moreover, cavalry has been at all times the principal force in the native armies, as in all Oriental nations. So horses are abundant in India, but it seems they do not meet the European requirements. There have always been complaints of the "country-bred" horses. Even when not "cat-ham'd Tattoos" or "screaming, vicious Belooches," they are pronounced wanting in strength and endurance, or they are undersized. The artillery requires a class of horse powerful as well as active; and European riders, even when not taller than the native horseman, are larger boned and heavier men. The experiment of forming new breeds was tried—among other places, on the Mysore tableland in the Madras Presidency—but from the accounts we have seen the results do not seem to have given satisfaction. Though such experiments were in operation many years ago—before the period of the mutiny as well as in late years—it does not seem that they are likely to stop the imports which still go on.

This enduring Indian demand is, as we have shown, exciting enterprises in horse-breeding in Australia to supply it. New Zealand is also thinking of such an outlet for their surplus animals. These countries are now drawing fine animals from the United States to improve their stock. We see no reason why California should not ere long figure in the same trade, which must be profitable or it would not lead to the special productive efforts we have described. It is true that the lower countries have quite an advantage of us in point of distance, but distance on the high seas can be annihilated when the motive exists. Horse-breeding in California is now going forward in a gratifying way, and the character of the stock is being splendidly improved. At present there is a good local demand for really fine animals, and many more can be profitably disposed of here before it will be necessary to look for an export outlet. But it is well to bear in mind that there is possibly something beyond our own borders as a warrant for further improvement and extension of breeding enterprises. Our State has many peerless advantages in horse-breeding, and it will not be surprising to find ere long that the California horse, like many other of our peerless products, has a fame throughout the world.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### A Ranch on the Mokelumne River.

EDITORS PRESS:—A loan of a copy of the RURAL, containing descriptions of prominent and important places in the State, and some of its enterprises, to a recent visitor from the East, suggested the writing of this communication. Agricultural literature and kindred subjects seem to be popular reading in California at the present time. Information of that kind is now eagerly sought for by many who are turning their attention toward the Pacific slope and particularly to California on account of her salubrious climate and the advantages she offers to the immigrant in almost every department of human industry and enterprise. In giving the characteristics of localities as to their resources, productions, etc., the stranger and fortune-seeker will soon learn where he may be best suited, and the RURAL is doing an excellent good work in that direction.

One of the publishers happened to be perambulating through the country around the towns of Lodi, Woodbridge, and the village of Acampo, and was pleased to take some notes for publication in his popular journal in reference to crop prospects and the present outlook. He had a very pleasant interview with some of the ranchmen in the neighborhood, made a brief mention of the improvements going on and the progress shown in developing the resources of this part of the valley. Among others noticed was the Albert J. Woods ranch on the Mokelumne river, confining his remarks chiefly to its present condition rather than to what it is to be prospectively, from plans laid out, and as indicated by improvements already commenced. The Woods ranch is somewhat of a recent purchase; had been rented out for a long time previously, and allowance should be made for the appearance of the surroundings on that account. But the place has, topographically and aesthetically, natural attractions which would at once engage the eye of a person of taste and judgment, and characteristics as to soil and location especially adapted to a diversity of products, a safer policy to insure success in farming life than to depend upon one or two of the cereals, the rule almost in San Joaquin county farming.

This Woods ranch is between 500 and 600 acres in extent, the larger proportion upland, and some 200 acres bottom-land, bounded by the meandering Mokelumne on the east and south, and an island and a land-locked lake on the west. The upland has the ordinary appearance of the rich plains of the San Joaquin valley, level as a house floor almost, and dotted over with the evergreen oak, which is fast disappearing before the woodman's ax. On the score of utility alone one might be induced to invest in this enterprise with safety, while the scenic effect would be a double incentive, as nature has grouped them together of upland and lowland, of lake and river, of the island symmetrical in form and of good elevation, of groves and belts of timber, the whole combining that proportion and variety essential to a perfect picture. Though Californians are accused of "blowing" in their descriptive efforts, it is no stretch of language to say that the view from the old, dilapidated homestead is very fine.

The house is of primitive build, as it were, conspicuous inside and out for the absence of all architectural merit or mechanical skill; but its ventilation is complete and in accord with the rules of hygiene. Erected presumably about the time the Digger Indians vacated these parts for more congenial quarters, it is one of the old landmarks and has quite an interesting history in connection with political and official affairs. Situated on the brow of the hill that leads to the bottom-land, a relief from the dead level of the plains, the yard ornamented with trees of profuse foliage, under whose pleasant and grateful shade many a social hour is spent, it is a pleasure to have always in view a panorama of natural scenery, combining in a great degree, now that the crops are maturing, the *utile dulci*. And then the grand old mountains in the distance, the Sierras to the east and the Coast range on the west, old Diablo, somber and rugged in outline, towering above them all, one may appropriately repeat again the backneyed quotation:

"Distance lends enchantment to the view."

The ranch has just got to be in good working order, and some of its richest soil put to profitable use that before yielded nothing to the profit account—a system that will be pursued until every foot of land that can be, will be utilized to "make it pay." To this end a thorough system of leveeing has been determined upon and partially completed, to go round the circuit of the bottom-land, without which the annual inundations of debris would bury much of its fertile soil out of sight. The work is rather a formidable one and expensive, but brains and energy will push it through. Two gangs of Italians are clearing off the timber where the remainder of the levee is to be built, and it is expected that by another wet season, or rise, the levee will be completed so far at least as to prevent any further injurious deposits of debris upon the lowlands.

Another improvement of importance and some magnitude is the fruit orchard and vineyard, to which a pretty large area will be devoted. Between 1,100 and 1,200 fruit trees have been already set out by way of commencement, and as many or more of grapevines, all of the best varieties, and these will be added to until the area set forth for the purpose is filled. An orchard and graperies of the dimensions contemplated is no uncommon thing for California, but what is worthy of notice and example is, that the care of selection and treatment are unusual, every tree and vine having received especial and separate attention of cultivation, prunings, washings and protection from hot suns and winds; the consequence is, that about 98% of them are living and doing well. The small fruits also are to be a part of this enterprise. It is thought the location of this orchard and vineyard is the best possible for the purpose, between the waters of the river and the lake. Both earth and air are more susceptible of moisture on that account. The healthy and rich coloring of both tree and vine is an evidence of it.

An orchard and vineyard of 60 acres, growing on the gentle slope of the hill and the bottom-land, right beneath one's feet as it were, in blossom or in bearing, will be a feature that will add a good deal of interest to the situation; an element of beauty in connection with the natural attractions above alluded to that gives it a tinge of romance belonging to the ideal home. But plain, practical people, who don't indulge in air-castle building, take the utilitarian view in "looking after the main chance," and estimate its value for the variety of its products as a grain, fruit and vegetable ranch, the latter either field crop or kitchen garden, without the aid of California's greatest desiderative—irrigation. It will also make a most complete stock ranch and for general farming can hardly be excelled. Timber is another of its products, which affords a revenue, while fish in river and lake, and game, for the disciples of old Isaac Walton, and for sportsmen, including the trapper, add to its worth in proportion as they subserve useful or pleasurable purpose. These characteristics, with the improvements contemplated, make up the perfect ranch, and are no doubt the inducement of its owner, as rumor says, to leave, in time, his present more elegant and comfortable home ranch for this as a permanent dwelling place. If plans are perfected and hopes should meet with fruition, he may then consistently say, with the Psalmist, "My lines have been cast in pleasant places, I have a goodly heritage."

The crops in this section may be said to be good, better than was anticipated before harvest, though not so heavy as last year. If appearances prove anything, however, it is that summer-fallowing should be adhered to as an undeviating rule in this locality. Statistics assert, as a fact, that wheat lands are deteriorating, the yield getting less and less upon an increased acreage, and while this is claimed, or, rather, reputed to be the best part of the San Joaquin valley for the production of that cereal, yet cropping without cessation will make them poorer, while practical experience has pointed out the way to recuperate lands in that condition, or keep them up to the standard that will raise good crops continuously—summer-fallowing. One may see the effect of good crops in the number of new buildings going up all round the circle; there seems to be a landable emulation existing among the ranchmen and town people to improve the country in that respect. Even Acampo, which has so long been a little more than the nucleus of a town, is spreading her wings, and the present outlook is that she will keep pace with the rich and progressive country around her. W. H. BUTLER.

Acampo, San Joaquin Co.

## THE STOCK YARD.

### Notes on California Breeding.

EDITORS PRESS:—Someone sends me a Stock-ton paper containing an account of the proceedings at a Granger's meeting, in which Mr. Overhiser, Dr. Grattan and Lecturer Johnston discourse on the relative merits of Durham (Short Horn) and Jersey cattle for dairy purposes. Mr. Overhiser defends the Short Horns, and says they are the best for all purposes. Dr. Grattan does not appear to have any very decided ideas on the subject, but Mr. Johnston says:

Talking about cows is my strong suit. If you want cattle for beef, why, take the Durhams. If you want for milk and beef, the Ayrshires will suit you. If you want a nice, pretty, handy cow for milk and cream and butter, nothing excels the Jerseys. I have been in the business for 20 years, and have milked all kinds. I have had a herd of pretty, well-bred Durhams. I have raised half-breed Jerseys from an imported bull, and out of 100 half Jerseys, during the month of January, I marketed 3,300 lbs. of butter. Now, I can keep three Jerseys to two Durhams.

Overhiser—Can't do it. Johnston—I know what I am talking about. I feed in the barn and weigh every bit of food the cattle get, and three Jerseys to two Durhams is the average, and each one of the Jerseys will make as much butter as the Durhams—not as much beef as the Durhams—but the milk of the half Jerseys is 25% richer in cream than that of the Durhams. I have not the full breeds, but my stock is well bred up. I never sold a good cow in my life till last winter, and then I got \$100 for one. Now I ask what you want cattle for? If land is high it will not pay to raise cattle. I raise calves only to keep up my dairy. If you can make \$5 or \$6 only a year more from a Jersey cow, that is the cow to keep; because, when you come to want

the animal for beef, there is not that difference. I keep no cattle for beef nor to raise stock from. That will do where land is cheap. But for rich milk, nice cream and yellow butter, give me the Jerseys.

Admitting all that Mr. Johnston says about Jerseys as Jerseys, I do not by any means propose to accept his statement in regard to keeping three Jerseys on the same food that two well-bred milking Short Horns can be kept on. I do not think it would be difficult to find two Short Horns that would give as much milk and butter as three ordinary Jerseys would do if kept on the same amount of food as that consumed by the two former. If Mr. Johnston was so unfortunate in his selection of the "herd of pretty well-bred Durhams," which he says he had, he ought not to throw the whole blame on the breed. He evidently did not get the right sort to begin with.

Then again, does he mean to say that he keeps two separate herds, one of each breed, at the same time? I am led to understand him so when he said "I feed in the barn and weigh every bit of food the cattle get, and three Jerseys to two Durhams is the average." Again, "the milk of the half Jerseys is 25% richer in cream than that of the Durhams." The milk of the latter breed contains on an average about 12% of cream, and Mr. Johnston tells us that the milk of his favorites contains 25% more. Does he really mean that the milk of half bred Jerseys is 37% or more than 1/2 cream? If so, the following question suggests itself to my mind: If the milk of half bred Jerseys is 1/2 cream, how much will the milk of the pure bred ones contain? As Mr. Johnston says he has not the "full breeds," I do not expect him to answer the question, but perhaps he may be able to refer to some one who has the full-bred milk.

Mr. Johnston says he has been in the business 20 years, that he raises calves only to keep up his dairy, and that he never sold a good cow in his life till last winter, and then he got \$100 for her. I have not been breeding cattle in this country quite so long as Mr. Johnston says he has, but I have sold a good many graded Short Horn cows at \$100 to \$125 each, reserving the calves, and have not yet found out what better use can be made of land than to breed and rear good cattle on it. When a heifer has a calf at about two years old, breeds and milks well and regularly, we are not much indebted to her for the cost of rearing by the time she is four years old, by which time she will have had her third calf, and will then be fit to sell as a family cow; her milk and the calves bred from her will be worth more than her cost, and the price she is sold for will be something like the net profit.

The kind of cows I have been in the habit of selling give from 18 to 25 quarts of milk a day, when properly fed and attended to. One person to whom I sold a cow last January (after having milked her five weeks after calving), told me that they made 12 lbs. of butter a week from her—the only cow they kept.

### Dairy Show Suggested.

If we could only get up a dairy show in connection with the Mechanics' fair in San Francisco, we would then have a chance to bring our cows together and find out who had the cows that would give the most milk and butter. I borrowed a State fair premium list from a friend the other day to see what premiums were offered for cattle, but amongst them all there is not a single premium offered for the cow best adapted for the dairy; therefore, if Mr. Johnston feels inclined to get up a little friendly competition amongst dairymen, I will join him in trying to show the cow or cows that will produce the most milk and butter in a given number of days.

### Appreciation of Good Stock.

Mr. Overhiser thought the farmers did not appreciate fine cattle, hence he had sold out his Durham cattle and has gone into the fish business. Now, it is cattle before fish with me, and I don't at all agree with Mr. Overhiser when he says that farmers do not appreciate the benefits to be derived from keeping good cattle. I used to think that his cattle breeding was quite a secondary matter with him, and I take the present opportunity of warning him not to let the "fish business" get down to the second place in his thoughts, else his efforts in that line may come to be no better appreciated than his breeding of good cattle proved to be; then, maybe, his fish won't swim.

As I have often said before, when a person undertakes to breed pure bred cattle of any breed successfully, he will find it to be a business requiring a great deal of forethought and skillful management; and if he has a large herd, he will also find that to properly attend to the management of the herd and a suitable farm to keep it on will require all the attention that one man can give to it. It will be just as much our duty and pleasure to show our herds and explain our methods of managing the same to inquiring visitors and intending purchasers as that of people in any other business to show their goods, and he who industriously devotes most of his time to his own business, is generally the one who succeeds best.

### Selecting Profitable Stock.

But to return to the appreciation of good cattle by farmers, it is quite true that many farmers do not appreciate their value; but the majority of those farmers who own a few cattle and have to make their living by them, know how much better it is to keep good cattle than poor ones, yet few act up to their knowledge in the matter—some, because they think they cannot afford to pay the price a good bull would cost; others are backward about weeding out their poor and unprofitable cows which they

keep on to the injury of the good ones through the overstocking of pastures in the growing season. Thus, the good cows that would be very profitable are robbed of their just dues by those cows that are in no way profitable to keep. If all dairymen would weed out their unprofitable cows, use good bulls of good milking families of Short Horns, and rear heifer calves from the choicest of their cows only, they would very soon own cattle that could be depended on for breeding good milkers.

I am not much in the habit of publishing the sales of cattle that I make, but to show that there are people who appreciate good cattle, I give the prices obtained for breeding bulls and heifers sold since the 1st of December last, also the age of each animal:

Roan S. H. Bull, 15 months old	\$100
Red " " 10 months old	200
Red, grade, 6 months old	100
Red S. H. bull, 21 months old	150
White " " 31 months old	50
Red " " 10 months old	150
Red " " 10 months old	150
Red " " 13 months old	150
Roan " " 10 months old	200
Red " " 13 months old	150
Roan " " 6 months old	150
Red " " 9 months old	125
White " " 14 months old	150
Roan, grade, 6 months old	75
2 roan heifer calves	200
1 " " 31 months old	100

\* Not my own breeding.

† After using.

The above list includes the bulls sold since the date named (in the meantime I have refused much higher prices for older bulls reserved for use in my own herd), and the prices are probably as low as the same class of bulls could be bought for in any other part of the country. I believe some people are frightened out of going to buy, or inquire about buying bulls, by the unreasonable prices asked by some breeders, who eventually take less than the price first asked. That is not the way to do business in buying and selling Short Horns. A breeder ought to know the market, and also know, if any man knows, what his own animals are worth, and if anyone wants to buy of him, it is best to name the price he knows them to be worth. Every one of the prices given are just what I asked—in fact, several of the animals were sold unseen and by letter, on my recommendation; I would rather people would come, but it is not always convenient for a man to travel 200 or 300 miles in search of a bull, therefore some are willing to take the risk of being suited without going to the expense of a long journey themselves.

ROBERT ASHBURNER.

Baden Station, San Mateo Co., July 15, 1881.

## THE PUBLIC LANDS.

### Available University Lands.

In answer to inquiries from our readers we have been informed by J. Ham. Harris, Land Agent of the State University, that there are about 7,000 acres of public land still obtainable from the University. Other questions asked will be found answered in the following official circular, giving information as to the way in which these lands can be secured:

Under the act of Congress, approved July 2, 1862, entitled "An act donating public lands to the several States, which may provide colleges for the benefit of agriculture and the mechanic arts," the State of California was entitled to select and locate 150,000 acres of public land; of this grant there are 7,000 acres not sold and not located. The right to select and sell this land is vested in the Board of Regents of the University of California. Neither mineral nor swamp lands, nor lands within the 16th and 36th sections, can be selected under the grant. None but vacant unappropriated public land can be located. Both surveyed and unsurveyed lands can be selected. No scrip is issued, nor can any scrip be used in locating California college lands. There is no restriction as to the number of acres that may be located by an individual. The Land Agent simply acts as the medium through which selections are made in the U. S. Land Office.

A person desiring to purchase land from the University must find the land he wishes to locate. He must then make application to the Land Agent of the University to purchase the land, describing it by section, township and range, and giving the subdivision of the section. The applicant must be able to make affidavit in substance "that he is a citizen of the United States, of lawful age, and that there are no improvements of any kind on the land, other than those owned by himself."

A person desiring to locate unsurveyed land must file with the Land Agent the same application as that required for surveyed lands. The township and range in which the land is situated must be given, together with a sketch or plat describing it as nearly as possible. Upon application being made by the Land Agent to the United States Surveyor General to survey the township in which the land is situated, if that officer declines to make the survey for the reason that there is no money appropriated for that purpose, then, in order to secure the survey the applicant will have to advance sufficient money to pay for the survey, and the money so advanced cannot be refunded.

Terms of Sale.—If the land sought to be located is inside of a railroad reservation, the



price is \$6.25 per acre; if not included in a railroad reservation it is \$5. One dollar per acre must be paid at the time the application to locate is made, together with a fee of \$5 on each application. The balance due is payable in five years (or sooner, at the option of the purchaser), with interest at 7% per annum, payable on or before the first of July of each year. Persons should be careful not to apply to purchase lands to which any adverse right has attached or may be set up. The University will not litigate or pay for any litigation that may arise in the U. S. Land Department or in the courts on account of adverse claims to land selected. If there is no valid adverse claim to the land at the date of location, the right of the University to the land attaches the day and hour the application to select is filed in the U. S. Land Office. It is not necessary for locators to reside or place improvements upon the lands located. The necessary blanks will be furnished persons desiring to make locations, as soon as they have found the land that they desire to locate.

## THE FIELD.

### Pacific Coast Hops.

Phil. Neis, hop merchant of San Francisco, has issued his customary hop circular, as follows:

Our market is bare of choice hops, and not one bale is left in growers' hands. Stock in warehouses, 249 bales, all of which are of inferior quality. Fluctuations of prices during the season insignificant. With the exception of the Willow Grove, values since September ruled from 15 to 20 cents. Last year's crop reached in round numbers 15,500 bales, of which 8,540 bales were grown in California, 4,990 in Washington Territory, and 1,935 in Oregon. Overland export, to date, 10,310 bales; by sea to Australia, New Zealand and other countries, 573 bales, making 10,883 bales. Quality of California hops was mixed; Washington Territory, not up to previous years—partly frosted; Oregon, better than usual.

Prospects of the growing crops: California crop will be shorter than last season. From present appearances, the yield will be all the way from 10 to 50% less than last year's. Yards in Mendocino, Lake and Napa counties will produce only half a crop. Washington Territory—vines look better than for the last two seasons, and if nothing interferes 1,000,000 lbs. will be produced. Oregon—the crop will exceed last year's increase of acreage 10%. The best care has been given to the yards, and most of them promise a heavy yield.

### Diversifying Crops.

EDITORS PRESS: Shall we continue to raise wheat, and only wheat, until all the elements which enter into its composition have left the soil, and until it is impossible any longer to raise wheat?

This may, at first, seem a foolish question, but let us inquire into the matter a little and determine, if possible, whether there is any danger of this. As I have said before, people have not wholly outgrown the idea, prevalent in years past among the first-comers to California, that one must grasp wealth at once; and when they find they cannot accomplish this, and accomplish it speedily in the gold mines, they seek to become possessors of wealth by overworking the productive soil of our valleys and hills, causing it to produce every year a crop of wheat, thus changing its very nature, and in time rendering it almost entirely worthless. I am more and more impressed with the fact that some thought must be taken for the future welfare of our land. Ranchers must begin to realize that they are making homes, not only for themselves, but for those who are to come after them, and that the land must be managed in such a way that it shall be nearly or quite as productive in years to come as it now is. I am satisfied that throughout a part, at least, of the Pacific coast, this thought is entirely ignored. The question arises: What shall be done? Can we give up the cultivation of wheat for a year and try some other crop? By no means; there is no cause for so doing.

Let each man try a few acres of some crop other than wheat, and test it each year. I have been perfectly astonished to see what California land can be made to produce, and land, too, much of it, which had been considered worthless, either on account of its color and gravelly nature, or its hills, ravines, etc.

#### Flax.

The Pacific coast is so varied in climate, nature of its soil, etc., that we cannot know, except by experience, what can be produced. I shall speak this time of the cultivation of flax, as I consider, that, in all parts of the coast, and especially of California, this could be successfully and profitably raised, and that it would cause the land to be more productive thereafter for the cultivation of wheat.

I see, in passing the ranches here, that more and more of this is being raised every year. In many respects, it has the advantage of wheat. It can be sowed later, will stand more drouth, pays better, and is a surer crop. Now let me mention some of my reasons for thinking that flax could be much more profitably raised in California than in Nebraska, where I am now visiting. In this climate it has to be harvested before it is really matured, on account of the

fact that the rains, which are sure to come about harvest time, cause it to lodge. With us, it could be allowed to stand the same as wheat.

Rain during harvest is a greater injury to it than to other grain. It also does best where the last few weeks before harvest are without rain. Flax seems always to do well where other grain will. The only objection is that not nearly as much money can be made from the raising of it, if the seed has to be exported and the straw unused, as could be realized therefrom were the facilities close at hand for the manufacture of linseed oil from the seed and linen and rope from the fibers of the bark. This, however, would be obviated, for it would soon become apparent to moneyed men there, as it does elsewhere, that it pays well to manufacture these articles at home.

The time must and will come when less capital will be lost by speculation in stocks and more will be used in home industry. The farmers will then save freight on a great many goods, both ways, when sent away as raw material and when imported again in a manufactured state.

In one respect only does it cost more to raise wheat than flax, viz., it must be threshed more slowly.

S. A. S.

Fairmount, Neb.

[Our readers are already informed on the subject of flax. There are large quantities grown in the lower coast counties, and we had some very practical articles on flax-growing from a Pescadero farmer last year. However, the subject is a fair one for discussion.—EDS. PRESS.]

## FORESTRY.

### Arizona Trees.

Our contributor, Prof. J. G. Lemmon, who, as our readers know, passed the early summer in Arizona, in the prosecution of botanical studies, prepares for the *Arizona Journal* a valuable statement concerning Arizona trees and plants, as learned by his latest researches. He writes: Among the most interesting discoveries made this season in the Arizona mountains are some facts which, though closely connected interiorly, yet superficially may be put into two classes:

First—Distinct and hence new species of plants derived either from extinct families, or also differentiated by ages of isolation from kindred living plants.

Second—Remarkable varieties, almost amounting to specific differences, owing to peculiar local and climatic conditions.

Time will admit of only the merest mention of these two propositions, which, with adequate ability, might be elaborated into deeply instructive essays, perhaps.

#### Of New Species.

Over two dozen have been detected in the mountains of Santa Catalina alone. These include plants of widely separate orders, from the tiny lichens and the useful grasses to the lovely ferns and the more consequential shrubs and trees. Precise scientific names cannot be given to all of these yet, until consultation of the authorities is had; but many readers will not be sorry to miss the difficult Greek and Latin names, notwithstanding their appropriate descriptive signification to the scientific reader. From the standpoint of utility, we would look at these discoveries from the bottom of the list indicated, that is, take a glance at the trees and shrubs first. But one botanical explorer has before reported maple trees from within the limits of Arizona; yet a

#### Fine Grove of Sugar Maple.

Which may be distinct, is found in the deer park included by the higher peaks of the Catalinas. Also, on the sunny slopes is seen a new and beautiful cypress, detected also by Mr. Green on the White mountains, northward, I believe. A sugar maple is reported by the miners on the north slope of Dos Cabazes, in the Chiricahua mountains, which is perhaps the same as this of the Catalina. The writer has arranged to have leaves and fruit forwarded to him soon, for determination, and may then report. The maple trees in the Catalinas are some of them one and a half ft. in diameter and 40 to 50 ft. high; of dark smooth bark, and long slender limbs. The leaves and flowers were just expanding when we first came upon the trees, amidst the melting snow banks, on April 30th; but the trees had been tapped by two adventurous pioneers there, and we had a canteen of excellent sap and a fine article of syrup given us. This maple strongly resembles *Acer grandidentatum* found in Oregon, but if it proves to be that species it has made a wonderful skip over the States of California and Nevada, where it is unknown.

Between this class of plants and the next stands a large and valuable pine tree, which until lately was considered a variety of a certain white pine found on the Sierra Madre mountains, Mexico, but of late declared by the highest authority (Dr. Engelmann) to be a distinct species. This pine resembles the common sugar pine of California, but the cones are not half so long and, even when young, the scales are strongly reflected, suggesting the Doctor's new name for the species:

#### "Pinus Reflexa."

It is frequently met with in the deer park referred to, also on a similar plateau on Mount Graham, and is reported also from several other ranges.

Among the second class of plants—the remarkable varieties—there is time to mention only one pine. In 1875 Dr. Rothrock, of the Wheeler survey, discovered on the Santa Rita mountains a pine tree having a strong resemblance to the common yellow pine of California (*Pinus ponderosa*), but having its leaves in fascicles of five each, instead of three each, the number in the typical species. Coupling this character with others, derived from the smallness of the cone, etc., Rothrock judged the two to be distinct, and gave it the name of

#### "Pinus Arizonae."

Though admitting that his "data was very meager," Last autumn, Dr. Engelmann himself, with Prof. Sargent, visited the Santa Ritas, and both became satisfied that the pine was indeed distinct and entitled to be ranked as a new species. Now, in the large inclosed forest of the Santa Catalina mountains, we find pine trees of the appearance and description given for the *Pinus Arizonae*, including the long, slender leaves in bundles of five; but, unfortunately for the fate of the new species, some of the leaves are in fascicles of all numbers from two to seven! On examination of this forest for several days, every variety of character distinguishing this polymorphous species was noted; the same as in the Sierra of California, with the added features of many-leaved fascicles and very small cones; so we are compelled to believe that the so-called *Pinus Arizonae* is only a form, or, rather, a sport of the *Pinus ponderosa*, so variable in its forms in California as to have received there four or five names from the lumbermen, but all specifically connected by intermediate forms. Of course, we must not deny that the *Pinus Arizonae* may exist in the Santa Rita mountains, a range some 50 miles southward of the Santa Catalina; but certainly the presumption is against it, and the facts presented, we think, show the wonderful transformation powers of isolation and climatic conditions to which this species has been subjected for ages, almost rendering it a distinct species. Fascicles of these pine leaves of different numbers and various lengths have been sent, accompanied by the gist of the above notes, to Dr. Engelmann, Prof. Sargent, Dr. Parry, and to the California Academy of Sciences, from whom we may expect decisive reports.

## THE DAIRY.

### Timothy on the Pacific Coast.

EDITORS PRESS:—If timothy is not indigenous to this country it is making itself quite at home here. It is disputing the hillsides with the almost ubiquitous fern. I send, in a paper box, a few sample heads of timothy, and two sample stalks.—J. ROGERS, Walla Walla, W. T.

This beats all the timothy we ever saw. One of the stalks is 7 ft. 4 inches long, and of the heads, many are 10½ inches long, and one is 11½ inches. Timothy does not succeed in the greater part of California, as the long, dry summer is fatal to its bulbous roots; but in some of the extreme northern counties, as in Lassen, for instance, it makes a splendid hay plant, as it does at the East. The same is the case in Oregon and Washington Territory; and as the land is new and rich, the timothy makes a marvelous growth as shown by the samples sent by our correspondent.

As this is the case, it may interest some of our northern dairy and stock-growing readers to have some points on treatment of timothy meadows which is the result of the best Eastern experience. The *National Live Stock Journal* says: One of our principal meadow grasses is timothy, and this forms a tuber or bulb just above the surface of the ground, and is injured or destroyed when the bulb is cut or eaten off. Pasturing meadows of this grass is likely greatly to injure these bulbs, and this explains the serious injury that occurs when these meadows are pastured in the fall. Cutting too close with mowing machines often injures it. Timothy is, perhaps, our most valuable meadow grass, as, with proper attention, it will easily continue 10 years in succession to yield large crops. If our meadows consisted of Kentucky blue-grass, wire grass, orchard grass, red top, etc., pasturing would not be so fatal, although then not advisable except on alluvial or overflowed land.

But let us see what the real value of the aftermath of timothy meadow is worth. Take the case mentioned of 75 acres pastured. Four cents worth of wheat middlings and corn meal per day to each cow, would have produced more milk and left the cows in better condition, during the five or six weeks that they were allowed to run a portion of the day upon the meadows. This would have cost, at the most, only about \$1.60 per head, whilst the damage to the meadow was at least ten times as much. Meadows require generous attention, should be top-dressed with stable manure in the fall, instead of pasturing them, and when this cannot be had, should be top-dressed with some commercial fertilizer every few years, and thus kept in full production, and your dairy full fed through the winter.

KEEPING BUTTER FOR HOME USE.—A lady reader asks how she shall manage to preserve the nice butter made from the family cow for use in the late fall. As it is made in small churnings, she does not see how she can keep these small lots in fine condition for so long a time. Our correspondent has, no doubt, the best possible means at her hand of doing just what she desires. She has some unused fruit

cans—quart and two-quart—and they offer her precisely the means she is looking for to preserve her butter. When the butter is worked ready for packing (and this should always be done the day after churning), let her make a small muslin sack, about half an inch smaller in diameter, and of the same depth, as the glass fruit can she will use. Put this muslin sack into the can, and fill it with butter through the mouth of the can, using a small rammer to press in the butter till the sack is full up to the neck of the can. About 3½ lbs. may be put in the sack for a two-quart can. When the sack is filled firmly with butter, fold over the upper edges, and place across the top of the sack a strip of wood that has been soaked in brine. This is to keep the sack from rising to the top of the brine. Now pour in strongly saturated brine, made from butter salt, and fill the jar, over the top of the sack, completely full; now screw on the cover, air tight, and it is prepared for keeping six months, or a year, as completely as you may keep fruit put up in the same can. These cans, filled with butter, should be set in a dark box in the cellar. This butter may be taken out through the neck of the can with a tablespoon, and it will be found as fresh, rosy and delicious in flavor as when first put up.—*National Live Stock Journal*, Chicago.

## AGRICULTURAL ENGINEER.

### Notes on Irrigation.—No. 3.

Under most favorable circumstances, it is not probable that with us more than one-half or two-thirds will receive the district benefits at any one time. This, at two-thirds, would amount to 100,000 acres. It may be safe, however, to venture the assertion that owing to our general inexperience in the science of irrigation, the crude and uneven state in which much of our land at present lies, that not more than 25,000 acres would receive the benefits for the next five years, even if we had the works constructed. In solving the problem as to the quantity of water that will be required, or its duty per cubic ft. per second, we must consider the nature of the soil, the subsoil, crop, climate and topography of the district. Confining my remarks to the section between the Mokelumne and Calaveras, which has been one of the fields of my examinations I find that the soil of the Calaveras bottoms which constitute our "black lands" is mostly a clay adobe, with an admixture of about 20% of sand. The land lying between the black land and the live oaks contains from 20 to 40% sand; the oaks 50 to 80% sand. Soils vary greatly in their power to absorb and retain water. This is due to the surface attraction of the particles of soil for the water, and the finer the particles of soil, the greater will be the amount absorbed, because the total surface of the particles is greater, and the longer they will be retained. A gravelly soil, or a soil of pure sand, will absorb but a small quantity of water and will soon part with it, while a fine alluvial soil, or heavy clay, will absorb a large per cent, and retain it for a long time. (See Schabler's experiments).

We thus see that the quality of soil (and I may add, its fine surface tilth which acts as a mulch), has very much to do with the measure of water required, and the engineer must consider and determine this point before any definite estimate of the needed supply can be made.

The subsoil of the district is similar in character to the surface soil, but more compact, probably from the fact of a smaller admixture of loam. This subsoil rests upon a substratum of hardpan or clay, at depths varying from 3 to 5 and 8 to 10 ft. As it is in a degree impervious to water and the topographic slope is sufficient, the water is transmitted by gravitation along the super surface to the lower points where occasionally it finds a rim forming a basin, and then comes to the surface in miniature lagoons or waterholes; but in its passage the moisture naturally rises through the soil by capillary attractions toward the surface, where it is eliminated as plant food, and gives a rank growth to vegetation. This is practically subaqueous irrigation, the very best that can be applied, and discounts asbestine process in its more general and cheaper diffusion. This, then, with us will become an important factor in determining the water supply. The climate also has an important bearing on our calculations.

The annual average rainfall for this valley is approximately 17 inches, varying between the extremes of 4.7 to 36 inches. We know that in California a gently falling rain of 3 or 4 inches will saturate the ground where dry, prepare it for the plow and start vegetation. This rain repeated, in less degree, every 20 or 30 days during the season, and our crops are assured, and the season is considered a good one. While often with violent storms and copious rains, producing floods, owing to our excessive slope but a small amount of water is retained to be absorbed and infiltrated into the soil, the excess passing off in channels of surface drainage.

In March and April we have our usual northers, that drink up all surface moisture, which are followed by the ardent heats and arid atmosphere of the summer months. During these months evaporation of moisture is excessive. Like mother earth, we, too, get dry and want libations of lager and "sich like drinks," while

(CONTINUED ON PAGE 58.)



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges respectfully requested for this department.

### San Luis Obispo Grange and the Transportation Question.

The following is sent to us for publication by San Luis Obispo Grange:

The San Luis Obispo Grange send greeting to the Patrons of Husbandry particularly, and to all shippers of this coast, Southern coast counties particularly.

**Fellow Citizens and Grangers:** We believe the time has arrived when we should carry into practice some of the principles of the Patrons of Husbandry and common sense. We ask you one and all to enter into a combination for securing to the whole Pacific coast just, equitable and lasting rates of freights and fares. We invite all who will co-operate with us to secure such results to send their names to the San Luis Obispo Grange. A committee will take charge of them and they will not be divulged. When a sufficient number of names have been obtained, a convention will be called, plans matured, and put into operation. We invite all of the Granges in the coast counties to become the receiver of a similar movement and to communicate with us. Send in your names! It will not cost you a cent. We are moved by the following considerations:

If all or a large percentage of the shippers on this coast, or the south coast counties will unite as one man in a combination to enter into a legal and binding contract with some carrying corporations or individual capital for a series of years, or for an agreed percentage of profit to take all the carrying trade of the coast, or south coast counties. Such service can be obtained at cost with a reasonable percentage of profit added. The reasons why we think this can be done are:

1. Large amounts of money are already invested in the carrying trade which ought to be and must be satisfied with a business that pays reasonable percentage of profit, if they are not permitted to make their own prices.

2. If the people combine they can control the carrying trade and force freights and fares to an equitable standard. Corporations and capital may own their ships and railroads but the people can if they will, control the movement of merchandise of all kinds. The coast counties have the ocean for an auxiliary, a highway that cannot be monopolized, a highway which is open to the capital and ships of the whole world. If we unite and take for our motto just and equitable rates of freight and fare and that we will have no other rates we must succeed.

Capital is becoming abundant all over the world. Particularly is gold, gold, gold pouring into our own happy land to pay balances due us, in the hands of thousands of emigrants, and seeking safe and long investments at low rates of interest or profit. Witness the sales of Government, State and county bonds and long loans made on first-class security of all kinds. Would not a contract made and backed by a whole people be the same or as good security as State and county bonds?

And are the people so foolish that when the unmistakable signs of the times and march of events and capital shake the co-operative contract system at them and call in thunder tones sign, sign! give us permanency, give us security and surety and we will give you service and money for small percentages of interest or profit, that they will not do it, but accept the menaces, the servitude, the shackles that are day by day being forged for them by corporations and aggregations of capital? Shall we subject ourselves at once to the avarice of corporations, and the percentages which they must charge to meet the contingencies that are possible and probable to them of rival lines and opposition when twice the carrying capacity necessary to the country shall be struggling for ascendancy, causing great waste and doubt as to the permanency and profitableness of the business and investment? If such a state of things is permitted it will be charged to the people as a part of the cost of the carrying trade. It has been said that we are and always must be dependent upon competition for low prices in everything; that this is a law which governs trade and commerce. It seems to us rather that the cost of anything depends upon the economy of its production. Shall we then depend alone upon competition, war and waste to bring us equitable freights and fares? Are there any of the elements of economy or cheap production in competition by rival lines? No, fellow Patrons and citizens we must join one and all, heart and hand, contract for and secure our commerce upon the most economic and equitable principles. Send us your names, your confidence will not be violated, you will have a voice in what is to be done, and it will not cost you a cent if nothing is accomplished.

Signed by the Grange Committee of San Luis Obispo Grange, July 11, 1881.

EDEN GRANGE, Haywards, confers the 3d and 4th degrees to-day (Saturday) at 10 A. M. Worthy Master Dennis, on behalf of his Lodge, extends an invitation to Temescal Grange and other Patrons to be present and partake of the harvest feast. Patrons who have hitherto partaken with the "Sisters of Eden," will not forget it. We are pleased to hear of the continued prosperity of Eden Grange.

### Some Significant Facts.

There are now invested in railroad property in this country upward of four and a half billions of dollars. Their net earnings for 1879 were upward of \$200,000,000.

This immense property is concentrated in the hands of a few men. The presidents of four roads—the Baltimore & Ohio, the Pennsylvania, the Central and the Erie—to-day control the price of breadstuffs on the Atlantic coast.

It is rapidly increasing. The funded debt and stock interest have increased in three years over \$700,000,000; the mileage nearly 20%.

It is exercising an increasing political control. The Central exercises an almost irresistible influence in the New York Legislature; the Pennsylvania a controlling influence in the Pennsylvania Legislature; the Central Pacific a despotic control over legislation on the Pacific coast.

It has a powerful if not a dominant representation in the United States Senate. Nearly every Senator added during the past three years is interested in railroad enterprises; and the railroad interest is straining every nerve to increase this railroad representation.

It controls three leading newspapers in the metropolis, one in the capital, and many others in different parts of the country.

The telegraphs of the country are concentrated in a single hand, and that the hand of a railroad president.

These facts are worthy of thoughtful consideration.—*Christian Union*.

### A Pleasant Grange Gathering.

After conferring the 4th degree at its last meeting, Temescal Grange postponed its harvest feast to Saturday, July 18th, at Bro. J. V. Webster's beautiful home in Fruitvale. The invitation for Eden Grange to participate, brought a large delegation of the "fair" and "stalwart" "live Grangers" of Haywards, who joined in making a pleasant and profitable day of it. The company were cordially met by Bro. and Sister Webster, and generously invited to make themselves "at home" in their elegant and substantial dwelling, and about the well-planned and ornamented grounds surrounding. Before the examination was completed of all that was interesting and instructive for the brothers and sisters to see of the thorough work done in the construction and improvement of the place, the gathering seemed indeed like a large family of Grangers, perfectly at home, and happy from youngest to oldest. For 20 years or more, Bro. Webster has worked his farm. It is now principally in well-advanced orchards. The place bears visible marks of the thorough and masterly hand of its cultivator.

Fruitvale is a sheltered nook, about three miles east of Oakland. In the well-protected grounds fronting the mansion, Bro. Webster is successfully growing orange, lemon, olive and persimmon trees, with a large variety of flowering and ornamental plants.

Being a warm day the sisters spread the harvest feast in the unique summer-house, perfectly formed from base to dome of that beautiful living evergreen—Monterey cypress. Abundance of substantial, cakes, hot coffee, lemonade, ice cream, etc., loaded the tables. These, surrounded with cheerful Matrons, Patrons and guests, with a liberal sprinkling of bright juveniles, just filled the charming space as completely as if all had been measured out for the occasion.

Repairing to the parlors, the committee reported a form of petition to the City Council for a free produce market in Oakland, to be signed by citizens of Oakland and farmers of Alameda and Contra Costa counties. It was adopted and signed by many present. Others will receive copies and sign with their fellow Patrons and farmers in other places. Immediate and persistent action in the matter was urged and resolved upon by members.

Mr. Campbell, by request, recited a thrilling incident.

Bros. Joel Russell (Chaplain State Grange), J. V. Webster (Treasurer State Grange) addressed words of wisdom and encouragement for the good of the Order. Brief and pertinent remarks were made by other brothers and sisters. Sister Webster rendered several beautiful songs accompanied by the piano, in an able manner. She was well supported in the singing of popular Grange songs. And thus the "labors" of the day closed, with pleasant and well remembered moments.

Thanks were voted to Bro. and Sister Webster for their generous welcome and kind attentions for the comfort and pleasure of Temescal Grange and their guests. Following is a copy of the above mentioned petition, which we trust will be thoroughly circulated and liberally signed:

To the Honorable Mayor and City Council of the City of Oakland:

We, the undersigned, citizens of Alameda and Contra Costa counties, respectfully represent that in our opinion it would be greatly to the advantage of the citizens of Oakland and the farmers and horticulturists living in the counties above named, to allow all farm and garden products to be sold by the actual producers free from a license tax, at some convenient place within the city limits to be designated by your honorable body. The principle is every where recognized that the more intimate the relations existing between the producer and consumer the greater are the direct benefits to both. While a license tax is imposed upon the actual producer, he has no discretion in the disposition of his products; leaving all consumers no other alternative than the purchase of their

supplies from the town huckster or of the Chinaman's stale stock in trade, scraped together from the refuse of San Francisco markets. These farmers or horticulturists with a few dollars worth of produce each month ready for market cannot afford to get out a license for the privilege of disposing of it, and consequently it is allowed to waste or be sacrificed to the dealers. It is an axiom well understood and recognized by business men everywhere that a town or city cannot grow and prosper while feeding upon its own vitals. That external trade is the life-blood of any prosperous community, and while the inhabitants of the rich agricultural regions around Oakland are by virtue of unjust restrictions compelled to send their products to San Francisco in order to realize a fair return for their toil, they will not to any considerable extent trade with the merchants of this town. So we have a city of 40,000 inhabitants depending on San Francisco for sustenance, instead of on the agricultural regions of one-half the State, which legitimately belong to our trade. Hence the truthful but opprobrious epithet that Oakland is simply a place where the people of San Francisco sleep and go to church on Sunday. Conscious of the advantages which will ultimately accrue to the inhabitants of Oakland and to all the people living in the rural districts adjacent thereto, we pray your honorable body may seriously consider the merits, and act upon the suggestions herein contained.

C. BAGGE,  
L. FRINK,  
J. V. WEBSTER, } Com.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

WHEAT.—*Chico Record*, July 16: Owing to the late winter rains and the large acreage overflooded by the floods, much seeding was deferred until it was too late for the grain to mature and yield a full crop, but as the weather through May and June continued cool and favorable for filling, ranchers became somewhat sanguine over the prospective yield of their crops on late sown lands. The harvest has now sufficiently advanced for a pretty correct estimate to be formed of the yield. Throughout this county where threshing has been done, the yield is found to be short of the estimate made a month or six weeks since. In some localities, especially on the higher and earlier land, the shrinkage is found to be from 20 to 30%, while on the stronger lands it does not exceed 10%, and a few fields show no perceptible falling off. In the southern part of Tehama county and the northern part of Colusa, on what is known as the plains, where the grain was principally sown in fallow, and did not suffer from the excessive rainfall of December, January and February, it is said to be fine, and the yield in a number of cases is exceeding the most sanguine expectation of competent judges, but in that grain belt many fields of volunteer and winter-sown are said to be very light, and wherever the land shows the presence of alkali a very light yield may be expected.

#### COLUSA.

OUR HARVEST.—*Sun*, July 16: As our harvest progresses we are confirmed in the estimate we made of the crop in this county at one-half of what it was last year. The strip of country along next to the foothills is turning out remarkably well, and a first-class article of wheat, too, but there was not much land sown. Grand Island will not have half as much as last year. We spoke of the river lands in our last. The quality of our wheat this year will be superb. The cool summer has greatly facilitated harvesting operations, and the headers and threshers will be housed much earlier than usual this season.

PEEN TOO.—I. N. Cain, of College City, sent us this week a peach shaped like a tomato, with a small pit, "flat the other way," which was at first a puzzle to us; but we were informed that it was the Peen Too, or flat Chinese peach. The flavor is a good deal like any other peach. They will not be generally grown, as there are so many better varieties.

#### FRESNO.

GRASSHOPPERS.—*Expositor*, July 11: The grasshoppers are very thick on the plains, and are doing considerable damage to fruit trees, grapevines, garden sassa and growing vegetation generally. Some parties have bought turkeys and are trying to reduce the pest by gobble power, and they report that the plan works very successfully. But everybody cannot adopt this course, as the grasshopper crop is more extensive than the turkey crop. Specimens of the hoppers shown us demonstrate that they are not dwarfs, and that they have been well fed.

#### LAKE.

CARP.—*Democrat*, July 16: An item in the *RURAL PRESS* in speaking of the many advantages of Lake county, and prophesying its future reputation as a carp producing section, is not at all visionary or inconsistent. It is an undeniable fact that our numberless small streams all through the mountains can be formed into ponds of any size and number desired and the culture of this noted food fish easily promoted into a leading industry. Like all other enterprises, it will require some means and some labor, but in a very few years the product will outstrip almost anything else.

FAIR.—*Bulletin*: L. H. Gruwell, President of the Lake county Agricultural fair, informs us the second annual fair, which will be held here on the 13th, 14th and 15th of September next, will undoubtedly surprise its predecessor for the extent, variety and value of its exhibits. We hope that the stock-raisers, fruit men, farmers and artisans, generally, of the county will not be behind other fairs in their general display. The next meeting of the directors will be held on August 1st next.

#### LOS ANGELES.

PLUMS ON ALKALI.—*Commercial*: Mr. E. H. Lloyd, the proprietor of a ranch in Los Nietos, and also of the Pacific hotel in this city, has shown us the branch of a plum tree 18 inches in length containing 131 plums of the damson variety, and weighing three lbs. This is the most remarkable specimen of plum growth we have ever met, and looks more like a bunch of grapes than a branch of a plum tree. The soil of Los Angeles is especially adapted to the growth of plums and pears. Those fruits seem to relish the soils of the lowlands containing alkali. When this fact becomes generally known, the planting of these fruits will be largely increased, with profit to the planters.

A NEW IRRIGATING ENTERPRISE AT ORANGE.—*Santa Ana Herald*: A great enterprise is being prosecuted quietly by our neighbors of Orange and vicinity, and one that will prove a lasting benefit to that beautiful and prosperous community. The settlers on the Letspeich, Montgomery tract, and the Farmers' and Merchants' Bank, set to work, a short time since, after the necessary surveys and examinations had been made, and placed a dam in the Santiago creek, between two high walls of the canyon from whence the water issued, thus raising to the surface the whole underground flow. There are about 400 inches, or 23 heads of water running in the Santiago, and it was determined to utilize it. To this end 7,300 ft. of 12-inch cement pipe (inside measurement) is being laid, and the work will be finished inside of two months and the water be furnished to irrigate 1,200 acres of valuable land. There will be no loss by evaporation or seepage, as in open ditches. A great deal of money has been spent in this undertaking, and the reward will, we hope, be commensurate with the enterprise of the projectors.

#### MONTEREY.

SALINAS VALLEY CROPS.—*Democrat*, July 16: Harvesting in this valley is in full blast, being more forward by several weeks than is usual with us. Oats have been gathered and sold, barley, likewise, has been harvested, and the cutting and threshing of wheat is going on briskly. All the grains are unusually bright, and, being well filled as a rule, farmers have little difficulty in effecting sales at current prices. It is understood that the quality of all the grain grown in our valley, this year, is exceptionally bright and good looking, its color being attributable, doubtless, to the absence of late spring rains, and to the comparative exemption from fogs customary during the seasons of ripening and of harvest.

#### NAPA.

BEKKYESSA CROPS.—*Register*, July 16: Harvest is well under way, and will be over by the last of the present month. Summer-fallow grain is generally very good, but the late-sown grain is thin on the ground and in most cases shrunk by rust or other causes. The amount of grain in the valley will equal about half of that raised last year.

#### SAN LUIS OBISPO.

NEW MILL.—*Mirror*, July 15: A joint stock company, with Steele Bros. at the head, is being made up to erect a grand flouring mill at this place. The mill is calculated to grind 100 barrels of flour daily, and will furnish employment to a dozen men, and what is best of all, it is to be a water-mill. Mr. E. Ludham, a thorough-going mechanic and engineer, says we have an abundance of water in the arroyo for four miles. With Steele Bros., Messrs. Popp, Ramsey and Ludham to push, the mill is assured within the next half year.

THRESHING OUTFIT.—*Cor. Mirror*: I wish to tell your readers what I saw a few days ago at Steele Brothers' ranch. It was, I suppose, the largest threshing outfit ever started out by one firm, in Southern California, and consisted of one large 18-horse power engine, drawn by six mules; one large, new Gold Medal separator, 36-inch cylinder, and one of the largest size grain cleaners; then a wagon with a platform, I think 10x18 ft., to drop the straw on. On this platform is securely fastened one of Jackson's derricks, with two of his derrick forks. On one end of this same platform is placed the end of the elevator that conveys the grain to the elevator, where one of Bayley's feeders feeds the straw evenly and uniformly. Then last, but not least, comes the huge cook house, on wheels, to feed the hands. It does the farmers' wives and daughters good to look at this last improvement—no more worrying, baking, fixing and dreading the coming of the thresher. Altogether, there were six wagons, including the engine and cleaner, and 18 horses. A few days after this immense outfit pulled out, it was followed by another equally large, owned by the same parties. They charge for threshing wheat, 14 cents per hundred lbs. when not run through the cleaner, and 15 cents when run through; barley 12 cents per hundred.

#### SAN JOAQUIN.

ACAMPO NOTES.—*Editors Press*: Crops are turning out very well in this vicinity. Winter plowing yields from 10 to 18 bushels; summer-fallow 18 to 30 bushels per acre. We can't complain; but most of us got caught on the sack ring, and we all feel blue over the price offered for our hard labor, but feel in hopes the market will improve by the first of November.—A. J. Woods, Acampo.

HORTICULTURAL COMMISSION.—*Stockton Independent*: Saturday, July 9th, the County Board of Horticultural Commissioners, consisting of Ezra Fisk, James Crozier and W. B.



West, met for the purpose of organizing. Mr. Fisk was chosen Chairman and W. B. West, Secretary. The board intend to proceed immediately with the examination of the fruit and shade trees of the county. Some preliminary work has been done which has determined the fact that outside of the limits of the city we are comparatively free from the worst enemies of trees—the scale insect—although the codling moth has ravaged nearly all the orchards in the county; and the red spider, aphids and mites are found everywhere. But I am sorry to say that in the city the "scale" has obtained a foothold, and in many cases has destroyed the trees. There is to be found upon the apple, pear and plum trees the "black scale," so destructive in Santa Clara county, and another kind upon elms. It is the intention of the board to have instructions printed for the destruction of these pests, and recipes for washes, which have been successful elsewhere, and we hope the public will aid us in our work of combatting these pests, for we cannot afford to lose our beautiful shade and fruit trees.—W. B. WEST.

**ROBERTS ISLAND.**—*Herald*, July 12: Reports from the upper division of Roberts Island concerning the probable yield of wheat are very encouraging. It is estimated that this division has about 21,000 acres sowed to wheat and barley. The yield of wheat will, it is thought by some, be on an average larger than last year. One man who has traveled over the division today informed a representative of the *Herald* that he thought there were at least 5,000 acres of wheat in that locality which would give an average yield of 50 bushels to the acre, and a large portion of the remainder of the tract will yield at the rate of 30 bushels per acre.

**THE WHEAT CROP.**—*Independent*, July 12: Wheat is not likely to yield as well as was supposed. Even the cool weather did not bring the crop up as was expected. Many farmers are inclined to put the yield at less than half of last year. None place it above half of last year for any extended tracts. J. M. Garwood and Wm. Snow state that around Colledgeville the average yield will be about nine bushels per acre. Mr. Garwood has some on fallow land that runs 16 bushels. Here and there a fallow will run 20 bushels, but the average is much less. Dr. Grattan puts his, east of this city, at nine bushels.

**ROBERTS ISLAND FIRE.**—*Herald*, July 15: At two o'clock in the afternoon a fire was discovered by T. J. Stebbins in a stack of grain belonging to Jessie Lewis, two miles southwest of Lindstrom's ferry, on Roberts island. As soon as it broke out, a force of men gathered to fight the flames, which rapidly extended to the ranch of C. W. Bidwell, where about 10 acres were burned, thence to Samuel Peter's ranch, where 70 acres of fine standing grain were burned before the flames were extinguished. The wind suddenly changed at this time, and the men, to the number of 300, became masters of the situation. The grain was very high and the men fought it by rushing in and beating it down with sacks and shovels. The heat was intense, and often the vigilant farmers became exhausted and had to be carried off by their comrades. Samuel Peter's crop would have averaged 40 bushels to the acre, and it is safe to say that he lost about 3,000 bushels, all of which was fully insured. In the stack where the fire originated there were from 1,000 to 1,200 bushels. The origin of the fire is unknown, as there had been no one about the stack since early in the morning. The night before a tramp slept there and it might be that either he or some other tramp dropped some matches there which were ignited by the heat of the sun. The loss is estimated at \$3,000, fully insured.

#### SANTA CLARA.

**SQUIRRELS AND GRAIN.**—*San Mateo Journal*: A squirrel was killed at Los Gatos the other day, in whose pouches 1,078 grains of chevalier barley were said to have been found. Although this number is probably about 78 too high, still the matter is worth thinking about. To compute how much grain the squirrels on a ranch consume in a year, count the number of holes, allow 10, old and young, to each hole, multiply this by 1,000 for each day the harvest is ripe and within their reach—say 60 days—and we have 600,000 kernels for each family. It is a poor ranch that can't support 500 holes.

#### SANTA CRUZ.

**INSECTS SCARCE.**—*Courier-Item*, July 12: On his return from his visit to this county, Chief Horticultural officer Cook reports that he found the orchards of this county remarkably free from injurious insects. He, however, found some eggs and other signs of the tent caterpillar, the same worm that was so plentiful in the orchard of Mr. Delong, of Marin county. The woolly aphid had done considerable damage in one or two orchards visited. The Pacific scale, of Prof. Comstock, has made its appearance, though not to any great extent. The Tussock caterpillars are also in some of the orchards, but the codling moth was only found to have been on one apple tree. Some pupae of the codling moth were, however, found in some boxes that had been returned from San Francisco. This may prove the first introduction of the codling moth into the orchards of this section. He advises that orchardists of this county should look sharp to their return boxes and other modes of bringing the codling moth among them.

#### SONOMA.

**FARMING INTERESTS.**—*Petaluma Courier*, July 14: Since our last report, farm prospects have not materially changed. Our wheat crop will be about one-third as compared with that of

last year. A gentleman who has just been out in the country says he never saw finer crops in Green valley than they have this season. And in this section on uplands we have a few fine crops, but on many of the valley farms, particularly on the low, flat adobe lands, there is no grain at all. What grain we have, however, it is said by farmers will be first-class. Our warehouses still have the bigger part of last year's storage on hand, and consequently there will be more than enough to supply the probable demand both at home and abroad. Hay is abundant and cheap. About one-half of the ground planted in potatoes last year has been planted this season, at least this is the estimate of farmers in this section and between here and the coast. The crop looks fine and promising. Owing to partial failure of the grain crops, farmers have planted more corn than usual, and the crop is looking fine. The dairy season is about over, and it has been one of the best we have ever had. The fruit crop is very promising; it will be of good quality, and the yield of most varieties large. Reports from the vineyards of the county are very flattering, and the wine interests will get a regular boom. The wool clip has been heavy and of fine quality, and sheep and stock of all kinds are in good condition. More improvements have been made in town and country than for several years past, all of which indicate prosperity among the people. The good citizens of old Sonoma have real cause for gratitude.

**FRUIT WORKS.**—*Santa Rosa Democrat*: Last Saturday we paid a visit to the fruit drying and canning establishment of Joseph Black. The season having hardly commenced, things as yet are not quite in running order. Four men are employed in making cans, each completing about 600 per day. On last Saturday evening there were on hand 30,000 cans. Apples and blackberries are already arriving in large quantities and work will begin next week. Mr. Black has erected a large Plummer drier and proposes to turn out nothing but the very best articles.

**RACES.**—The next meeting of the Agricultural Park Association of this county, at the fine grounds of the association near Santa Rosa, will take place the last week of August. At present every stable is occupied, and, besides the racers and trotters already on the ground there in training, assurance is given of the additional attendance and entry of other noted horses and promising colts in training at Petaluma and other points. Mr. James McM. Shafter's fine stock is in training on his own ranch, and will be brought here in due time.

#### SUTTER.

**MOVEMENTS OF WHEAT.**—*Marysville Appeal*: The warehouses at Yuba City still contain a large quantity of old wheat. The steamer *Knight* is making two trips a week down the Feather to the Sacramento, taking about 150 tons to a load. The Buckeye mills have had nearly all their wheat in store at Yuba City moved to their warehouse in this city. Sheriff Harkney, of Sutter county, is sending new wheat from his ranch direct to the Buckeye mills. Little new wheat has arrived at the warehouses in Yuba City. Heading is mostly completed, and threshing is actively under way. The wheat crop of Sutter this year is turning out very light. The grain is of first-rate quality, but much of it is foul from the effects of last winter's floods. One grower reports that he has only harvested 1,700 sacks off of 600 acres, and from 100 of those acres the yield was only 150 sacks.

#### TULARE.

**SWAMP LANDS.**—*Lemoore Advertiser*, July 2: The U. S. Surveyor is revealing to us the astounding fact that Lemoore has in its immediate vicinity thousands of acres of the most valuable farming lands in this or any other county in this State—a soil for productiveness that is unparalleled in the world, Egypt on the Nile not excepted. Immense tracts of these lands have been claimed by parties whose avarice exceeded their honesty, under pretense of having reclaimed them, when, in fact, they never needed reclaiming. A report to the proper authorities at Washington, by the surveyor who is now surveying them, will set this matter all right, when these lands will be open for entry, and will naturally place Lemoore in the center of the Mussel Slough country. Lemoore necessarily will become the center of trade and business.

**WHEAT CROP.**—*Delta*, July 15: Enough of the wheat crop of Tulare county has now been threshed to enable the *Delta* to form, with some accuracy, an idea of the yield this season, as compared with last. As a general result, it may be stated that the number of sacks or bushels is, as a general rule, in the chief wheat districts of the county, less than last year, while it is also true that the general weight per sack is heavier, by four to nine lbs., than it was last season. Yet, this increase in weight per sack will not prove sufficient to prevent the yield in Tulare county from being considerably less than it was in the harvest of 1880. Even a slight increase in the acreage sown this year will not prevent the wheat crop from falling short of the standard of last year in quantity. In quality, however, it can safely be asserted that the wheat of Tulare county has never surpassed this year's crop, if, indeed, it has ever equalled it. The wheat this year is very plump, and no wheat in the State can be justly called superior to it. Sacks range this year in weight from 138 to 149 lbs. An odd fact this year is that volunteer shows more smut—though slight—than winter sown.

#### TUOLUMNE.

**EDITORS PRESS:**—Wheat is being secured all over our broad domain. Short crop and low prices is the general outcry. But when we make calculations on the reserve crop on hand, there need be no fears of a scarcity, either for export or home use. The weather has been favorable for field labor. We have suffered only a few days of extra heat. The glass ranges from 78° to 98° in the shade, at noon. A cooling shower of rain passed over the foothills a few nights ago, giving us an evening rainbow of prismatic splendor. Eighteen hundred and eighty one is passing away, as vanishes all the fearful, fanciful predictions ascribed to its prophetic traditions. Nature is ever true to laws eternal, and they are filled with "peace and plenty" when man obeys them. The earth is ever fruitful to science and industry. The fruit crop is earlier than usual. With the exception of occasional patches of mildew on grapes, and codling moth operations on apples, the fruit crop will be abundant. The best of the peach crop has not yet appeared in the market. A few more weeks will be required to bring them to maturity. Blackberries are plenty, prices ranging from 5 to 8 cents per pound. One thing surprises those who take an interest in horticulture and its products. Canneries seem to be plentiful in and around the Bay city, while the very best centers for fruit, and that of the freshest and best, is left out in the cold. Much fruit superior to that up in the city, goes to waste for the lack of a market. You may have strawberries in richer abundance, and also currants; but for all other staple fruits, the world cannot beat us for flavor and variety. It will not do to send our fruit below to be canned up. It loses flavor by being picked comparatively green for transportation. The only true method is to establish canneries in the midst of our foothill gardens, and such fruit will command a ready sale, and the highest market price. The reputation gained would soon make California occupy the front ranks in canned productions. Enterprise and capital are necessary to success. It is only a matter of time. The demands of trade will send us canneries and wine manufacturers, also a railroad to distribute our splendid horticultural products all over our vast and varied domain.—JOHN TAYLOR, Mt. Pleasant.

#### WASHINGTON.

**BLUE MOUNTAIN FOOTHILLS.**—*EDITORS PRESS:* I have been three months on the foothills of the Blue mountains, about 13 miles northeast from Walla Walla. I like residence here better than in any other place I have tried in the Territory. A great portion of these hills are covered now with waving grain, wheat, barley and oats, or summer-fallow, whenever the grade will allow of tillage. Prospects very flattering.—J. ROGERS, Walla Walla.

#### The State Fair of 1881.

Preparations for the State fair at Sacramento, September 24th, are going forward, and the outlook for a fine exhibition is good. The premium list has already been issued, and can be had by addressing the Secretary, E. F. Smith, Sacramento. It should be consulted by all producers, and the best things in each department of production and manufacture selected to represent the industries of the State. For the coming session the Central Pacific railroad company will carry all articles and animals exhibited at the fair, over its respective routes, free of charge, and the same company will issue excursion tickets to all parties going to the fair and returning, at about half price. Over \$20,000 has been appropriated by the officers of the society as premiums for the best exhibits in the several departments of live stock, machinery implements, textile fabrics (mill and domestic products), and juvenile department, mechanical products, and California inventions, designs, etc., agricultural products, horticultural products and fine arts. Liberal special premiums will be given for all worthy articles exhibited, not mentioned in the schedule. Also, in addition to the premiums named, the society will give a gold medal to the most meritorious exhibition in each of the departments. Those who desire to compete for the gold medal in any department should make special entries for that purpose at the time of entering their goods for general premiums, so that the Gold Medal Committee may examine them more closely. The preparations being made for the fair are of a good character, and the season probably will be one of mutual profit for both the society and the public.

A new feature this year, and one which should attract the attention of California girls, is in the fact that J. McM. Shafter, President of the State Agricultural Society, offers a premium of \$50 in plate, to the Miss under 18 who, unaided, makes the best loaf of white bread and the best loaf of brown bread. This practical contest should win many contestants.

**"LEMOORE ADVERTISER."**—We have received early copies of a neat little local paper entitled the *Lemoore Advertiser*, of Lemoore, Tulare county. It is owned by Dr. B. Hamlin, and edited by John Boor. Lemoore is a growing town, and the *Advertiser* will, we hope, advance with it.

#### News in Brief.

DEAN STANLEY is dead. BOTH London and Paris are at present afflicted with a bad hot spell.

THREE comets are said to be visible every night at Guaymas, Mexico.

SALMON are now running in all the rivers of British Columbia in large numbers.

SIR EVELYN WOOD is to be raised to the peerage for his services in the Transvaal.

SAMUEL BRANNAN is having trouble with the Mexican authorities in regard to his land grant.

HESSY HELFMANN'S death sentence has been commuted to imprisonment, for what term is not stated.

THE President continues to improve, and it is now confidently believed that the danger line has been crossed.

THE Secretary of the Treasury has presented Ida Lewis with the gold life saving medal, authorized by act of Congress.

THE different Atlantic cable companies have given notice that they will reduce their rate to 25 cents per word after August 1st next.

A LONDON, Ontario, dispatch says the Captain and Superintendent of the ill-fated Victoria have been committed for trial at the Assizes.

FIFTEEN HUNDRED laboring men in the logging camps of Wisconsin are out on a strike for 10 hours, instead of 11 and 12 hours service per day.

A ST. PETERSBURG dispatch says: General Ignatieff recently received several threatening letters, purporting to come from the Nihilists.

MARTIN MURPHY and wife, who came to California in 1844, on Monday celebrated their golden wedding at Mountain View, Santa Clara county, in grand style.

THE track of the recent cyclone in Minnesota is 40 miles long by one mile wide. Several lives were lost, and the property damage is estimated at \$300,000.

THE London *Morning Post* hints that the protective tariff of the United States and other countries renders retaliation duties necessary on the part of England.

A LARGE meeting of Turkish bondholders in London has formally requested the former Under Foreign Secretary (Bourke) to go to Constantinople to arrange the Turkish debt.

A VIENNA dispatch says: Chimerical as it may seem, the Berlin and Vienna foreign officers are seeking to effect a political and trade alliance between France, Austria and Germany.

IN the rifle match at Wimbledon between the Lords and the Commons, at a single range of 50 yards, the Lords scored 440 and the Commons 393.

IN shooting for the international trophy on Saturday, at Wimbledon, the grand total scores were as follows: Scotland, 1,774; Wales, 1,086; Ireland, 1,642. Twenty competitors were in each team.

BILLY THE KID, the notorious murderer and outlaw, who for several years has been the terror of New Mexico cattle men, was on the 14th inst. killed by Patrick Garrell, Sheriff of Lincoln county.

SEVERAL Mexican Custom-House officers in attempting to arrest some smugglers were disarmed and tied to trees, where they remained for two days, until rescued by some friendly Papagos.

AFTER two years' labor, the fire in the Stanton shaft, Wilkesbarre, Penn., has been subdued. The work of repairing the immense destruction caused by the water and flames is now being vigorously pushed forward.

DON CARLOS, the Spanish pretender, has been ordered to quit France. It is stated that he has been engaged in certain proceedings which are regarded as a manifestation against the present form of government in France.

A LAW student in the University of Bonn has just been killed in a duel, and another student is in the hospital hopelessly wounded. A student in Berlin a few days ago had his nose slashed nearly off. Scarcely a week passes but we hear of some such brutality.

THE agricultural laborers in many parts of Cork are dissatisfied at deriving no benefit from the improved circumstances of farmers consequent on the payment of reduced rents, and contemplate striking for higher wages during the harvest. The movement is fast gaining ground.

STATISTICS published by the Hamburg police authorities, show the number of German emigrants passing through Hamburg alone to America, from January 1, 1881, to June 30th, 1881, amounted to 74,633. If emigration proceeded in the same proportion the government will find that, reckoning fugitives by other channels, it has lost in 1881 about a quarter of a million of its subjects.

It is stated that France has made a treaty with the chief of the Amados in Senegal for the exclusive right to found and open roads to the Niger. Segoo will be placed under a French protectorate, and a French resident will be stationed there. It is intended to build a railway up the valley of the Senegal toward Bamakoo on the Niger, in order to establish communication with Upper Soudan.

THE latest estimates of the harvest in Hungary agree that the yield of wheat will be much larger and of better quality than last year. Reports from Russia state that the yield will be excellent. Roumanian grain crops are much damaged by spring rains and storms. Reports from France show that the harvest, with few exceptions, will be excellent.





### The Lender's Dream.

[The following touching lines are sent to us by an Eastern friend, who writes feelingly of investment in mortgages on farms in the grasshopper and cyclone regions, because he had some on 'em himself.—Evs. Press.]

The lender sits in his down-east shade,  
And dreams of the freaks by fortune played;  
Of the blooming West, and the twelve-percent,  
That promised bread, and a sweet content.

He dreams of the incomes o'er and o'er,  
That came as prompt as the tide to shore;  
Of the blessings breathed on the branny arms,  
That cradled gold from his mortgaged farms.

He dreams of the drouth and a draining purse,  
Where his income flowed like a footless verse;  
Of the locust clouds that settled down,  
And sacked the fields as a foe a town.

He dreams of the blight and the blizzards' wrath,  
And the scattered homes in the cyclone's path;  
Of the vanished fruits of the toiler's band,  
And a fortune lent on a faith of sand.

Anon he dreams with a startled sigh,  
Of the fickle past, and the by-and-by;  
Of the by-and-by with its calm and gale,  
And his loan-bought lands by the league for sale.

### Mountain Top Letters.—No. 15.

[Written for the RURAL PRESS by J. W. J. W.]

This is the third attempt at No. 15 since the last part of a letter appeared, and I, like the busy editor, find them out of date, after a few weeks. Your "Home Circle" is so well filled of late that I have felt it impossible to aid it any, so have kept silent, while my tired body and brain enjoyed the treat.

Two columns of poetry, by our much valued friend, G. W. McGrew, were indeed gems, and shall find a place in my scrapbook, much as I dislike mutilating my RURAL. How rare do we find youthful feelings mingling with ripe age. To grow old gracefully is a charm so few possess, or care to cultivate. Life, with its cares, duties, disappointments and sorrows are so apt to make us selfish, morbid and dead to the joyousness of youth and the beauties of nature that when one finds it in such poetry it is refreshing, and I trust you may yet publish a poem of praise on the 50th wedding anniversary of friend McGrew, written by the same pen.

Will it ever be summer? is a question often asked this year. What is the matter with Old Sol? Has the "perihelion" anything to do with it, or the comet, or both, or neither? Who can tell? My "gude mon" and myself feel like emigrating to some warmer climate, if there is such a spot. Our corn and beans stand shivering, and our squash vines don't know which way to run to get warm; while the melon vines wonder whether it is worth while fruiting, as it is too cool to be a luxury. Meantime the weeds keep apace, and our song is hoe, boe, boe, from morning until night; boe, boe, hoe, till there's not a weed in sight, and will be all the season I fear, as late showers make weeds a veritable fact.

How swiftly flies a city-bred woman's ideal thoughts of farming when brought face to face with the actual employment! To plow, plant and harvest was in my ignorant brain the sum total of farming—and enough, too, I thought. But here comes the actual items: Plow twice; barrow four times, and plant; cultivate, hoe all the time until harvest. Meantime, there are squirrels, gophers, beetles, worms, slugs, bird and beast that require poison, trap, gun and fence to fight and kill, until a peace woman like myself is quite disgusted at the amount of destruction to life required in the peaceful farm life you read about!

Shall I dare touch upon a pet hobby of mine in our "circle" without bringing upon myself the odium of "reformer?"—and a wonder from the sisterhood, if I act up to my opinions, etc., which is of little importance to any one but myself.

### The Dress of Women and Children.

Especially girls. Since the reform underwear for ladies and children has come into use, there is a slight under-current of common sense creeping into the mind of the average woman. They follow the style, and make outer garments higher in the neck, longer in the sleeve and skirt than formerly. But the limbs of both women and girls are insufficiently clad, and not kept warm, as men's and boys' are, and consequently there is entailed a list of diseases and weaknesses that are usually laid at the door of sex, when all physicians know and proclaim that the female sex is by far the hardiest, enduring more privations, discomforts and abuses than the male sex, with less fatal results. More male children died, according to New York statistics some years ago, than females, in proportion. While few men could undergo the tight lacing, cramped feet and hands, cold extremities and the uncomfortable fashions of women's wear, without being, like her (provided they live through it), victims to "general debility," "nervous prostration," and

a host of general ailments which now apparently belong to the female sex—produced by improper dressing from youth up. Do you doubt it, my sisters?

I lately saw in the paper that a Paris doctor gives it as his opinion that thousands of children die in Paris annually from "bare arms, necks and legs." A London physician told the same story, viz., "improper dressing of children," as the cause of great mortality among them, blaming the mothers for not using more sense in such matters—instead of following fashion they should make it; while the *Scientific American*, in a little article headed "Hogs vs. Babies," thinks it is a pity that babies have not a market value, like hogs. "A death rate among the pigs, less than one-third the death rate among children, in our large cities, moves the Government to costly investigations of the cause and to diplomatic correspondence with foreign nations; while produce exchanges get excited on the subject, and all the newspapers join in the discussion. The babies die by the thousand in New York and other overcrowded cities, and all over the country, and scarcely any notice is taken of the fact."

I believe it is time for the mothers of our land to try to solve the great question, "How to save our children from disease and death," and bring them into healthy competition with hogs.

Deer Ridge Farm, July 2, 1881.

### How Simon Peveritt Got Married at Last.

Master Westley, clerk and sexton in the small village of Woodham, was one winter's morning sitting by his cheery fireside, watching alternately the rain, fiercely beating against the latched window panes, and the brisk movements of his active little daughter, as she moved to and fro, busy about her household work. Presently she came in, bringing a hat, great-coat, and umbrella, observing: "You will be wanting these soon, father. It is nearly 11 o'clock." She had hardly said this, when a loud knocking was heard at the outer door, followed by the abrupt entrance of a little middle-aged man in a state of great excitement, his face red, his hair rumpled, his boots splashed with mud, and his coat dripping with wet.

"Why, Simon, what on earth's the matter?" said the clerk. "You don't look much like a bridegroom."

"Bridegroom! No!" the little man exclaimed with bitter emphasis. "Master Westley, you'll hev to tell parson I can't get married to-day."

"Why, how is that?" asked the clerk. "I can't get Mary up," quoth the indignant and disappointed lover. "I've been rattlin' at her door, and throwin' stones at the window, and shoutin' till I'm as hoarse as a rook; and I'm nearly wet through with the drippings from the huses [the eaves of the house]; but I can't get she up. She only jest put her head out of the window for a minute, to tell me 'twor no good for me to stand hocketting [making a great noise] there; for she'd never take the trouble to put on her best things, and go out in that powerin' rain jest to marry me."

"Why, Sim! this is rather a bad beginning for people about to marry—isn't it? I'm afraid the gray mare will be the best horse in your team—won't she?" said the kindly old clerk, with a merry twinkle in his knowing brown eyes. "However, I'd better go and tell Mr. Howard, or he will be putting his surplice on for nothin'. Shall I say to him that perhaps the wedding will come off to-morrow, if the weather is finer, Mary will get up in time?"

"If she don't," vowed Sim, glaring vengefully, "she shall never bev another chance. I'm fairly sick of her tricks. We've been keeping company this 20 year and more, and now she don't know her own mind a bit better than a mawther [young girl] in her teens. But I won't stand it no longer. She ain't going to treat me like a dog, or a mat for ber to wipe ber feet on. There's the Widow Biggs would hev me any day, and glad; and a nice comfortable woman she is too. The wedding-ring shan't lie long in my pocket for want of a wearer. And there, Master Westley," said poor Sim, almost in tears over his frustrated plans and disappointed hopes, "I'd meant this to be been a reg'lar jolly day. I'd got in a barrel of beer, and a spare-rib of pork, and we wor going to hev paraties and fawns [pancakes], and a mort of good things beside, to make a reg'lar spree of it; and now, it's all knocked on the head, and everybody knows I'm made a fool of into the bargain."

"Cheer up, Sim?" said Master Westley. "It is aggravating, I'll own; but Mary isn't a bad sort, though she has rather a cruggy (crusty) temper. She has been very true to you; and it would be a pity for two such faithful lovers as you've been, to part over a little tiff at last. I believe Mary is jealous of the little widow. You know people did say once you were rather soft on her."

"It was a big story," burst out Sim. "She tried to hook me, but I never gave her no encouragement."

"Didn't you walk with her from church last Sunday? I heard that you did and carried little Joey all the way home; and kissed him when you put him down at his mother's door."

"Well, he axed me to give him a kiss, so I couldn't do no other wise. There was no harm in that, severly."

"Certainly not. Only, you see, as Mary

lives just opposite, and saw it all, she very likely thought you'd be better engaged kissing her, instead of hanging round the widow's door. Depend upon it, she's jealous; and she's got a highful spirit of her own, and is acting like this to make you think she doesn't care whether she has you or no. If she thought there was real danger of losing you, she'd come round in a minute, as tractable as you like."

"But how can I make her think so?"

"Well, you won't be doing any work to-day, and it's dull tittling [idling] about doing nothing. Take and brush yourself up smart, and go and have a chat with Mrs. Biggs. Take some oranges and sweets for Joey. Don't look at Mary's house; and mind and make a grand show of petting and kissing the hoy in front of the window, where she can see it all. She'll be more jealous than ever. But if she doesn't marry you to-morrow, I'll eat my head."

"Ah, Master Westley, you're a deep one, you are!" said Simon, regarding his astute adviser with admiration. "But it don't fare to be ezackerly jounick [straightforward] to dew so; and I ain't fond of snarmin' babies over with kisses. Still, if you think it will bring Mary up to the scratch, I'll e'en try it. If it don't, marry Sukey, I will, without any more shilly-shallying."

Master Westley then started for the rectory; and Sim paid his visit to the widow. He remained in her snug little house some time, and must have acted his part uncommonly well, for he had hardly reached home again, when he was visited by his old sweetheart. That eccentric spinster, ignoring her own wayward conduct that day, attacked Sim with a storm of reproaches, accusing him of fickleness and falsehood in forsaking her for "that sly, carying, little widdy; and after keeping company with me for so many years!" she plaintively added.

"No," said Sim, stoutly; "twor no fault 'o mine. I was ready to do my part this morning. It was you as run word. But I'll eat humble-pie no longer. If you don't want to hev me, I know one as does. I'll marry you to-morrow, if you like. If you don't, I'll never ax you again!"

Mary was a tall, black-eyed, comely looking spinster of 40 or more, reputed to have a hot temper and shrewish tongue; but for once she kept both in check. It was evident that Simon meant to be trilled with no longer. Moreover, she could not help secretly admitting that he was right, and admired his spirit and manly determination. It would never do to let so good a fellow and so faithful a lover fall a prey to a designing widow—not to mention the humiliation she would have to endure!

Next morning, the rain-clouds had all cleared off, and a bright sun poured its rays through the old church windows on Mr. and Mrs. Simon Peveritt as they walked from the altar-rails into the vestry, to enter their names in the parish register. Sim, with a broad grin on his face, laboriously executed a big black X as "his mark," informing the rector that he was "a sawyer by trade" and that his "owd gal had been of age this 20 years!" after which he turned to his friend the clerk, with a knowing wink, and said in an under-tone "We did it well between us, didn't we? Mary was up at six this morning, and hed to wait for me! I've got the whip-hand, to begin with; and I promise you I won't give up the reins again." Then he added in a louder tone, as they were about to leave: "Now, Master Westley, you must come and help we eat the wedding-dinner. The pork and apple-sass will be none the worse for waiting a day; and my Missus and me'll make you as welcome as flowers in May. There won't be happier folks in Woodham. And, Master Westley, you shall have some of the finest logs in my timber-yard, to keep up your fires this winter. I am not the man to forget a good turn or an old friend."

### A FARMING WOMAN IN TULARE COUNTY.

A very remarkable example of prudence, foresight and continuity, has recently developed in the southern part of this county. The more so in that the subject is a woman. And in comparison with the conduct of so many men who become easily discouraged and "tramp" as the more praiseworthy, this young lady had started with nothing but her education; taught school a few terms and acquired a little ready money. The occasion for its use speedily arrived, which she was not slow to perceive. A young man in the neighborhood had taken up 160 acres of land, built a house upon it, a barn, bored wells, dug ditches, sown it in wheat, and in all spent hundreds of dollars upon it. It happened to be a dry season, and the crop failed. He became discouraged, and like many desired to leave, and offered his claim and improvements at a sacrifice, for means to get away. The young lady alluded to gave him \$100 for his right, title, and interest in the land and everything on it. She let it lie. She need do nothing more. She sold [the insufficient crop for bog feed. The hogs rooted and scattered it. The winter rains came, and with them came the volunteer crop, which matured and has just been cut, yielding 12 bushels per acre on 120 acres. She will clear at least \$1,500, besides having the land and improvements. So much for adhesion—and the girls.—*Visalia Delta*.

A PAINTER who was well acquainted with the dire effects of the law had to represent two men—one who had gained a lawsuit and another who had lost one. He painted the former with a shirt on and the latter naked.

### Water for Babies.

I was one day called upon to visit a sick little one in a family residing near my office. The babe I found in apparent good health, but crying and struggling in its mother's arms as though suffering from excruciating pains.

The mother informed me that the child seemed desirous of nursing continually; and that to quiet it, she had given it the breast as often as the crying commenced. When that did not soothe the little one, a dose of Mother Somebody's cordial had been administered.

"My good woman," I inquired, "when did you last give your baby a drink of water?"

"I don't remember," replied the lady; "I seldom let him drink water. Does he need it?"

"Need it? Why shouldn't he need it as much as you? This child is suffering from thirst—nothing more."

I called for cold water, gave the infant a few

teaspoonfuls, and it was relieved of all its troubles, stopped crying and sank peacefully to sleep in its mother's arms.

Let this be a reminder to mothers and nurses. Infants who nurse at the breast may often suffer as much for want of water as adults who eat more solid food. Often when he cries, it is only thirst which causes it.

Do not, then, dose it with the poisonous

"soothing syrups" or nursing cordials, or press it to the breast, which it will eagerly grasp, expecting to satiate its burning thirst; but, filled to the brim with its natural food, it cries on harder than ever.

Use a little discretion. The poor little one cannot tell its wants; if it could, it would often cry: "Water! water!"—*Exchange*.

### Safety Lamps.

EDITORS PRESS:—A writer in the last issue of your paper attributes the invention of the safety lamp to George Stephenson. This is a mistake. Sir Humphrey Davy invented the safety lamp. Young persons may think that statements made in the RURAL must be correct, hence the necessity of correcting the above.—Mrs. J. B. Boody, Stockton, July 14th.

In 1815 Stephenson devised a miners' safety lamp, for which a large prize had been offered by colliery owners; but Sir Humphrey Davy having simultaneously invented his safety lamp, this prize, valued at £2,000, was awarded to him; £100 being awarded to Stephenson by the committee; a separate subscription of £1,000 was raised in 1817, which was presented to Stephenson, and his lamp is still in use in some English collieries.—*Johnson's Universal Cyclopaedia*.

BLONDE HAIR CHANGED TO BLACK.—At a meeting of the Biological Society, held at the Smithsonian Institution last evening, Dr. D. W. Prentiss read a paper entitled, "Notes on the Action of *Pelocarpus pennatifolius* in Changing the Color of Human Hair." Prof. Prentiss' paper recorded a very remarkable case of the change in color of the hair of a lady patient in this city who had been treated several months for blood poisoning with jaborandi, a Brazilian plant used in medicine. This medicine, which is given to produce sweating in certain rare cases, was first given to the patient in subcutaneous injections in December last. At that time, and previously, her hair was a light blonde, but within about two weeks a change toward a darker color was perceptible, which increased until, in the middle of January, the hair became of a chestnut brown color. In May the color was nearly a pure black, which it still retains, although there is slightly apparent tendency to return again to a lighter color. As this is the only recorded case of this plant (which is not, however, in common use) having produced any perceptible change in the color of human hair, it becomes a matter of interest to know how this change was brought about and how often it might accompany the use of this remedy. A microscopic examination shows the hair to contain a greatly increased quantity of pigment matter, and scientists now await with interest the results of future growths to ascertain whether they will retain their old color or retain that newly acquired.—*Washington Post*, June 4th.

COMPRESSED GUNPOWDER.—Some interesting experiments with Messrs. France & Baker's compressed gunpowder have been made at Messrs. Pease's mines, in Skinningrove, Cleveland. The powder, says the *London Mining Journal*, which was Curtis & Harvey's, had been compressed into a triangular form, so as to fit the drill-hole, and cut in short lengths, some weighing 2 to 3 ozs. each. The holes were drilled in the same way as if they were about to be charged with loose powder, the triangular blocks were placed in and exploded in the ordinary manner, but more than the usual quantity of stone was brought away. In all, 11 holes were charged, requiring altogether 162½ ozs. of the compressed powder, whereas with the powder loose it would have required, in the judgment of the miners themselves, no less than 267 ozs. This shows in powder alone a saving of just 40%, to say nothing of the advantage in charging and the diminution of danger.

MAGAZINE FOR JOLLY PEOPLE.—Dr. Dio Lewis, the well-known apostle of hygiene, has begun a new literary venture entitled *Dr. Dio Lewis' Monthly for Jolly People*. Edited by Dr. Lewis, and published by the Eastern Book Co., Boston, Mass., at \$1 per year. It is copiously illustrated and the articles are entertaining and nirth provoking.



## Chaff.

"MY WIFE," remarked Fitznoodle, "is fairly crazy over the spring fashions. She's got the delirium trimmings."

THE *Graphic's* farm editor says: "Soak cats well in a hag tied at the mouth and plant them deep to prevent their scratching up the seed."

THE mad dog which jumped over a six-ft. fence to hite a man's leg must have felt terribly mortified and disgnsted when he found it was wooden.

WHY is a cow's tail like the letter F? Because it is the end of heef. Here's another quite as had. Why is an egg like a colt? Because it is not fit to use until it is broken.

CHOICE brands of French wines are now largely made from glucose and beets, and some of the best French brandy is made from grain and potatoes. Hoopskirts and oyster cans are said to make a very superior article of cider.

THE Shepaug railway has finally succeeded in killing a man. The theory is advanced, that he was walking on the track behind the "lightning express," and caught his foot in the weeds and stumbled, striking his head against the hump of the rear car.

AN Oil City man who suspected that his servant girl was in the habit of using kerosene for kindling, put just a taste of nitro-glycerine in the oil-can as a test. Contrary to expectation, nothing happened, but a day or two later the girl came around and asked him to subscribe something towards buying a new stove for her poor old mother, as the old one had fallen to pieces.

A GRANDFATHER, coming to read his paper, found that he had mislaid his spectacles, and thereupon declared: "I have left my glasses somewhere and can't read the paper." A little three and a half years old girl, desiring to assist him, answered: "G'an'pa, you go outside and look froo ze window, and I will hold ze paper up so that you can read it."

ORIGINATING NEW IDEAS.—The most difficult mental or material operation in the universe is that of originating an entire new idea. Many philosophers deny the possibility. An important thought in the youthful mind, is matured by reflections on the more simple meditations and ideas of childhood, and these are, obviously, hegotton by what is seen and heard in the still more early dawn of mental receptiveness. First words and ideas, then, are the seeds of germs of thought and they are planted by our early teachers. This being conceded our originality can consist only in the new arrangement of words and ideas. To illustrate: We cannot form in our minds even an original animal. We may fancy a living creature with the body of a horse, the head of a lion, the face of a man, the scales of a fish and the feet of a kangaroo; but this would not be originating anything. It might be a combination not before dreamed of, but no proof of genius. So with the working of all powers. We cannot create anything. The most original thinkers and workers are those who are able to form the most beautiful and useful combination.

WHY WOOLEN FABRICS SHRINK.—The fibers of wool and certain kinds of hairs, are toothed or jagged at the edges, the teeth (or imbrications) pointing upward—that is, from the root to the point. When subjected, therefore, to compression or friction these fibers, being free to move only in one direction by reason of these asperities of surface, have a great tendency to unite and lock together. This explains the peculiar capability possessed by wool, of felting, and also the shrinking of fabrics of wool. In the latter case, the excessive rubbing to which they are subjected causes a matting or binding together of the ultimate fibers, which causes shrinkage; and this is intensified by changing the goods from hot to cold water, which is usually practiced, as the contraction of the fibers which this causes is itself a felting process. For washing woollen articles, it is recommended to place them in warm water, never in cold; and if changed from one water to another, they should go from hot to hotter. They should be cleansed with as little and as gentle friction as possible. The fibers of cotton and linen are straight and smooth, and possess none of the surface roughnesses that characterize the structure of wool, hence they do not shrink in washing.—*Manufacturer and Builder.*

DISCOLORED BRICK WALLS.—The white saline substance that "comes out" upon brick walls, and which has been a source of annoyance to a great many, may, according to the *American Architect*, be remedied. In reply to a query on the subject, it says: The "saltpetering" of brick-work can generally be prevented by adding oil to the mortar at the rate of a gallon to the cask of lime. If cement is used in the mortar, an additional gallon of oil must be allowed for each cask of cement. Linseed oil is generally employed, but any kind that does not contain salt will answer. The incrustation, once formed, can be removed with hot water, or by the muriatic acid generally used for cleaning down brickwork, but it will reappear again by exudation from the interior of the wall, and usually leaves a permanent black, or brown stain.

A REMARKABLE worm has been deposited in the library, Santa Barbara, by Henry Cooper. It has alternate sections of transparent emerald, and shines in a dark room like an electric jewel

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of 56 letters.  
My 12, 42, 35, 24, 52 is a journal.  
My 26, 2, 36, 46, 10, 48 is to waver.  
My 1, 44, 56, 17, 39, 16, 19 is a town in Maine.  
My 6, 50, 13, 40, 43 is to insult.  
My 38, 11, 39, 9, 55 is a fabled being.  
My 53, 28, 47, 33, 25 is a garment.  
My 18, 54, 20, 4, 34, 31, 48, 51 is a bush.  
My 49, 27, 32, 22, 30 is a part of the head.  
My 3, 7, 8, 42, 36 is a propheticess.  
My 45, 21, 39, 29, 6 is confidence.  
My 14, 23, 41, 48, 15 is a Spanish name.  
My 37, 27 is a preposition.  
My whole is good advice.

CEPHA.

## Cross-word Enigma.

My first is in west but not in east;  
My second is in lion, but not in beast;  
My third is in low but not in high;  
My fourth is in lie, but not in die;  
My fifth is in lie, but not in truth;  
My sixth is in Jane, but not in Ruth;  
My seventh is in much, also in many;  
My eighth is in some, but not in any;  
My ninth is in have, but not in will;  
My tenth is in farm, but not in till;  
My eleventh is in king, but not in queen;  
My twelfth is in scarlet, but not in green;  
My thirteenth is in pen, but not in ink;  
My fourteenth is in red, but not in pink;  
My fifteenth is in bay, but not in night;  
My sixteenth is in dark, but not in light;  
My seventeenth is in cent, also in dime;  
My whole was a well-known bard of olden time.

MELANCHTHON.

## Curtailments.

1. Curtail an outbuilding and leave a personal pronoun.
2. Curtail a place where hay is kept and leave a tri-nunal.
3. Curtail to moisten and leave a plural pronoun.
4. Curtail to ask earnestly and leave to perceive.
5. Curtail benevolent and leave relatives.

AUNT SARAH.

## Charade.

A pronoun always meaning me;  
A verb that signifies to sever;  
Another verb whose meaning is  
To join or link, or bring together;  
These words together rightly placed  
Will form a widely-famous river.

A farmer bought a drove of cattle for \$180. After giving away two of them, he sold the rest for the same amount—\$180. He now finds his gain on each to be one-third more per cent than the cost price of each. How many did he buy?

UNCLE JAMES.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—"Be it ever so humble there is no place like home."

PROBLEM.—3, 9 and 36.

CROSS-WORD ENIGMA.—Mountain.

RIDDLE.—New, full and old moon.

NAMES OF AUTHORS.—1. Byron (buy-run). 2. Shakespeare (shake spear). 3. Milton (mill-ton). 4. Emerson (emma-son). 5. Whitier (whit-ear). 6. Moore (more). 7. Cowper (cow-per). 8. Hart (heart). 9. Read(e).

## Boys Who Were Housekeepers.

Do not be afraid of a little house-work boys, if there is a need-be for it. It will never hurt your manliness in the least and may be almost a life-preserver to a weary, feeble mother.

Willie Radcliffe's mother, up in Maine, was taken sick in harvest time. He was but 12, and there were three little ones younger still. Mother was sick some six weeks, and Willie did all the house work. He made the butter, baked the bread, and even went into pies, and cooked for a lot of threshers, and farmer's folks tell me that they have wonderful capacities in the way of eating. But Willie carried the ship through safely, until mother was at the helm, and I know you will vote him a brave little boy.

I knew another young man whose mother was feeble, who had to mix up her bread and sweep out the house, when he came in from his regular work, and thought nothing of making his own coffee and cooking his steak in the morning before he went out. He has been married these 10 years and the folks tell me that Lizzie has the nicest, kindest husband to be found anywhere. He makes a good living, too, at his trade, and they are a very happy little household. House-work did not make him in the least effeminate. He is a man among men, and never paraded his domestic attainments, though not at all ashamed of them.

It is not pleasant, in general, to have a man fussing about the kitchen-work when there is no need of it. Most women can work better without such help; but it is an excellent thing in a man to know when his strength would be of service, and then have the willing heart and hand to render it.

A CAT'S LONG JOURNEY.—A gentleman in this city had presented to him a Maltese cat with four young nursing kittens, by a former friend, living 14 miles out in the country. This cat and her kittens were placed in a close-covered basket inside of which was a blanket in which they were wrapped, and the whole then covered with a thick rug. The basket and its contents were then brought in a wagon to this city, the distance stated. The cat and her kittens were kept in a room in their new home, and carefully watched, fed and petted for seven days she appearing to be wanted and content. On the morning of the seventh day she and her kittens were seen at their new home for the last time, and were missed very soon after. The following day she appeared at her old home with all her kittens. She did not return by the

road, the way she came, as she was seen by several persons going through the field with a kitten in her mouth. Allowing 30 hours to have elapsed between the time she was last seen at her new home and the time she was first seen at her old home, she must have traveled a distance of 112 miles carrying a kitten one-half the same distance.—*Bangor Letter to Forest and Stream.*

## GOOD HEALTH.

## Water as a Part of Diet.

Many persons drink ordinarily as little water as possible, and none at all at meal times, because they suppose that water dilutes the gastric juice. Experiments, however, show that dilution does not diminish the digestive power of the gastric juice, and further, that water alone, as well as solid food, awakens its secretion.

A paper, read by Dr. Wehber, of Boston, at a meeting of a learned medical society, took the ground that water, used moderately at meals, is beneficial, and that a large class of people drink too little.

The result is, if too little water is drank—especially if the person eats heartily—the perspiration and the kidney secretions are diminished. Not only they, but the waste of the system which can be removed only in a state of solution, is not eliminated with sufficient regularity and fullness, and the system becomes gradually clogged by it. The accumulation is slight from day to day, but in time unpleasant symptoms are developed.

These symptoms are of an indefinite character—discomfort, even pain, sometimes in one place and sometimes in another, constipation and unhealthy hue of the skin.

"Patients," says Dr. Webber, "who drank no more than a pint of water a day, have told me that they were not thirsty. They were surprised when told to drink more. Those who have followed this suggestion, in the course of a week have developed thirst, and drank as many as three pints of water a day."

We may add that water taken into the stomach is at once rapidly absorbed by the blood vessels. A bowl of well-seasoned broth as a first course is specially helpful to the above class of patients. A large quantity of ice-cold water is harmful to any one.

Dr. T. C. Duncan, in his book entitled "How to Get Plump," shows the necessity to the human system of frequent draughts of water. The Doctor says that "few people appreciate the fact that water constitutes in the normal human subject about 70% of the entire weight of the body. The water which thus forms a part of the animal frame is derived mainly from without. It is taken in the different kinds of drink, and also forms an abundant ingredient in the various articles of food. Water is abundant in the blood and secretions, where its presence is indispensable in order to give them the fluidity which is necessary to the performance of their functions. Water is therefore an essential ingredient of the fluids, for it holds these solid materials in solution and enables them to pass and repass through the animal frame. Water is also an ingredient of the solids—muscles, tendons, cartilages, bones, teeth, glands, skin, etc. If the water of tendons, skin, etc., be evaporated they become yellowish in color, shriveled and unfit for performing their functions. This accounts for the sallow appearance of lean people. With these facts before us, continues Dr. Duncan, we can readily understand why a person who does not take much water except in food is lean. Lacking the necessary fluidity, the functions are all performed with difficulty. Many cases of dyspepsia are due to lack of water. Many cases of headache can be relieved by increasing the fluidity of the blood. Many a case of functional palpitation of the heart can be mitigated by increasing the volume of the circulating fluid with an extra pond of water. I generally order a half-pint of water to be taken four times a day, early in the morning, about 10 A. M., about 4 P. M. and before retiring. I forbid cold water to be taken at meals, for the reason that the stomach is then at its highest functional activity, and cold lowers its temperature and retards digestion. Warm fluids, like milk and water, facilitate digestion.

HELP THE CHILDREN GROW ERECT.—William Blaikie, the author of "How to Grow Strong and How to Stay So," spoke before the Brooklyn Teachers' Association recently on "Physical Education." "I want," said he, "to see if in an informal talk we can't hit upon some way in which we can bring the physical education of school children down to a practical basis. Our children who are healthy and buxom when they begin school work, come out pale, sickly, and with round shoulders. If you require the children under you to sit far back on a chair and to hold their chins up you will cure them of being round shouldered, and the lungs and other vital organs will have free and healthy play. Another sample plan is to have the children bend over backwards until they can see the ceiling. This exercises for a few minutes each day will work a wonderful transformation. If a well-qualified teacher could be employed to superintend the physical development of the children the best results would be seen.

## DOMESTIC ECONOMY.

## Curing Hams.

The last report of the Oregon State Agricultural Society gives the following methods of sugar curing hams as practiced by those who took the premiums for hams at the fair of 1880:

Hams lie 15 days in common Liverpool salt; then put on about seven lbs. of sugar to the hundred lbs. of pork; let all lie about 10 days; then take up and soak over night in fresh water; then hang up and smoke well 10 to 20 days.—*D. C. Howard.*

For 100 lbs. of ham, 6 ounces of saltpeter, 12 lbs. of fine salt, 1 quart of molasses and six lbs. of brown sugar; mix saltpeter, salt and sugar; then add the molasses; the mixture to be well rubbed on the hams; at the end of one week rub them again; at the end of the third week to be rubbed again, adding a little salt each time; at the end of the fourth week rub them again, and then hang them up to smoke.—*George H. Riddell.*

## Birthday Cake.

EDITORS PRESS:—Will some of the correspondents of your valuable paper please give a recipe for making a nice birthday cake, and oblige!—NINA, Bear Valley, San Diego Co., Cal.

SOAP BARK FOR CLEANING BLACK GOODS.—For removing spots and dust from black goods of all kinds, a decoction of soap bark has given the best satisfaction of anything we have tried. In fact, we would not be without it. Buy a few cents worth—to be had of any druggist—break into bits, steep a while in a little more than water enough to cover, strain, and it is ready for use. Brush the goods free from dust, dip a piece of black cloth into the decoction, squeeze out and rub the soiled parts. If a thorough renovation of the article is desired, a rip apart, brush from it every particle of dust, and with a cloth dipped into the decoction wipe off each piece, folding it up as you proceed. Then with moderately heated irons, smooth and press the goods upon the wrong side until dry. As for silk, we prefer to fold it and place under a heavy weight until dry instead of ironing. Of course, the goods should be but dampened with the liquid.—*R. New Yorker.*

STEWED STEAK.—Take a clean, well-tinned stewpan, which is much better for the purpose than an ordinary saucepan; put in a little butter or dripping, and melt it; then place in the steak, cut into conveniently sized pieces, and fry each of a very light brown, frying a sliced onion at the same time; when sufficiently fried, add the seasoning, such as pepper and salt. The salt must not be added at first, as it would draw out the gravy and prevent the meat browning. The meat should then be barely covered with cold water and allowed to stew slowly for four or five hours, the greatest care being taken that it does not boil. The vegetables, such as turnip, carrot, celery, etc., should be cut up and boiled in a separate saucepan of water until tender, and then added to the stewed meat. The object of cooking the vegetables separately is to prevent the necessity of boiling the meat, which would harden it. Half an hour before serving, add a little flour and water, mixed into a very thin paste, and let the stew just simmer so as to thicken the gravy.

CROQUETTES OF TURKEY.—To each half-pound of meat allow two ounces of ham or bacon, one ounce of butter, one tablespoonful of flour, the yolks of two eggs and some bread crumbs. The smaller pieces of turkey, that will not do for a fricassee, answer very well for this dish. Mince the meat fine with ham or bacon in the above proportions; make a gravy of the bones and trimmings, seasoning it well. Mince some parsley, put it into a stewpan with some butter, add the flour, mix well, then put in the mince and about half a pint of gravy made from the bones. When just boiled, add the yolks of two eggs. Cool the mixture, then shape it in a wineglass. Cover the croquettes with bread crumbs and fry them a delicate brown. Put small pieces of parsley stems for stalks, and serve with rolled hacon cut very thin.

MACARONI PUDDING.—Take two and a half ounces of macaroni with a pint of milk and the rind of half a lemon in a saucepan. Let it simmer gently, until the macaroni is tender. Then put it in a pie dish, leaving out the peel. Mix a pint of milk with three eggs; stir them well together, adding two tablespoonfuls of brandy, and sugar to taste. Pour the mixture over the macaroni; grate a little nutmeg over the top. Bake in a moderate oven for half an hour. To make this pudding look nice a paste should be laid around the edges of the dish, or a layer of preserves or marmalade may be placed on the macaroni. When this is done omit the brandy.

IMPROMPTU SHORTCAKE.—These delicious, easily made shortcakes are especial favorites. Take 1½ cupfuls of sour milk, adding salt, and soda to neutralize the acidity. Stir with a spoon, adding enough flour to make a batter that will easily run, but considerably thicker than batter for buckwheat cakes. Then stir in four tablespoonfuls of drippings. Bake 10 minutes in a long pie tin with a brisk fire. Split and spread with some kind of canned fruit or preserves, and eat with plenty of cream, flavored with nutmeg.—*Gussie Thomas, in Country Gentleman.*





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## Business Announcements.

Petaluma Fruit Drier.—J. W. Cassidy, Petaluma, Cal.  
Bullock Producing and Manufacturing Co.—Stockton, Cal.  
Furniture and Bedding.—W. D. Comstock, Sacramento.  
For Sale.—C. H. Hall, Sequel, Cal.  
Fruit and Alfalfa Farm.—McAtee Brothers, S. F.

## The Week.

The telegrams still come at intervals of a few hours announcing the progress of the wounded President toward recovery. If all goes well another week will release him from his chamber and see him carried to the better air of the seashore for the regaining of full strength. It will be a day for demonstrations, no doubt, when the President rises from the stroke of the assassin.

Threshing is in full swing now in the great grain-growing counties, and in the earlier localities the cutting is finally complete. Accounts agree that the outcome from the separator is comparatively small in amount, but of unusually good quality. This is fortunate, for many growers will not think of selling at present. Since our last note fires have broken out in several fields and destroyed grain in stack and standing, but, fortunately, the most of the property was insured.

The fruit market continues to rejoice the orchardist. Canners have paid as high as \$1.15 per basket for yellow peaches, and the city dweller will hardly know what peaches are this year, for receivers find it more profitable to close out the fruit at once on the wharf to the canners than to haul it up to stores for small customers. This is indeed quite a change for San Franciscans, who for years have been used to carrying off luscious peaches at nominal prices, and seeing what they did not want thrown into the bay. This is a better day for all concerned, for the high price means a foreign demand, which will bring in gold; and general prosperity will yield plums of content to those who are now robbed of cheap peaches. The world is full of compensations.

## The State University

We have refrained from comment upon the condition of affairs at the State University, because, in the excitement of changes of various kinds, it is seldom one can speak wisely and disinterestedly. It is true that these changes are not yet fully made, but it is plain that the fever of revolution has well nigh passed away and the immediate future will be calm, and, we trust, productive of benefit to the institution. The gift of Mr. Mills was most timely. It bespoke confidence and trust on the part of one who is known as a man who does not put his money in poor places, and his thousands have done more to give people a belief that there is a future for the University than the same number of most eloquent orations. Sometimes a sum of money is weightier than argument, and in this case, as too seldom occurs, the sum of the money was thrown on the right side of the balance. Mr. Mills is entitled to the approval which greets him from all parts of the State.

The almost universally popular feeling against the selection of Mr. Reid for President, has happily calmed down. There was most excellent *a priori* grounds for the protests against the selection made by the Regents. It is natural that the people should cry aloud when their ideals were about to be dashed to pieces by what seemed to be a few men's idol. But since the crash has come, all are now looking with interest upon the figure, hoping that it may indeed spring forth full of life and action, willingly waiting to acknowledge that they erred through their inability to fathom the unknown. It is certain that the new president will come upon the scene with the best wishes of his associates and the public generally. If he prove master of the situation, if he have indeed that breadth of view, coupled with a grasp of detail, that ready wisdom and firmness in the right, and those qualities of head and heart which will lead people irresistibly to united efforts for the upbuilding of the institution with the bestowal of their sons, their daughters and their surplus funds, then his victory will be great, and the people of California will rejoice with him and in him. Such a chance as lies before the new president is enough to cause the strength and nerve of any able and sincere young man to grow within him and compel him to rise with the occasion and surmount it.

It is becoming more and more apparent that the reduction of salaries of professors and other members of the working force of the institution is a matter of necessity in the present condition of the University funds. So far as we are aware, those who find their incomes lessened are accepting the disagreeable fact with becoming spirit, and it does not appear that the efficiency of the institution will be decreased. As a rule, it is a fact that men whose minds are filled with the consciousness that their calling is high and their work of benefit to those who come to them to be fitted for their life work, are not turned from their course by considerations which influence more sordid natures. If the true scholar can live and find modest comfort for his family he clings to his work until death sets him free. We do not cite this as a reason why these noble, self-sacrificing men should be pinched; far from it. It is the greater reason why the people should be generous with those so devoted to all interests but their own. We mention it as praise justly due to the University professors, and as surety to the people that their sons will be just as zealously and conscientiously taught as though the professors had a few more dollars for their disinterested labors.

We are glad to assure our readers that the College of Agriculture, in which they are especially interested, bids fair to be brought into greater prominence and its just claims to be more generally recognized than heretofore. It is true that its operations are restricted and its efforts crippled by a lack of funds which should not appear, but we trust that time and a generous people will remedy the evil. It is true that our friends have been prone to grow indignant in their letters that a position which the law says shall be given to one thoroughly identified with agriculture, has been otherwise bestowed, but that is a small matter if the interests of agriculture in the University should be otherwise conserved and advanced.

We base our chief hope for the agricultural future of the institution upon the manner in which the work of the College of Agriculture has been shown forth to the popular mind during the general scrutiny which has been turned upon the University. Whatever has been criticized and whatever condemned, there has been a general disposition to approve the work which Prof. Hilgard has carried forward during the last six years. There has been a general demand that the College of Agriculture be given means and opportunity to carry forward and increase its instructive and experimental work. It is true that in the present condition of the finances of the institution it does not appear how this can be done, but a way must sooner or later appear, for the disposition of those engaged in our leading producing interests seems unmistakable, and their ability to finally secure their ends cannot be doubted. There is imperative call that our varied agricultural interests should enjoy the full light of scientific research and experimentation which many of their practices and processes so greatly require. The College of Agriculture is naturally looked to as the source from which this light should emanate.

This was the original design in its creation, and the clearer perception of the need and the design is but the forerunner of realization.

The promoters of a new career for the University can build strongly if they give the College of Agriculture due consideration. It is firm in the popular esteem and confidence. If the impression should go forth that its growth and advancement are to be received with due pride and care by the rulers of the institution, we do not believe that funds will be long withheld. The agriculturists of the State would rally around it, and it should not be overlooked that they are now achieving more solid and general prosperity than any other class of our population. Our orchard, vineyard, dairy and live stock are all yielding immense aggregate values, and have wider margins of profit than the old staple cereal products. There is a large amount of generosity lying in the hearts of producers waiting the concentrator. They can easily furnish the means to supply their own needs of information, and for the education of their children in the arts which have made them prosperous. We have uncovered a mine. Only well known and trusted hands can work it.

## Cheese Factory Reports.

The dairyman has much to learn from correct statistics. They can tell him whether his cows are worth keeping, whether the churn or cheese vat is doing the fair thing with his milk, and a score of other things which enter into the question of profit and loss in dairying. In the Eastern States there is a great deal of figuring done on the season's average yield of milk for the dairy, the milk of individual cows, the amount of milk required to make a pound of butter or of cheese, the price obtained for the product as compared with the prices of other producers, etc. There is something of this done in this State, also, but not nearly to the extent it should be.

We shall be glad to receive and publish well-certified milk records, product from specified numbers of cows, and other trustworthy data of that kind. We believe that a large collection of such statistics will show dairy advantages in California which have not yet been made prominent, and cannot be claimed with any force unless the statistics can be had. We believe that the average milk per cow through the dairies of the State will be much higher than the Eastern average, and we also believe that less milk is required, as a rule, to turn out a certain amount of the finished product. These are but impressions gained from limited observations, and cannot be firmly claimed unless wide-reaching figures should be gained.

We notice, in the *Santa Clara Journal*, a report of the work of the cheese factory at that place for the year which closed July 9th. The summary of the season's work is as follows:

Pounds of milk received from patron stockholders during the year, 1,108,514; pounds received from outside patrons, 165,770; total pounds of milk received, 1,274,284; pounds of cheese made during the year, 224,385; gross sales of cheese, \$15,090.19; average price per pound, 12.61 cents; pounds of milk to one pound of cheese, 10.10; dividends paid on milk, \$13,290.31; amount expended in permanent improvements, \$228.93.

The report shows a fine average price for the year, but gives rather a large amount of milk to the pound of cheese, unless the patrons have been making some butter at home. It is not very high, as 10 lbs. is what is usually calculated in the rough, at the East, but we expected to see a lower figure out here. This might be so if the cheese were weighed as near the hoop as they are in New York. But one cannot argue much from a report unless he knows more about the circumstances which may affect its statements. Let us have more facts and figures about the dairy in California.

## Birds and Worms.

The beneficial deeds of insect-eating birds are everywhere recorded and have entered into nearly everyone's experience, and they are constantly recurring. Mr. Blowers dates the inroad of leaf-eating caterpillars upon his vineyard from the year when there was no water for irrigation, the alfalfa fields were killed out and the birds finding no green thing flew the neighborhood. Since then the insects gained such a start that he has had to fight the insects himself, instead of trusting to friendly birds as formerly. We notice by the *Dixon Tribune* that the birds have returned because of the abundance of insect food, and are doing much service for Mr. Briggs. He has discharged most of the 150 Chinamen whom he had employed to pick the green worms off his vines, because he has secured the unpaid services of a better insect destroyer than human hands, viz: An immense flock of crows that come every morning and settle in the vineyard, diligently searching for and devouring the worms. The existence of the worms in this vineyard seems to have been made known to all the corvine species in that part of the State, and they are nothing loth to take advantage of such an unusual opportunity for a feast. When the Chinamen were working at the job they went over the vines several times, snipping the worms in two with scissors, but could not seem to exterminate the insects, who are very voracious and can eat up a leaf in five minutes. They do

their work of destruction in the morning hours, crawling down the stalk as the hot weather comes on.

Such service as this gives new force to the old injunction, "Don't kill the birds." But this, like other general commands, must be intelligently obeyed. The character of a bird is as distinctive as that of the larger animals, and it is necessary to observe the food of the bird in order to determine whether he can be spared or not. The study of birds, with a view to learn their injurious or beneficial character, is proceeding rapidly at the East, especially in Illinois, by Prof. Forbes and Mr. Garman, and great numbers of dissections are made to learn the character of the food taken into the stomach. In a report made by the latter on a visit to an orchard overrun with canker worms, we find an interesting paragraph. He found that the number of birds in the infested orchard was very great, altogether in excess of that usually seen. There were also a number of species which are seldom met with in that section. These were all drawn together by the banquet of canker worms. There were 30 different kinds of birds observed in the single orchard of 16 acres, while neighboring orchards not visited by worms were also neglected by the birds.

## Overland Fruit Shipment.

This promising branch of our horticultural industry is showing unusual life this year, and is far outdoing the achievements of all former years. It is a neat trade, and it ascends to high figures. It will bring into the State this year a large sum of clean coin, and will exert indirect benefits by relieving the pressure on our local markets and thus enable much more material to be turned into money. The trade over the northern overland line is centered in Sacramento, and the *Bee* states that the shipments this year have been largely in excess, if not double those of any previous year. The *Bee* gives items in this connection which are of general interest:

The steamer *Apache*, which came up from San Francisco this morning, brought up 1,983 boxes of fruit from points between Ketchikan and this city, in Sacramento county, all of which is for shipment East. This is the largest consignment ever brought to Sacramento on a river steamer, and attests to the excellence and plenteousness of the fruit crop in this county this season. M. T. Brewer & Co. last week shipped East 23 car-loads of fruit and vegetables, and have already orders to forward 16 car-loads this week. Gregory & Co. ship eastward, on an average, from one to three car-loads per day. Strong & Co. and D. DeBernard & Co. also send large quantities forward each week, and such a "boom" as now prevails in the fruit and vegetable shipping business was never before known in Sacramento. In addition to these heavy shipments to the East, fully as much is sent to Nevada and the Territories northward.

There has also been active work done in the southern counties over the new southern overland route. The well-known firms of Woodhead & Gay and E. Germain and others in Los Angeles have been busy forwarding all kinds of produce to Arizona, New Mexico and beyond. Shippers are also operating at other points, as for example, the purchase of Riverside apricots for the overland trade. The new outlets for perishable products are stimulating producers both in northern and southern counties, and the result is satisfactory to contemplate.

The details of the Eastern trade in fruits are of interest, as there are many methods and appliances employed in so novel a business which have not been required in the ordinary fruit trade. We have given items relating to this matter from time to time. There is special preparation at nearly every point, and it reaches back even to the orchard, although, in most cases, there has usually been a re-packing at Sacramento. The *Chico Record* of last week says:

At the Rancho Chico orchards this morning an additional force of 40 hands was put on to pack plums for the Chicago market. The fruit is shipped by T. Earl, of San Francisco, to W. H. Pescock & Co., of Chicago. Each plum is wrapped in a separate piece of paper before it is packed in the box. The boxes are 12 inches wide, 18 inches long and 4 inches deep, and hold about 20 lbs. of fruit. The car will be loaded this evening and will leave with the express train to-morrow morning for Chicago. The amount of fruit shipped will be about 10 tons, or as much as can be placed in the car. The plums are of the Purple Duane variety and are of fine size, much larger than the average size shipped, and the regulation box is too shallow and has to be made larger by the addition of small cleats on the end to prevent mashing. The car is well ventilated and built expressly for the shipment of fruit.

The trade for this year, although it has been very active, is but just approaching its height, for the grape is one of the greatest items, and grape ripening has hardly begun. Our Eastern friends will have plenty of California grapes this year, and they will be of exceptionally fine quality.

A NEW PAPER.—We have received the first copy of a new paper entitled the *Women's Herald of Industry and Social Science Co-operator*. It is published by Mrs. J. W. Stow, under the auspices of the California Women's Social Science Association, organized in San Francisco, August 7, 1880. It is a large, eight-page journal, full of well-written notes and essays on fresh themes relating to the work of the Social Science Association, and women's progress in arts and industries generally. It has also vigorous descriptions of the wrongs and indignities which the editor affirms have been visited upon her by those in authority. The *Women's Herald* is wide awake and aggressive, and bids fair to reach a wide circle of readers.



## The Olive in Italy.—No. 6.

[Translated for the RURAL PRESS from *L'Italia Agricola*, by Dr. J. I. DEASDALE.]

## Oil Making in the District of Albenga.

The cultivation of the olive tree in this district, and indeed in the greater part of the Communes, may be said to be our most important industry, and that from which the best remuneration is obtained.

The serious attention of our agriculturists has been directed again, as it ought to be, to this tree, which was called by the ancients, "the first among the first." But the intelligent farmer ought not to stop at the cultivation of the tree; for, if so, he would stop half way, but should have a bright eye to the fruit in order to get the largest profit from the oil. The study, then, of the extracting of the oil is as profitable as that of the cultivation of the tree, for, without it, the tree is of secondary consideration.

At present, the producers of olive oil have to contend with a terrible competition with the producers of oil from seeds; and in order to come off victorious, it is clear they must not only bring the trees into highest productive cultivation, but know how to extract the largest possible quantity of oil, and of the finest quality. It is true that the quality and condition of the olives have a great influence on the oil as the methods of extracting it, but it is also true that from good and sound olives indifferent oil is obtained.

The olive tree which gives the best fruit for oil is that called *taggiaseo*, which our forefathers did not introduce into this district, though they could not help knowing it, as it was cultivated in the bordering Province of Porto Maurizio.

Whatever their reasons may have been is not now worth the trouble of inquiring. Nevertheless, our olive trees are capable of yielding good, fine oil; hence, it seems opportune to inquire into our methods of extracting it, and to indicate in our own case the causes which may improve a less perfect extraction. Thirty or forty years ago, in my opinion, the farmers understood the extracting of oil, whether as to quantity or quality, inasmuch as everyone grew olives and made oil. Many, especially in the villages, had oil mills, which were worked by horse-power; and in a calm and careful way attended to the oil, securing a larger amount of pressure with greater cleanliness of their utensils. But at the present day this system, for economical reasons, has fallen into disuse, and but few turn their attention, even under special circumstances, to manufacture oil by animal power; yet, when they do so, with olives of equal goodness, they obtain oil of a far higher quality than that made by water-power machinery. On the other hand, such a system might be compared to that of grinding wheat with a hand-mill, and economy has irrevocably condemned that. So now, oil is manufactured by water-power, and it is directed by speculators, who buy the olives from the growers, extract the oil for sale to merchants in the great centers.

We will take a look at the establishment. It consists of a basin with a millstone set in motion by a water-wheel; of from four to six oil-presses made of wood, according to the amount of motive power, and of all the utensils and appliances requisite for obtaining and storing the oil. The building, which includes the whole, is for the most part rectangular and somewhat narrow.

The contractor takes care to provide olives to keep the hands employed, who in ordinary times may number six, and he sells the oil gradually as the price in the market suits him. His aim and endeavor are principally not to pay too much for the olives, that he may be safe against loss in the sale of the oil; and as he is frequently in communication with the traders, who know every day the variations in prices on the markets, so when he receives commissions under favorable conditions, he sets himself to make all the provision in his power to, and above the full power of his machinery. He heaps up all his purchases in one room without the least discrimination, and before they are crushed, always 10 or 15 days pass, during which time anyone may guess what sort of a fermentation will have set in. Under circumstances like these, the work is hurried along, relays of workmen are arranged, and the chief scope and aim of all is to get on with the crushing, and if everything proceeds most favorably, the press of labor is not forced, and the distinction is made between the first and second-class qualities. In this way he measures out the work during the year, with no other intent or interest than to regulate the price of buying by that of selling.

He deposits the crushed matter in tanks dug in the ground, and close to his mill, to keep it for washing afterward, the last process it is subjected to.

The washing establishment consists of another basin, where a small oil-mill, assisted by a little drain of water, softens the muck and causes it to pass into another basin or trough, where the washing is finished with the help of appropriate iron implements for stirring it; of troughs for holding the pellicles of oil which rise to the surface, which are afterward put in a caldron, fixed in one corner, to undergo the requisite boiling; of wooden oil presses moved by long levers, with the assistance of a windlass, and all the other utensils necessary for collecting and storing the oil.

Such are the establishments in this district, and I believe there are few as good in all

Liguria; and such are the systems in use, and such the speculators who manage this important industry, which yields to Italy an average annual value of 400,000,000 of lire (*Livres*).

The district council of Liguria (*i Comizi Liguri*), with the view of promoting, as far as they could, the economic improvement of the olive-growers, gave their attention to the extraction of the oil; and in full meeting laid down rules and instructions—forming a valuable code of advice and precept.

I would call attention to the fact that it is necessary to contend with oils made from seeds if we are to come off victorious.

The opening of the Suez canal has unfavorably affected us. From time to time steamers go up the canal, and being able to shorten the voyage so much, they bring back seeds in a condition of freshness from which is obtained good oil, which suffices for palates little acquainted with olive oil; or what is worse, such as serves for mixing with and adulterating olive oil, to the great advantage of the manufacturers. Still I will not say that that colossal undertaking of the Isthmus has really been injurious to the olive-growers, and that they curse it on that account; but I would point out in order to show that whilst the production of seed oil had its advantages precisely in being obtained from seed which had not undergone injurious fermentation, the extracting of olive oil might be equally improved if the proprietors would take precisely like care to prevent injurious fermentation to which the olives are peculiarly subject.

I observed above that the extraction of oil is in the hands of greedy speculators, the least fit to distinguish the quality of the oil, having no other aim in view but to regulate the purchase price of the fruit with the sale of the oil; never troubling about the goodness so long as they are remunerated.

Truth to tell, if we pay attention to them we shall direct our improvements to nothing but present profit, for their interests are at direct variance with those of the growers. Nevertheless, the keepers of oil mills have an important part to play in oil industry. They ought to spare no pains to keep everything about their

some Communes, they would be crushed immediately, and the millers could not accumulate such large quantities, which serve no purpose but to injure the oil.

Innovations such as these, which one may think of minor importance, are the only means of maintaining a high price for the oil; and as there is nothing difficult about them, we may reasonably hope that those most nearly concerned will see their profit and will gladly act upon them.

As concerns the washed oil, I would remind the millers that it is of primary necessity to improve the tanks dug in the earth where the crushed and pressed matter is put; because in them it becomes deteriorated to a depth of from 25 to 30 centimeters, and yields no oil on account of having been in contact with the earth; and to remedy this evil, all that is needed is a little walling on the inside of the tanks. It is of importance to do the washing as early as possible, and not wait to the end of the season, because thereby better oil can be washed out, which will sell for from 5% to 10% more than that got out of the old muck.

It is indispensable, then, and the reason is most evident, that we should substitute iron presses for the wooden ones, because with these latter, whatever kind of power is applied it is impossible to obtain a strong and regular pressure. And that such improvement would be of evident utility, has been demonstrated by the results obtained by a certain intelligent and active proprietor, who substituted an iron press for his wooden ones, and thereby extracted a larger quantity of oil than sufficed to reimburse him largely beyond the cost of labor, in comparison of others who were working with wooden presses.

In conclusion, it occurs to me to remind the reader that to defeat the competition of seed oils it is indispensable:

1. To have large oil mills, well appointed and provided with presses of iron.
2. To crush the olives quite fresh; preventing by all means any injurious fermentation; and hoping that chemistry will soon discover prompt and easy means of detecting the adulterations

Fig. 2.

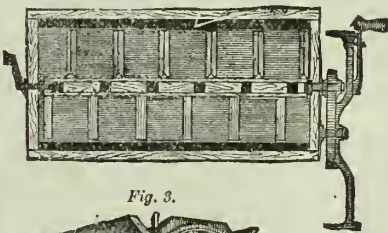
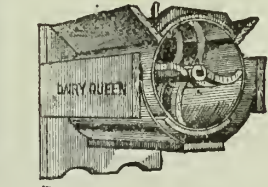


Fig. 3.



## FREEMAN'S COMBINED CHURN AND BUTTER WORKER—THE DAIRY QUEEN.

establishments in most perfect order; to require the laborers to keep all utensils in the highest state of neatness and cleanliness, and, what is of the utmost importance, to pay unremitting attention to the oil press. I would observe that in general the presses are made of wood and moved by manual labor. Such a system has nothing to recommend it, for granting that the wooden press has been constructed in the most perfect manner, it is exposed to the influence of the atmosphere, and hence the pressing becomes irregular. I would also add that the bags filled with the mass to be pressed are no longer subdivided by metallic plates, on which account the pressing is always faulty, and not uniform over the whole column.

It is true that the oil is not lost (as some say) and that it is found in the washings, but it is also right to say that the washed oil is inferior to that from the pressing; and there is a loss always of 50%.

Another sufficiently important improvement would be the substitution of presses of iron for those of wood, and to use metallic disks, such as would multiply and equalize the power applied, and using the windlass.

Such improvements as these should be made by the proprietors of oil presses, who would find their account not alone in the greater yield of the olives, but in not having to spend money continually on repairs.

It remains now to see how oil of the best quality can be extracted.

Experience has incontestably proven that, to have good, fine oil, the berries must be sound and free from any injurious fermentation. The facts show clearly that the oil millers care nothing about selecting the olives, and make no account of the fermentation which they undergo in the heaped-up piles, on occasion of excessive purchases. To obviate these and such like drawbacks, the concurrence of every party concerned is required. In our neighborhoods the owners offer the olives gathered during the week only on Sunday, and many only once a fortnight. This system is ruinous; because, in the less perfect seasons the olives begin to ferment already in the hand of the owner, and finish their injurious fermenting afterward in the oil press, when they go to form part of the great heaps upon which the oil-miller is operating. If the proprietors, instead, had but the good habit of selling their olives every day, as we now know, to their advantage, is done in

which are going on every day.

3. To keep the muck from contact with the earth, and washing it as early as possible; and 20 or 25 days after being deposited, to endeavor to obtain the greatest pressure in order to set free whatever oil remains in it.

G. DURANTE.

## Italian Oil Crop of 1879.

The olive crop was in 1879 of excellent quality in 29 Communes, good in 456, medium in 879, bad in 972, and null in 712. The Communes which cultivate olives are in number 3,048; those which do not cultivate them, 5,241. The actual quantity of hectoliters of oil produced according to regions is the following:

	Hectoliters
Lombardy.....	1,471
Venice.....	3,766
Liguria.....	106,034
Emilia.....	13,852
Marche and Umbria.....	32,843
Tuscany.....	61,959
Lazio.....	17,087
Meridionale Adriatica.....	202,415
Meridionale Mediterranean.....	74,262
Sicily.....	125,543
Sardinia.....	8,934
Total Hectoliters.....	651,216

Taking account of some corrections made by the provinces of Livorno (Tuscany), Salerno (Southern Mediterranean), Sassari (Sardinia), the amount of land under olive cultivation in the kingdom will amount to 882,707 *ettari* (acres), with an average yield of 3,313,319, hectoliters, corresponding to an average product of three hectoliters, 27 liters per acre.

BREWING BARLEY.—Phil. Neis, of this city, in his review of brewing materials for the harvest year, gives the following rates on brewing barley: Export overland, to May 31st, 827,425 cents; by sea to New York, 84,344 cents; by sea to Great Britain (Chevalier), 350,672 cents; total, 1,262,441 cents. From the beginning of September to November, prices ruled from 85 to 95 cents per 100 lbs. From that period prices stiffened, and with a gradual rise, \$1.25 was reached in the first part of December. To-day's quotations are \$1.10 to \$1.22. Chevalier barley early in the season brought from \$1.10 to \$1.45; the latter figure only for gilt edge. In consequence of higher freights by sailing vessels, about middle of October, prices for bright Chevalier dropped to \$1.25 to \$1.30.

## A New California Churn.

Californians long ago achieved position in dairy invention by the construction of several original and valuable devices for the use of the butter-maker. Dairy inventors are still busy, and the latest to bring his work to public notice is George W. Freeman, of Rocky Point, Sierra county, who was himself a practical dairyman, until the idea of an improved churn filled his mind and made him an inventor. As Mr. Freeman is thoroughly versed in butter-making, and consequently knows well the points of a good churn, and the bad points of many devices which have been used in the dairy, he was well qualified to bring out an improved churn, and this his experiments thus far have established. His invention was patented last year through Dewey & Co.'s Patent Agency, and will soon be offered to the public.

The engravings on this page will aid the reader to understand the mechanism of the new churn, which Mr. Freeman has named the "Dairy Queen." Fig. 1 is a perspective view, showing the arrangement of the gear, balance wheel, pinion crank, etc. Fig. 2 is a sectional view with the top half removed, showing the arrangement of the beaters on the beater-shaft; also the hand-screw at the end, where it acts as a pinion for the heater-shaft to revolve upon. Fig. 3 is a cross-sectional view of the churn, showing it with the head removed, thus exposing the false bottom and showing the cam-shape of the beaters, the arrangement of the cooling chamber, etc.

There are several points in the design and construction of the Dairy Queen churn which are worthy of especial mention. It is operated by a gear, the beater-shaft revolving thrice to every revolution of the balance wheel, which secures ease, rapidity and uniformity of motion. The peculiar cam-shape of the beaters when revolved with the inside of the cam forward is to draw the cream from the sides toward the center of the churn. One-half of the beaters are beveled on the right side, the other half on the left side, commencing at the ends of the shaft and meeting in the middle, by this arrangement tending to draw the cream from the ends of the churn to the middle, where it will be most effectually acted upon. The arrangement of the beaters on the shaft is such that each set of beaters lies between those before and behind them, thus when revolved they insure a complete and continuous agitation of every particle of the cream. The cam-shape of the beaters and their arrangement on the beater-shaft is such as to best adapt the machine to the washing and salting of the butter, and this leads Mr. Freeman to name his machine a "butter worker" as well as a churn. For when the butter comes and water is turned into the churn, the beaters are moved backward, and as the backs of the beaters are flat, they act as a series of revolving paddles, stirring the small lumps of butter in the water, and effectually separating the buttermilk. In the same way the salt is stirred in, and this allows the thorough incorporation of the salt without injury to the grain of the butter. The cam-action of the beaters throws the butter to the outside of the cylinder, thus placing it where it can be best acted upon by the beaters, and their shape causes them to free themselves of the butter better than they could if of any other shape.

Another important point of construction is the jacket which surrounds the churn, which is to be filled with either hot or cold water, according as the cream needs warming or cooling to bring it to the 58° or 60°, which are best degrees for churning. This jacket or cooling chamber holds the cream against the rise of temperature, which always occurs during the churning and is, of course, much better in its action than a temporary cooling or warming before churning begins. Cooling chambers are used on churns of other styles, but Mr. Freeman believes his is the first geared churn with a cooling chamber.

Another very important point is the material used in the construction of the cylinder of the churn. It is of what is known as "agate iron ware," and familiar to housewives, as sauce-pans, basins, coffee-pots, and other culinary utensils are made of it. It has a surface as smooth as glass, and cannot be corroded by the acid of the buttermilk or by the salt, and therefore no poison from zinc can get into the butter or buttermilk. It is also as easy to clean as a glass dish. The glass-like enamel is placed upon extra heavy sheet iron, which gives more strength to the cylinder than any of the old metal churns have. Besides this there is a perforated false bottom, which supports the agate iron cylinder and this effectually prevents it from breaking down, even if the iron should yield. This support can be seen in Fig. 3.

There are also some important features in the adjustability of the gear by which the force is applied to the beater-shaft. The speed may be increased or decreased threefold by a simple shift of the gear wheel, and thus, when speed is used in churning, the slow motion may be applied to wash or salt the butter. In the larger sizes of the churn the crank is extensible, that is, the stroke may be lengthened or shortened about eight inches, or, when power is to be used, the crank may be removed altogether.

Mr. Freeman's "Dairy Queen," churns will be shown at the Mechanics' fair in this city, also at the State fairs at Sacramento and Reno, Nevada. They have been fully tested practically, and seem to have shown their adaptation to the purposes required.



## Notes on Irrigation.—No. 3.

(CONTINUED FROM PAGE 51.)

sbe, poor soul, writhes and withers in her scorching misery.

It is an established fact that by far the largest portion of the water that falls upon the earth's surface is removed by evaporation. This is particularly the case in summer months where even in the humid climate of England, surrounded by seas, with a moist climate and showers almost every day and a temperature 20° to 40° less than our own, it is found by observations kept for a period of 8 years, that the evaporation of rain which fell from April to October was 90%, and that only 10% found its way into the drains which were from 3 to 4 ft. deep. Our rainy season may be said to commence in November and end in April, covering a period of 6 months, after which the precipitation is at its minimum, seldom enough to keep up the surface equilibrium of moisture necessary for the best development of our cereal crops. And for that class of products which require a greater amount of water to bring them to perfection, many of them which cannot be planted during the season of frost, and whose growth must extend into the summer months where the surface moisture is almost dissipated by evaporation, it is quite plain that all deficiencies must be based upon what experience has shown was a necessary supply.

In Italy, where hoed crops are the rule, the Italian engineers estimate the quantity required at one cubic foot per second per every 96 acres. In the hot and dry climate of Provence, in the south of France, where irrigation is extensively practiced, the duty of one cubic ft. of water is 107 acres. In the experience of India, where grain is the principal crop, it is found that the constant flow of one cubic ft. of water will irrigate from 180 to 200 acres.

Quoting Prof. Davidson, an eminent American scientist and a resident of this coast for several years, and who, under the auspices of the United States Government, has made European, Asiatic and California irrigation a subject of personal investigation and study, and is good authority upon the subject, in discussing its application to California, says that "One cubic ft. of water per second for 150 days (five months), would furnish 12,900,000 cubic ft., or a quantity affording a total depth of 10 inches over 357 acres of land; 1,000 cubic ft. for the same period would supply 357,000 acres; and in a season of rainfall of even six or eight inches' supply, would doubtless supplement the loss by evaporation, absorption and waste, and bring up the duty of water to 357 acres." Therefore, accepting that as a standard quantity (and it approximates the best application in California), it would require but 70 cubic ft. per second to irrigate 25,000 acres in cereals, or 8,000 acres in vegetables. A canal 10 ft. wide on bottom, slope of sides 1 to 1.6 ft. deep with flow of three miles per hour, will discharge that quantity, or 72 cubic ft. per second. I have thus far only considered the use and application of water as applied to the land for irrigating purposes. But it will at a future day be used for the propulsion of machinery for manufacturing purposes. The entire Mokelumne bluffs, from the eastern county line to Woodbridge, afford excellent sites for water power. The fall or head ranges from 20 to 40 ft., and the supply of water may be made constant during the entire year by constructing reservoirs in the high Sierras, to be filled by the winter rains and melting snows, and thus impounded, can be let down in summer months in quantities as wanted. Much might be said upon the *kinds* and *methods* of application of water, but the subject is so comprehensive that time will not allow of amplification.

The subject of the drainage system of our rivers is one of great and growing importance, and even now excites the deepest interest through the entire valley. Nowhere has its importance been more severely felt than in the Sacramento valley, where the carrying capacity of her rivers has been impaired by the debris of the hydraulic wash of the mines, which is constantly being poured into her rivers, and by overflows spread over vast areas of the most fertile land, superimposing a deposit of slickens yards deep. Farms have thus been ruthlessly wiped out, and as effectually as if an earthquake had engulfed them. Hundreds of sterling farmers whose property was a part of the taxable wealth of the State, after years of toil have been made poor and by the imperious bidding of the mining autocrat are told to "move on." We, in our valley, have not as yet suffered so severely, but the time is not far off when by some of our torrential floods we shall either be wiped out or suffer great loss, as the trough of the Mokelumne is filling up at the rate of more than 6 inches per year. Some of you know how it was in 1862, when the floods of the Mokelumne ran where this pleasant town is now located, and I think in 1878 the flood at one point above here left its banks; when, at Mokelumne city, in 1862, we had a depth of 15 to 20 ft. of water near the head of tide water navigation. Four years ago, over the same spot, I could strike bottom with the dip of the oar. This filling of the beds of the rivers renders them more liable to get out of their banks each succeeding year and submerge our lands, and the question indeed becomes a serious one as to how we shall arrest this evil. There is mainly only one source whence the evil comes—that of hydraulic mining. Acres and square miles in the aggregate are being loosened by the resist-

less force of water, and swept down to the ruin of our farmers and the destruction of navigation. Debris dams may for a time abate, but cannot cure the evil. The good they do is not commensurate with their cost, therefore we are averse to being taxed for them. Hydraulic mining must stop and cease to be an industry of the State unless the miner can take care of the tailings and so impound them at his own cost as to render it impossible that they should find their way to the plains. The mines generally, on our rivers, are owned by a few men who employ Chinese labor on shares to wash them, giving from one-third to one-half net proceeds, the proprietors furnishing the capital. The Chinese on the co-operative plan often do not average 50 cents per day, while the proprietor's share may amount to a good income. And we, the public, must stand the loss and ruin of our lands, the State the loss of the positive destruction of a taxable capital, that a few aliens may earn a laborious existence, and the proprietor a doubtful income. For a truth, political economy demands that hydraulic mining should be wiped out by statutory enactment.

The question of drainage deserves an entire lecture even to briefly touch upon its most important points, but I will dismiss the subject by remarking that our drainage can be materially improved by giving a more direct channel and confining the water within levees which will tend to give an increased velocity of flow, scouring and deepening the channel. Nature has given us a district possessing great natural advantages; the climate is healthful; the location is central; avenues of communication by water or rail, radiate in all directions and bring to near markets. The topographic slope is such that gravitation will place water upon all parts of it. The soil, naturally rich, will be made still richer, and the waste incident to continued cropping will be restored by the elements of fertility contained in the water. Our now arid plains will be clothed [with perpetual verdure, instead of uncertain crops, resulting from seasons of unequal rainfall; it will give us certain uniform harvests with a greatly increased production; mixed husbandry will be introduced; land increase in value; labor be constant and well paid, and happy homes abound midst flowers and clustering vines. These are some of the benefits which irrigation has conferred upon other communities—why not upon this?

G. C. HOLMAN,

Lockford, Cal.

## A Gift to the University.

The following letter from D. O. Mills Esq., who has just resigned as a member of the Board of Regents of the University of California, explains itself:

SAN FRANCISCO, July 7, 1881.

To the Board of Regents of the University of California:

GENTLEMEN—My interest in the institution over which you preside, and a desire to contribute to the benefit and support of good learning, prompt me to propose to you the establishing of a permanent foundation in the nature of a trust fund, of which the income shall be applied to the maintenance, in the University of California, of a Professorship of Intellectual and Moral Philosophy and Civil Polity. The sole condition that I shall impose upon this trust and foundation is that the income only shall be devoted exclusively to the support of this professorship, and that any surplus shall be added to the original fund. While I propose to commit this trust to the keeping of the Regents of the University, confiding in their wisdom to direct it to the promotion of the studies to which it is dedicated, and to the steady increase of human thought and progress, and would limit it by no narrow boundaries of transient opinion, I desire to record my views as to the nature of this professorship, and the character of the man who should be called upon to discharge its duties.

The studies included under the general title pertain especially to man—his intellectual moral and social being—and can never cease to hold a high place in human learning, nor to have great influence on human welfare. In the widest and most liberal meaning they underlie laws, manners and religion, and in effect form the public opinion of the world, and their teacher should not be one who merely resorts to them, picks them up, or incidentally adopts them, but one of philosophic spirit who shall devote his life to this appropriate field of influence and noble labor. To such a man this professorship offers opportunities limited only by his own genius and devotion. For the above purpose I inclose herewith my check for the sum of \$75,000, and will be obliged if the Board will signify to me the acceptance of the trust. Hoping that this may result to the advantage of the State and to the University, I remain, gentlemen, very respectfully,

D. O. MILLS.

This gift comes at an opportune time in the affairs of the University, and its friends will feel grateful to Mr. Mills, both for his generosity and his timely application of it. On receipt of the gift, the Regents passed appropriate resolutions, one of which was as follows: That in recognition of the living interest and broad views of the donor, the Professorship thus endowed shall bear the name and title of the Mill Professorship of Intellectual and Moral Philosophy and Civil Polity, and that the wishes of Mr. Mills shall be consulted in the appointment of the first Professor.

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CALIFORNIA PIONEERS.—At the annual election of the Society of California Pioneers, the following officers were elected: Pres., Joseph G. Eastland; Vice-Pres'ts., John F. Lohse, of San Francisco, Ethelbert Burke, of San Francisco, Lansing B. Mizner, of Benicia, Charles Harrison, of Oakland, and Thomas H. Laine, of San Jose; Sec'y, Ferdinand Vassault; Treas., Howard Havens; Marshal, William Huefner. Directors, Washington Bartlett, Geo. B. Bradford, Joseph Britton, George S. Evans, John G. Hodge, S. W. Holladay, F. W. Macondry, Samuel P. Middleton, James Phelan. The Territorial Pioneers of California have elected the following officers: Pres., William T. Garratt; 1st Vice-Pres., William Pearson; 2d Vice-Pres., Matt. D. Carr; Sec'y, Lowell J. Hardy, Jr.; Treas., Robert Dinsmore; Marshal, Robert Bell. Directors, Capt. C. Nelson, John W. McCormick, Sol. D. Brastow, J. W. Wesson, Samuel Figel, Domingo Maruccci, Dallas A. Kneass, C. H. Reynolds, Ely I. Hutchinson, Jr., Benjamin B. Stansbury and David Stern.

WOODEN BOILERS FOR STEAM.—The almost incredible feat of making steam boilers of wood was accomplished 76 years ago in Philadelphia, where they were used to furnish steam to the pumps, for pumping up the river water, for the use of the city water works. They, however, lasted only two years, when it became so difficult to keep them steam-tight that they were abandoned for iron boilers. How was it possible to beat water in wooden boilers? It was accomplished by having an iron fire-box 12 ft. long, 6 ft. wide, and 2 ft. deep, placed inside a rectangular wooden chest, 14 ft. long and 9 ft. square, made of plank nearly half a foot thick, securely bolted together by iron rods passing through the planks. The iron fire-box had eight vertical flues of one foot in diameter, through which the water circulated and around which the fire acted, and passed upward through an oval flue, first above the fire-box, carried from the back of the boiler to near the front and back again, when it passed out into the chimney. It was expected that these boilers would be very economical, on account of the non-conducting property of wood; and so they were to a certain extent, as the boilers did not need any protecting covering, but, as already stated, they did not last, and cast-iron boilers were substituted and used until 1822, when water-power was substituted for steam-power in the Fairmount water works.

ELEPHANT'S MILK.—Dr. Charles A. Doremus has been much interested in an analysis of the milk of strange animals. His greatest difficulty was to get the milk. When Barnum's show was here he interviewed a lioness, but her claws were too long and menacing. He did, however, succeed in getting a sample of the food upon which the only American-born baby elephant was brought up. Dr. Doremus gave an account of his analysis before the American Chemical Society. He said it was no wonder that elephants were such great, hearty, overgrown animals, because the milk upon which they are nurtured is the richest he ever saw. It contains less water and more butter and sugar than almost any other kind, and has besides a delightful flavor and odor. It is about half cream, and the butter made from it, which is rather softer than the ordinary butter, is very rich. The oil extracted from it is clear and like olive oil.

THE FINEST FLOORS are said to be seen in Russia. For those of the highest grade, tropical woods are exclusively employed. Fir and pine are never used, as in consequence of their sticky character, they attract and retain dust and dirt, and thereby soon become blackened. Pitch pine, too, is liable to shrink, even after being well seasoned. The mosaic wood floors in Russia are of extraordinary beauty. One, in the Summer Palace is of small squares of ebony inlaid with mother of pearl. A considerable trade is done in Dantzic and Riga by exporting small blocks of oak for parquet floors. There is an active demand for them in France and Germany, but none in England.

## Lands for Sale and to Let.

### TEXAS LANDS.

I am prepared to sell lands in various counties of Texas and at prices ranging

From 50 Cents to \$5 Per Acre,

Owing to nearness to Railroads and Improvements, supply of wood, water, etc. These lands are carpeted with a rich and nutritious growth of MESQUIT GRASS, green the year round.

I have a solid body of 9,200 acres in Zavalla County, fronting Leona River.

Plenty of Grass, Timber and Water,

At \$1.25 per acre, unfenced, and 15 miles from Railroad. Also tract in Frio County, of 10,000 Acres, fronting on Frio River. NEVER-FAILING water, well coated with Grass; ALL FENCED. Well adapted to Cattle, Sheep, Swine or Farming, five miles from Railroad Station, at \$3 per acre, one-half cash, balance in one and two years at 8% interest.

Also 4,605 acres on same river, two sides fenced and near County seat at \$2 per acre.

Also some 640-acre tracts of rich land at \$2.50 per acre, and near Railroad, besides many other pieces in other counties.

JAMES M. THOMPSON,  
San Antonio or Frio Town, Texas.

### 275 Acres of No. 1 Bottom and 225 Acres of No. 1 Upland for Sale,

Known as the Iler Ranch, and situate three and a half miles from the town of Elk Grove, on the Cosumnes river, 350 Acres Growing Grain, well improved, large House and Barn and plenty of Timber.

PRICE, \$40 PER ACRE.

Inquire of GEORGE H. ILER, on the premises, or of ILER & SONS, at the town of Galt, or of

JAMES H. FERRIS, Agent.

### FRANK RITTER'S RANCH FOR SALE.

It is well improved, and consists of 100 Acres of No. 1 Bottom and 140 Acres No. 1 Upland, and is situated nine miles east of the town of Galt, on Dry creek, California.

Price \$12,000. Terms one-half Down.

Deferred payment to draw 10% per annum, interest. Time to suit purchaser. Inquire of FRANK RITTER on the premises, or of

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### A GOOD BARGAIN.

Twenty-five acres Old Bearing Vineyard; 100 acres New Vines; 200 Old Bearing Orange Trees; 75 acres prepared for Setting Vines; 200 acres in all with a good site for a Wine Factory. All good Vegetable Land, with site for irrigation. Adjoining Mr. Rose's Vineyard, and is half a mile from the Railroad depot at San Gabriel, Los Angeles county, Cal. Income this year, \$3,000, and when all is in good bearing, income will be from \$10,000 to \$20,000 per annum. Price, \$20,000. Inquire of MORFORD & BROWN, Los Angeles, Cal.

### FARMING LAND

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PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

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**WILLIAM NILES**, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs.

**HENRY PIERCE**, 723 Montgomery Street, S. F. Jersey Cattle, bred from Importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted butter strains on the Island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound butter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

**PETER SAXE & SON**, Lick House, S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

**PAGE BROTHERS**, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

**M. WICK**, Oroville, Butte County, Cal. Breeder of Thoroughbred Cattle, Short-Horns. Young Bulls and Heifers for sale at all times of the year.

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**HENRY MILLER**, San Francisco, Cal. Breeder of Thoroughbred Norman Horses of the Stock Imported by Mr. Perry, of Illinois, took First Premium at San Jose Fair, 1880.

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**GEO. TREFZER**, Napa, Cal. I have a fine lot of Brown Leghorns for sale, all one year old, for \$5 per trio, if taken soon, in order to make room for my young stock.

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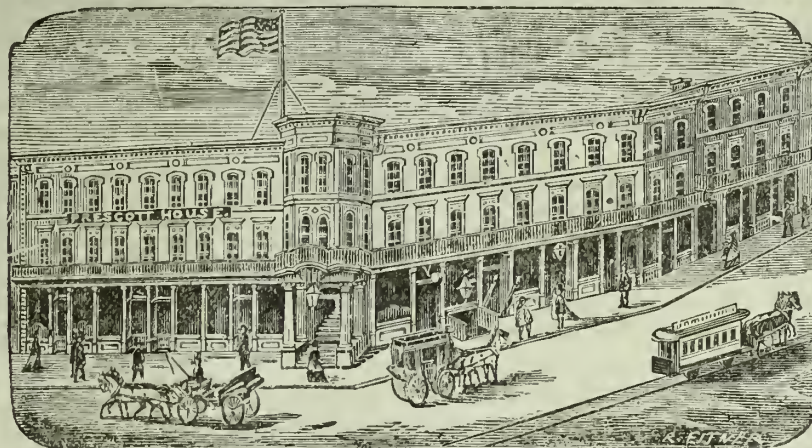
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Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

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Having recently purchased the entire stock, tools and machinery of the late Kimball Manufacturing Company's works, and having the best appliances in the way of machinery for Wood and Iron Working, also Painting and Trimming, on the Pacific Coast, I am enabled to fill all orders promptly, such as Carriages, Farm, Freight and Ore Wagons, also all kinds of Agricultural Implements, R. R. Horse Cars, and R. R. Hand Cars, Scrapers and Excavators at short notice.

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Header, Farm and Freight. Manufactured expressly for the Pacific Coast. SEND FOR CIRCULAR AND PRICE LIST. Also the following masterpieces of mechanical skill: The Davis Steel Double-Tree. The Davis Spring Tongue Support. The Davis Spring Bolster. The World-Renowned La France Steam Fire Engine.

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Admitted by those who have used it, for regularity of Feeding, Simplicity, Cheapness and Durability to be Unequaled by any other Feeder in use. Call and examine before purchasing elsewhere. Threshing Machines Re-paired on short notice.

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A Pleasant and Profitable Fancy Work. Patterns stamped in colors on heavy hurlaps; Animals, Flowers and Scrolls. Can be made of rags or waste yarn. Full printed directions furnished with pattern. Send for Catalogue. Address

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## PATENTS AND INVENTIONS.

### List of U. S. Patents for Pacific Coast Inventors.

From Official Reports for the "Mining and Scientific Press," U. S. and Foreign Patent Agents.

FOR THE WEEK ENDING JULY 5, 1881.

243,760.—VENTILATOR—W. T. Cottier, Napa, Cal.  
243,801.—MAGAZINE FIRE ARM—A. Schneider, S. F.  
243,814.—STEAM PUMPING ENOINE—Thompson & Evans, S. F.  
243,818.—CORSET—Mrs. C. V. Nicola Valley, B. C.  
243,715.—COMBINED HEADER AND THRESHING, A. H. Lighthall, S. F.

Note.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast Inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**MAGAZINE FIRE-ARM.**—Alois Schneider, 24 Erie street, S. F. Dated July 5, 1881. No. 243,801. Mr. Schneider's invention relates to certain improvements in those fire-arms which have a magazine for containing a series of cartridges in line; and it consists in a means of preventing the cartridges within the magazine from resting upon one another, whereby the danger of explosion may be avoided. The invention is applied to any form of magazine in which the cartridges lie in line, one above another, as in the ordinary form. Mr. Schneider has made several valuable improvements in fire-arms, being an inventor of great skill and ingenuity in this line, and a mechanical expert as well. Among other things, he has patented an excellent method of converting muzzle-loading rifles into breech loaders by simple means.

**CORSET.**—Christiana V. Turner, Nicola valley, British Columbia. Dated July 5, 1881. No. 243,818. The invention relates to that class of corsets, the novelty in which consists in a peculiar construction of sections, cut in shape and form of particular dimensions, said sections, when united, forming a corset which will exactly fit the wearer, and which, by reason of its construction, will especially fit the hips better, and render a better support for the back than corsets, as ordinarily made. Having the general shapes of the sections, any appropriate system of measurement may be applied to make the corset fit different bodies.

**VENTILATOR.**—Wm. T. Cottier, Napa. Dated July 5, 1881. No. 243,760. The object of this invention is to provide a means of ventilation for chimneys, vaults, water closets, rooms, buildings, urinals, cars, ships, sewers, or any places where impure air or foul gases are liable to generate. It consists in providing a chimney, tube or shaft with supplemental induction tubes, the openings of which communicate with peculiarly formed air-concentrators, by which the currents of air are directed into the said induction tubes, inside the chimney stack or tube, without the use of movable directors, whatever be the direction of the wind. The currents of air entering these induction tubes, and passing upward, tend to draw up, by induction, the gases or foul air below and ventilate the space or chamber with which the chimney flue or tube is connected. This space the inventor calls the vomitorium and it is adapted to receive the foul air from the sewer, room or other place to be ventilated and deliver it into the flue.

**SHERMAN'S EDUCATED HORSES.**—We had the pleasure one afternoon last week of attending one of Mr. Sherman's exhibitions of his educated horses, which are held in a commodious tent on Market St., between Fourth and Fifth Sts. We have known of Mr. Sherman's efforts at equine education since the time he first set out with his pupils from his Contra Costa county ranch, and have been interested in his success as a Californian and an amateur rather than a professional horse trainer. We expected much from his horses because of the glowing reports current, but we were hardly prepared for such marked indications of the "higher education," as applied to the brute creation, as we saw. The thorough understanding of the things required of them which the animals exhibit, is fairly wonderful, and the spirit and disposition they evince in performing their acts surpass anything we ever saw in the line of equine performance. These acts are too many and too complex to admit of description here, but we can assure all horse lovers and those who believe in the intelligence of the animal they admire, that they will find new grounds for their belief and admiration. Mr. Sherman is deserving of high credit for his efforts, which have given his horses an opportunity to demonstrate the intelligence which pertains to their kind, and the popular favor with which he is received is fully merited.

The hotel at Nimshew, in Butte county was destroyed by fire on Monday night and two men, William McIntosh and Edward Mavis, were burned to death.



## Mechanics' Fair Daily.

"A Valuable Publication."

BY AUTHORITY OF BOARD OF MANAGERS  
OF THE MECHANICS' INSTITUTE  
FAIR FOR 1881.

During the season, the MECHANICS' FAIR DAILY is the BEST AND MOST IMPORTANT ADVERTISING MEDIUM IN SAN FRANCISCO. While open, the Fair is THE LEADING ATTRACTION with both residents and visitors from abroad. Thousands attend daily, seeking and obtaining information. While thus in an investigating mood, the "great public" are more ready than at other times to receive evidences of the superiority of goods and inventions, and the claims and advantages offered by professional and active business men.

The DAILY will be printed on superior California made paper, in the presence of THOUSANDS OF VISITORS during every evening of the exhibitions, and DISTRIBUTED FREE, "fresh from the press," in IMMENSE NUMBERS.

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The DAILY possesses continuously a great advantage over all other desirable periodicals, from having, in large numbers, a new set of readers for each issue, aggregating an immense number from the most thrifty and intelligent portion of the community. Receiving it somewhat as a novelty, they are likely to peruse its entire contents; pass it around the home circle, and frequently send it to interested parties elsewhere.

Advertisements will be received at reasonable rates. It will be of advantage to patrons to secure the spaces wanted without delay.

Advertisements will be received by the publishers through telephone (No. 75) or we will send our business representative on request by telephone or postal card.

N. B.—The only official Catalogue of the Fair, during the exhibition, will be published complete in the columns of the FAIR DAILY, under authority of the Board of Managers.

DEWEY & CO., PUBLISHERS.

MINING AND SCIENTIFIC PRESS Office,  
No. 202 Sansome Street, S. F.

**THE ZIMMERMAN DRIER.**—W. P. Lampkin, of Booneville, Mendocino county, writes: I am much pleased with my No. 2 Zimmerman drier. I got it too late to dry anything but apples. I sold them loose at 10 cents per pound. The drier works to perfection. I wish I had bought a No. 3 size.

**TURKISH RUG PATTERNS.**—Charles Peake (209 Kearny street S. F.) is finding a large sale for his Turkish rug patterns in all parts of the State, as they are easily sent by mail. These patterns are designs of animals, flowers, scrolls, etc., printed on suitable jute cloth (bur-laps), and are shaded in the various colors required to make them perfect. The designs or patterns are not on paper, but cloth, which forms the foundation for the rug, and are so plain that the most inexperienced can fill them readily and make good work. They are filled with various kinds of rags or wool yarn, with a hook made expressly for this purpose, and clipped or sheared off to imitate the best Turkish rugs, and when well made, it is hard to tell one from the other, and they will wear four times as long as velvet rugs.

**THE CALIFORNIAN FOR AUGUST.**—The Californian for August has an attractive table of contents and several notable articles—one, a poem by Joaquin Miller, entitled "Sophia Perows-Kaji," has great power. Other articles in prose and verse are good, and the number generally creditable. Since the June issue, the office of the Californian has been removed to commodious quarters, at No. 408 California street, and its numbers printed on new bourgeois type, in creditable style, by Bacon & Co., for its able editor and proprietor, Mr. Chas. H. Phelps.

**THE PETALUMA FRUIT DRIER.**—Our fruit-growing readers will notice the advertisement of the Petaluma fruit drier, the invention of J. W. Cassidy, in another column. We have heard good reports of the Petaluma drier and consider it worthy of examination.

## THE 16th INDUSTRIAL EXHIBITION

### MECHANICS' INSTITUTE

OF SAN FRANCISCO,

Will Open Tuesday, August 2, 1881.

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GAS AND WATER.—Wilcox, Wells, Dinsmore.  
ART.—Hopps, Bauer, Gray.

### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. F. OSBORNE—San Francisco.  
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A. LONARD MEYER—Utah and Idaho Ter.  
C. E. WETMORE—Alameda county.  
J. M. WOLFE—California.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has now varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

## S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, July 20, 1881

Trade is growing rather more interesting. Shippers and holders of Wheat are at variance about prices, and as both sides just now are apparently firm in their views, there is comparatively little done, though there is much talked of. The latest from abroad is the following:

LIVERPOOL, July 19.—California Wheat—Cargoes—Off coast, 46s 3/4; just shipped, 46s; nearly due, 46s. Liverpool Wheat, spot in firm—8s 1/2; 8s 1/4. Floating cargoes are improving. Cargoes on passage and for shipment are tending up. Mark Lane Wheat is improving.

#### The Foreign Review.

LONDON, July 19.—The Mark Lane Express, in its review of the British Grain trade for the past week, says: A week of tropical heat has brought on the crops rapidly toward harvest. Wheat shows a good deal of variance. The ears are generally short, and some insect injuries are

beginning to be spoken of. The exceptional heat will doubtless prematurely ripen the Wheat. Barley certainly wants rain. In the southern, eastern and midland counties the Oat crop may be regarded as lost. The delivery of native Wheat during the week have been insignificant, only 234 qrs. having reached London during that period. Values are unchanged. The Barley and Oat trade is totally unaltered. Foreign Breadstuffs are in ample supply, and the trade, despite the weather, has been firm but extremely quiet. Stocks are depleted to an unusual extent.

#### Eastern Wool Markets.

Boston, July 16.—The demand for Wool has been fair, and the business of the week a good average. Supplies continue to arrive quite freely. The receipt of domestic for the past two weeks amounts to some 15,000,000 lbs. There is now a fine assortment of all kinds offering. The sales of the week have been 2,577,000 lbs. Washed fleeces have been rather neglected, and for them prices are a shade lower, but all other kinds are very firm. Manufacturers are now well supplied with Wool, having been large purchasers on the street and to arrive. They have now concluded to draw out. We look for a comparatively quiet market for some weeks. Sales of Ohio and Pennsylvania fleeces have been made at 41¢ for X and XX; 42¢ is now about the outside figure for good average lots of XX. Michigan fleeces have been sold at 40¢ for X, but buyers are holding back and not inclined to pay over 38¢ for 30¢, which is offered for large lots. The demand for combed and delaine is quite active, and all available lots are taken. A few delaines are bringing 44¢ for 40¢; medium and No. 1 combed, 46¢ for 45¢; coarse combed, 37¢ for 40¢; unwashed combed, 31¢ for 33¢, including Kentucky and Indiana at the latter price. Unwashed fleeces have been in demand, and upward of 3,000,000 lbs. have been sold at 1¢ for 20¢ for low and coarse, 25¢ for 31¢ for fine, 25¢ for 30¢ for medium. California Wool is quiet but steady. Sales have been made at 27¢ for spring, and 16¢ for 22¢ for fall. Pulled Wools are quiet, prices ranging from 34¢ for common and choice super. In foreign Wools, transactions have not been made to any extent. Cape has been selling at 31¢ for 32¢.

#### Government Crop Report.

WASHINGTON, July 15.—The Agricultural Department returns to July 1st, report the condition of the Wheat crop as much better than June 1st, and that it averages 83 for the whole country. The Atlantic States fall off slightly as compared with the returns for the same time last year, but the large Wheat region north of the Ohio river and west of the Mississippi return a low condition compared with 1880. Michigan reports only 64% and Illinois 60%; Ohio and Indiana are below last year, but report fair prospects. Missouri and Kansas each make great complaint of damage from insects. In Spring Wheat the State of Iowa alone returns a condition much lower than last year, and which is only 73%. The increase in the area planted in Corn is nearly 2% over 1880. The average condition of the crop is not so high as the last two years, and is 90% against 100% last year. In all the north Atlantic States the crop is backward, owing to the cold, wet spring; but in the States south of the Delaware river and on the Gulf of Mexico it is reported as fair. Texas, however, reports serious injury from drought. In the great Corn producing region bordering on the Ohio and Mississippi rivers the average is below last year, particularly in the State of Iowa, which only reports a promise of 77%, caused by the cold spring and too much rain in June. In Illinois and Missouri the condition is reported very favorable.

#### COMPARATIVE STATEMENT.

Report of Flour and Grain Remaining in the State of California, Crop of 1880, on July 1st, 1881, as taken by the SAN FRANCISCO PRODUCE EXCHANGE.									
COMPARATIVE STATEMENT.									
	Flour. Bbls.	Wheat. Ctns.	Barley. Ctns.	Oats. Ctns.	Broom. Ctns.	Oorn. Ctns.	Hay. Ctns.		
San Francisco and Oakland Wharf, including wheat afloat in harbor...	69,419	2,319,820	217,300	7,243	46,770	13,030	3,420		
Marin, Sonoma, Lake, Mendocino and Humboldt Counties.....	3,640	9,287,89	9,878	3,985	680	640	67,3		
Napa, Solano, Yolo and Colusa Counties.....	9,873	4,043,348	28,800	.....	.....	1,800	.....		
Sacramento, Yuba, Sutter, Butte, Tehama and Placer Counties.....	17,670	1,280,680	9,200	.....	.....	1,800	.....		
Contra Costa and Alameda Counties.....	3,100	1,481,110	92,640	480	210	1,750	.....		
San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern Counties.....	7,300	1,814,000	15,480	.....	.....	1,600	.....		
San Mateo, Santa Clara, San Benito, Santa Cruz and Monterey Counties.....	12,700	1,132,800	110,940	3,110	10,380	1,400	.....		
San Luis Obispo, Santa Barbara, Ventura, Los Angeles, San Bernardino and San Diego Counties.....	12,300	166,380	116,210	950	.....	74,670	.....		
Totals.....	136,532	12,444,278	606,028	15,744	70,780	94,210	3,800		
January 1st, 1881.....	78,283	19,805,466	1,651,757	95,220	113,708	228,087	17,742		
July 1st, 1880.....	30,944	333,821	503,294	18,357	65,217	6,989	6,989		
January 1st, 1880.....	83,638	4,086,898	2,013,990	112,551	48,904	129,715	38,712		
July 1st, 1879.....	37,766	593,251	806,665	26,483	.....	148,002	22,237		
January 1st, 1879.....	75,130	5,781,168	2,907,142	137,042	.....	283,654	64,384		
July 1st, 1878.....	20,251	284,424	147,698	29,964	.....	11,066	290		
January 1st, 1878.....	57,187	2,646,311	882,006	104,998	.....	110,434	3,401		

**BAGS.**—The combination seems to have run across a snag. There seems to be too many Bags outside of the arrangement to allow the ring prices to have free course, and there are many others due to arrive which may add to the ring trouble. At all events prices are lower this week. The auction sales have not favored the combination. The offering at auction Friday, by S. L. Jones & Co., consisted of 110,000 Calcutta Bags, 50,000 Oakland Bag factory goods of this year's manufacture, and 10,000 returned Bags. Only sample lots of 10,000 Calcutta's and 10,000 Oakland make were sold, the former going at 9¢ each and the latter at 8.92¢ per hundred. The balance of the offering was withdrawn. The return Bags were all sold at 8.30 per hundred. On Tuesday there was an



other sale, at which 10,000 Calcutta Wheat Bags, in good order, sold at 9½c, and 30,000 were withdrawn. A lot of 50,000 damaged Bags sold at \$4.30 up to \$8.40 per hundred.

**BARLEY**—The market is improved and prices advanced a little. Sales were 1,600 and 250 sks choice Feed at 97½c; 3,000 and 500 sks do at 95c; 500 and 369sks Coast Chevalier at 95c ½ ctl.

**BEANS**—Prices have fluctuated somewhat. Bayos take a wide range, some going as low as 87½c per ctl. We note sales: 340 sks Pea at \$2.25; 317 sks Small White at \$2; 144 sks Small Butter at \$1.17; 190 sks Pink at 85c per ctl.

**CORN**—Corn prices are unchanged, and the trade has been at a standstill for several days.

**DAIRY PRODUCE**—Fancy lots of Butter have shown a slight improving tendency, and have sold at 27½c, with exceptional sales at 28c. Cheese is in fair demand, and the best rates 1c higher than last week, reaching 13½c per lb.

**EGGS**—Fresh California Eggs are advanced to 25¢ 7½c per doz. The supply has shortened and holders are elevating their views.

**FEED**—Hay is unchanged, the grades rating as follows, Wheat, \$8.50¢ for new, and \$10.12.50 for old; Barley, \$7.00¢; Wild Oat, \$7.50¢ for new, and \$10.11.50 for old Alfalfa, \$9.00¢; Cow, \$8 to \$10.50 ½ ton.

**FRESH MEAT**—Mutton and Spring Lamb have sold higher. Live Hogs have shaded down a fraction, the best going at 6c this week.

**FRUIT**—Prices have held up well. The canners are still taking largely, especially yellow Peaches, which are going high. Oranges have improved, as there are but few at hand.

**HOPS**—The local trade is all that is going now, and brewers are not quite as anxious as holders would desire. Most sales are from 18c to 21c per lb. Emmet Wolls, in his New York circular of July 8th, says:

Inactivity has been the ruling feature of the trade this week. The hot weather of the last few days has not yet shown its effect upon the market, and brewers who have been reported to be short of supplies have not yet put in an appearance. It is evident from this that they have Hops enough for the present, and that they do not entertain any fears of supplies running short. Our reports from the districts this week are uniformly to the effect that the vine is very backward in growth—the result of cool weather—and unless a change for the better takes place within the next fortnight, the crop will turn out considerably short of last year's. Nearly this same condition is reported of the German crop. In England, however, present prospects point to a good yield.

**OATS**—The best Oats are held firmly, as there are but few comparatively to be had. Common descriptions are unchanged, and purchasable at rates favoring buyers.

**ONIONS**—Silverskins have now a decided advantage, being called for at \$1 ½ ctl, while Reds are neglected at 50c.

**POTATOES**—Potatoes are unchanged. A lot of 100 boxes Sweet Potatoes sold on Monday at \$2.50 ½ ctl.

**PROVISIONS**—The market is active, and rates on California Bacon advanced, as shown in our list.

**POULTRY**—The supply is large and the market has rather a weak tone, although prices have not very materially changed.

**VEGETABLES**—String Beans are worthless. The market is glutted with fine Beans which could be bought at 50c ½ sk. Our list shows a few changes in other Vegetables.

**WHEAT**—Prices are unchanged and sales few at present. We note sales: 1,700 cts new Shipping at \$1.40; 202 cts Milling at \$1.37½; 4,000 and 400 cts No. 2 Shipping at \$1.35; 20,000 cts do, private; 1,200 cts do at \$1.32½; 2,000 cts do at \$1.31; 2,000 cts off-grade at \$1.28; 450, 300 and 200 cts do at \$1.20; 1,300 cts do at \$1.19 ½ ctl.

**WOOL**—Trade is very quiet, and sales are made a trifle lower than last week. The disposition is, however, to hold good lots for an improvement, which is expected. The amount now on hand is comparatively small.

### Fruits and Vegetables.

[WHOLESALE.]

FRUIT MARKET.	
Apples, bsk.....	20 @ 25
do, Astracan, bx.....	30 @ 40
Apricots, lb.....	3 @ 4
Bananas, bch.....	2 @ 4
Cantaloupes, crt.....	1 50 @ 2
Cananutas, 100.....	6 @ 7
Crab Apples.....	50 @ 65
Cranberries, bbl.....	— @ —
Figs, bx.....	75 @ 1 25
Grapes.....	60 @ 1 50
Limes, Mex.....	7 @ 8
do, Cal, box.....	5 @ 6
Lemons, Cal, bx.....	2 @ 3
Sicily, box.....	8 50 @ 9
Australian.....	— @ —
Oranges, Cal, bx.....	75 @ 2 50
do, Tahiti M, 100 @ 25	25 @ 30
do, Mexico.....	— @ —
do, Loreto.....	— @ —
Peaches, bx.....	30 @ 40
do, bsk.....	40 @ 75
do, Crawford.....	75 @ 1 00
Pears, bsk.....	25 @ 40
do, bsk.....	50 @ 75
do, Bartlett, bx.....	1 50 @ 2 00
Pineapples, doz.....	6 @ 8
Plums, bx.....	40 @ 75
Prunes German.....	50 @ 75
Quinces, bx.....	— @ —
Blackberries, ch't.....	2 75 @ 4 00
Raspberries, ch't.....	6 00 @ 8 00
Strawberries, ch't.....	4 00 @ 5 00
Sugar Cane, bble.....	— @ —
Watermelons, 100.....	6 00 @ 12 00
do, 100.....	12 @ 20

[WHOLESALE.]

WEDNESDAY M., July 20, 1881.	
Apples, bsk.....	20 @ 25
do, Astracan, bx.....	30 @ 40
Apricots, lb.....	3 @ 4
Bananas, bch.....	2 @ 4
Cantaloupes, crt.....	1 50 @ 2
Cananutas, 100.....	6 @ 7
Crab Apples.....	50 @ 65
Cranberries, bbl.....	— @ —
Figs, bx.....	75 @ 1 25
Grapes.....	60 @ 1 50
Limes, Mex.....	7 @ 8
do, Cal, box.....	5 @ 6
Lemons, Cal, bx.....	2 @ 3
Sicily, box.....	8 50 @ 9
Australian.....	— @ —
Oranges, Cal, bx.....	75 @ 2 50
do, Tahiti M, 100 @ 25	25 @ 30
do, Mexico.....	— @ —
do, Loreto.....	— @ —
Peaches, bx.....	30 @ 40
do, bsk.....	40 @ 75
do, Crawford.....	75 @ 1 00
Pears, bsk.....	25 @ 40
do, bsk.....	50 @ 75
do, Bartlett, bx.....	1 50 @ 2 00
Pineapples, doz.....	6 @ 8
Plums, bx.....	40 @ 75
Prunes German.....	50 @ 75
Quinces, bx.....	— @ —
Blackberries, ch't.....	2 75 @ 4 00
Raspberries, ch't.....	6 00 @ 8 00
Strawberries, ch't.....	4 00 @ 5 00
Sugar Cane, bble.....	— @ —
Watermelons, 100.....	6 00 @ 12 00
do, 100.....	12 @ 20

### Bags and Bagging.

[JOBBER PRICES.]

WEDNESDAY M., July 20, 1881.	
Eng Standrd Wheat.....	9½ @ 9½
Cal Manufacture.....	9½ @ 9½
Hand Sewed, 22x36.....	9½ @ 9½
20x36.....	9½ @ 9½
23x40.....	12 @ 13
24x40.....	12 @ 13
Machine Swd 22x36, 104 @ 11	11 @ 11
Flour Sks, halves.....	9 @ 10
Quarters.....	9 @ 10
Eighths.....	9 @ 10
Hessian, 60 inch.....	12 @ 12

### Domestic Produce.

[WHOLESALE.]

WEDNESDAY M., July 20, 1881.	
<b>BEANS &amp; PEAS.</b>	
Bayo, ctl.....	87½ @ 15
Butter.....	10 @ 30
Castor.....	3 @ 50
Pea.....	2 @ 20
Red.....	85 @ 87½
Pink.....	80 @ 80
Small White.....	2 @ 30
Lima.....	2 @ 25
Field Peas, bkeyl.....	40 @ 50
do, green.....	1 35 @ 40
<b>BROOM CORN.</b>	
Southern.....	3 @ 31
Northern.....	4 @ 6
<b>CHICORY.</b>	
California.....	4 @ 41
German.....	6½ @ 7
<b>DAIRY PRODUCE, ETC.</b>	
<b>BUTTER.</b>	
Cal. Fresh Roll, lb.....	25 @ 27
do Fancy Brands.....	— @ 27½
Pickle Roll.....	25 @ 27½
Pick, new.....	26 @ 27½
Western.....	18 @ 22
New York.....	— @ —
<b>CHEESE.</b>	
Cheese, Cal, lb.....	11½ @ 13½
<b>EGGS.</b>	
Cal Fresh, doz.....	25 @ 27½
do, Oregon.....	— @ 25
do, Eastern, by exprs.....	18 @ 19
Pickled here.....	— @ —
Utah.....	22½ @ 23
<b>FEED.</b>	
Bran, ton.....	24 @ 24
Corn Meal.....	24 @ 24
do, 50 @ 12.50	24 @ 24
Middlings.....	— @ 19
Oil Cake Meal.....	24 @ 25
Straw, bale.....	40 @ 45
<b>FLOUR.</b>	
Extra, City Mills.....	4 87½ @ 5 00
do, Country Mills.....	4 25 @ 4 75
do, Oregon.....	3 75 @ 4 37½
do, Walla Walla.....	4 00 @ 4 25
Superfine.....	2 50 @ 2 25
<b>FRESH MEAT.</b>	
Beef, 1st qual'y, lb.....	6 @ 6½
Second.....	5½ @ 6
Third.....	4½ @ 5
Mutton.....	3 @ 3½
Spring Lamb.....	5 @ 5½
Pork, undressed.....	5½ @ 6
Dressed.....	8 @ 8½
Veal.....	7 @ 7½
Milk Calves.....	7½ @ 8
do, choice.....	8½ @ 9
<b>GRAIN, ETC.</b>	
Barley, feed, ctl.....	92½ @ 97½
do, Brewing.....	10 @ 12
Chevalier.....	15 @ 20
do, Coast.....	85 @ 95
Buckwheat.....	60 @ 75
Corn, White.....	1 @ 12½
Yellow.....	1 @ 12½
Small Round.....	1 @ 12½
Oats.....	1 @ 40
Milling.....	1 @ 50
Rye.....	1 37½ @ 45
Wheat, No. 1.....	1 @ 40
do, No. 2.....	1 @ 35
do, No. 3.....	1 @ 30
Choice Milling.....	1 42½ @ 45
<b>HIDES.</b>	
Hides, dry.....	19 @ 20
Wet salted.....	9 @ 10½
<b>HONEY, ETC.</b>	
Beeswax, lb.....	20 @ 24
Honey in comb.....	12 @ 14
do, No. 2.....	8 @ 10
Dark.....	5 @ 9
Extracted.....	7 @ 9½
<b>HOPS.</b>	
Oregon.....	— @ —
California, new.....	18 @ 21
Wash. Ter.....	— @ —
Old Hops.....	— @ —
<b>NUTS—Jobbing.</b>	
Walnuts, Cal.....	8 @ 9
do, Chile.....	7½ @ 8
Almonds, hd sh lb.....	8 @ 10
Soft shell.....	14 @ 15
Brazil.....	10 @ 12
Pecans.....	
Peanuts.....	4 @ 5
Fibers.....	15 @ 16
<b>ONIONS.</b>	
Red.....	50 @ 60
Silver Skin.....	35 @ 40
Oregon.....	— @ —
<b>POTATOES.</b>	
New.....	75 @ 1 00
Petals.....	— @ —
Tomatoes.....	— @ —
Humboldt.....	— @ —
"Kidney".....	— @ —
"Peachblow".....	— @ —
Jersey Blue.....	— @ —
Chukky Cove.....	— @ —
River, red.....	— @ —
Sweet.....	— @ 2 50
<b>POULTRY &amp; GAME.</b>	
Hens, doz.....	6 @ 7 50
Roosters.....	5 50 @ 7 00
Broilers.....	2 50 @ 4 00
Ducks, game, doz.....	3 00 @ 4 50
Mallard.....	— @ —
Sprig.....	— @ —
Test.....	— @ —
Widgeon.....	— @ —
Geese, pair.....	1 00 @ 25
Wild Gray, doz.....	— @ —
Wild O.....	— @ —
Turkeys.....	15 @ 18
do, Dressed.....	— @ —
Snipe, Eng.....	2 50 @ 3 00
do, Common.....	1 00 @ 25
Quail, doz.....	1 25 @ 1 50
Mkibits.....	2 00 @ 2 50
Hare.....	2 00 @ 2 50
Venison.....	6 @ 9
<b>PROVISIONS.</b>	
Cal. Bacon, extra	clear, lb.....
Light.....	13½ @ 14
Medium.....	13 @ 13½
Utah.....	14 @ 14
Lard.....	14 @ 14
Cal. Smoked Beef.....	10 @ 10
Shoulders.....	8½ @ 9
Hams, Cal.....	11 @ 12
Dupee's.....	— @ 16
Whitaker.....	— @ 16
Royal.....	— @ 16
Ward.....	— @ 15
Golden Gate.....	14½ @ 15
<b>SEEDS.</b>	
Alfalfa.....	15 @ 17
do Chile.....	— @ —
Canary.....	4 @ 5
Clay, Red.....	14 @ 15
Ward.....	15 @ 15
Cotton.....	— @ 20
Flaxseed.....	2½ @ 3
Itamp.....	7 @ 8
Holland Rye Grass.....	25 @ —
Perennial.....	25 @ 12
Mt. German.....	10 @ 12
do Chile.....	10 @ 12
Mustard, White.....	3 @ 4
Brown.....	1½ @ 2
Rape.....	3 @ 8
Ky Blue Grass.....	20 @ 25
2d quality.....	16 @ 18
Sweet Grass.....	— @ 75
Ward.....	20 @ 25
Red Top.....	— @ 15
Hungarian.....	8 @ 10
Lawn.....	30 @ 40
Mequit.....	10 @ 12
Timothy.....	10 @ 11
<b>TALLOW.</b>	
Crude, lb.....	6½ @ 6
Refined.....	7½ @ 8
<b>WOOL, ETC.</b>	
SPRING—1880.	
Oregon, Eastern.....	24 @ 27
do fine, heavy.....	21 @ 24
SPRING—1881.	
Sau Joaquin, choice.....	19 @ 21
do fair.....	17 @ 18
Southern Coast.....	20 @ 21
Slightly Burry.....	16½ @ 20
Burry and Seedy.....	17 @ 18
Northern choice.....	25 @ 30
Burry or Seedy.....	22 @ 25
Ward.....	20 @ 25
Cinco, Humboldt.....	— @ —
fancy.....	31 @ 40

### Retail Groceries, Etc.

WEDNESDAY M., July 20, 1881.

Butter, California	25 @ 30
Choice, lb.....	17 @ 25
Cheese.....	25 @ 30
Eastern.....	25 @ 30
Lard, Cal.....	— @ 18
Eastern.....	20 @ 25
Flour, ex fm, bbl.....	8 00 @ 9 00
Corn Meal, lb.....	2½ @ 3
Sugar, wh crushed.....	12½ @ 13
Light Brown.....	75 @ 9
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 100
Finest Japan.....	55 @ 100
Candles, Adm'te.....	15 @ 25
Soap, Cal.....	7 @ 10

### Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, July 20, 3 P. M.

SILVER, 1.	10 @ 10
GOLD BARS, 890 @ 910.	10 @ 15 ½ cent. disc.
COIN.	
Exchange on New York, par.....	London, 49½ @ 49½; Paris, 5.20 francs ½ dollar; Mexican dollars, 91 @ 92.
New York (4 per cent) 110½.	

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To our friends and the Wool Growers and Farmers generally, having established ourselves in a General Commission Business for the sale of Wool, Grain, Hides, Pelts, Tallow, Alfalfa Seed, etc. A strict attention to the business, as well as a careful study of the interests of Wool Growers and Farmers, during an experience of 12 years with the well-known house of Miller & Co., enables us to anticipate the wants of the consignors.

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Principal place of business, No. 38 California Street, San Francisco, State of California. Notice is hereby given, that at a meeting of the Directors of said corporation, held on Monday, the Twenty-seventh (27) day of June, A. D., 1881, an assessment has been levied of ten (10) per cent. upon the capital stock of said corporation, amounting to the sum of two and one-half (\$2.50) dollars upon each and every share of said capital stock, payable July Twenty-eighth (28), 1881, to Amos Adams, the Secretary of said corporation, at his office, No. 38 California Street, S. F., State of California.

Any stock upon which this assessment shall remain unpaid on the Sixth (6) day of August, A. D., 1881, will be delinquent, and advertised for sale at public auction, and unless payment is made before, will be sold on Monday, the Twenty-second (22) day of August, A. D., 1881, to pay the delinquent assessment, together with costs of advertising and expenses of sale. AMOS ADAMS, Secy. Grangers' Business Association of California, office, No. 38 California Street, S. F.

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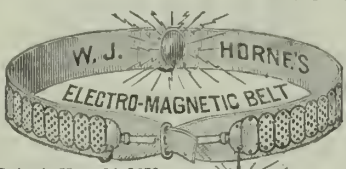
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1st dam, Duchess 9th, by Baron Airdrie.....2476  
2d dam, Duchess 7th, by Duke of Airdrie.....2743  
3d dam, Duchess, by D'Otley.....432  
4th dam, Henrietta, by Sir Alfred.....969  
5th dam, Lucilla, by imported Romulus.....(12-19)  
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8th dam, Ruby, by Young Sir Dimples.....(171)  
9th dam, Daisy, by Wellington.....(678)  
10th dam, Beauty, by Duke.....(224)  
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This splendid Bull is in fine condition and warranted kind  
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Patent, Nov. 9, 1880,  
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IN FUEL. CURES THE FRUIT IN  
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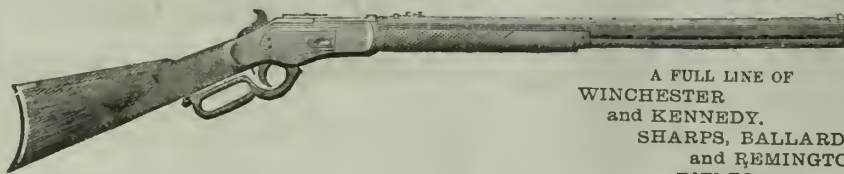
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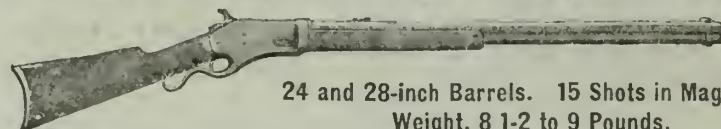


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Sweepstakes:  
For best Ram of any age or breed,  
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We offer for sale this season 200 head Superior Rams, Yearlings and two-year-olds. Also 100 head Yearling Ewes and  
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Three sizes of THOROUGH-BRACE WAGONS, with 1, 2 or 3 seats.  
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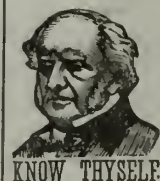


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PROOF.

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All free from disease and grown without irrigation.  
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Importers, Growers and Dealers in Garden, Field and  
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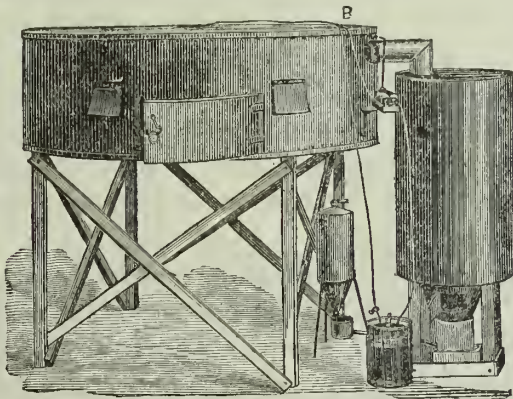
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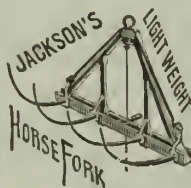
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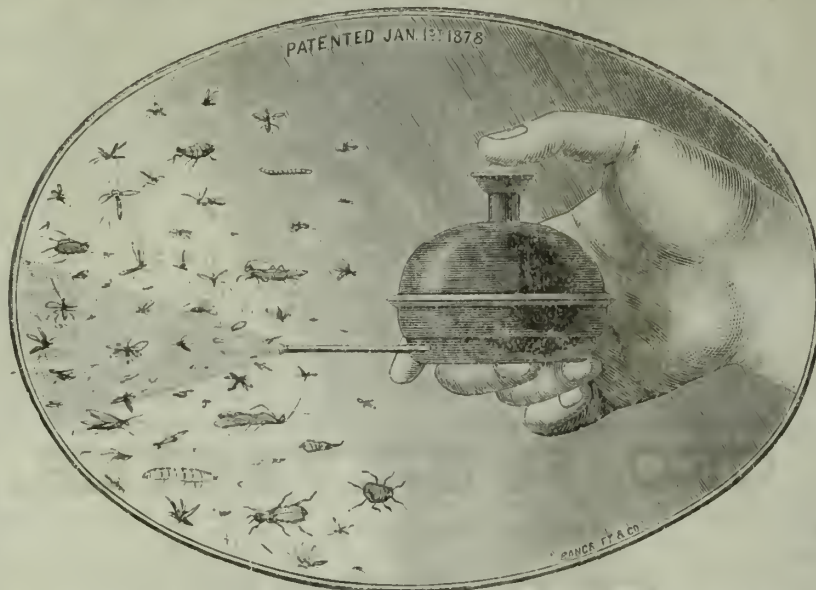
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On receipt of \$5 we will send a package of seed by mail to any address, with instructions for cultivating the wonderful plant from which our G. N. MILCO'S BUHACH CALIFORNIA INSECT POWDER is made. Each package will furnish plants for two or three acres. All orders for seed must be sent to the

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There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Ranch.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for an illustrated paper containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

EDWARD FRISBIE,

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WE WOULD LIKE TO SAY A FEW WORDS TO THOSE  
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## FRUIT DRIER.

FIRST—ALL DRIERS, EVERYTHING BEING EQUAL,  
WILL PRODUCE DRIED GOODS OF EQUAL VALUE.

Now the question arises, what kind of a machine is the most profitable? To this we would answer, the machine that does the most work with the least amount of labor and capital.

Can a Drier do as much work whose whole side is thrown open every ten minutes and kept open for a long time to raise the trays by hand, as one where all the trays are raised at once, and in less time than it takes to raise one by hand.

The Drier that opens its sides every ten minutes to raise the trays loses fully one-quarter of the heat, thereby losing one-quarter of the capital in fuel.

Suppose there were Fifteen trays in the chamber, and each had to be raised separately by hand, would it not take just fifteen times as long as it would take to raise the whole by one automatic motion.

With the improvements that have been added to the already FIRST-CLASS PETALUMA FRUIT DRIER, we have no fears in coming before the public with the claim of the best and cheapest first-class Drier in the U. S., and to parties contemplating erecting driers we think we can convince them of the fact, by addressing

J. W. CASSIDY, Petaluma Cal.

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THE FALL TERM WILL BEGIN

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The next term will begin on

Monday, . . . . . July 18, 1881  
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568 Twelfth St., Oakland,

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For Boarding & Day Pupils.

Next Term Commences, Tuesday, July 26th, 1881.  
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For Young Ladies.

Oak Street, bet. 10th and 11th, Oakland.

Will open JULY 27th. A special course of study will be arranged. Thorough preparation given for admittance to the State University and Eastern Colleges. For circular address

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Boarding and Day School for Boys and Young Men.

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THE NEXT SESSION WILL BEGIN JULY 25, 1881.

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### LAUREL HALL.

Home School for Young Ladies and Children.

The Eighteenth Annual Session will commence Thursday August 4, 1881.

This institution offers to a limited number advantages of the highest order, having a large corps of well-known teachers who give individual care and treatment to each pupil. Address MRS. L. MANSON-BUCKMASTER, San Mateo, Cal.

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27TH TERM BEGINS

Tuesday, July 26th, 1881.

For Catalogues please address

BISHOP WINGFIELD, Benicia, Cal.





Volume XXII.]

SAN FRANCISCO, SATURDAY, JULY 30, 1881.

Number 5

### The Demand for Labor.

There could hardly be any surer indication of the life now inciting the industries of the United States than the demand for labor, which seems to greatly exceed the supply notwithstanding the unparalleled immigration from the laboring classes of Europe. The country is growing and advancing from side to side and end to end, and all who have the disposition to labor, can secure the opportunity. This is in marked contrast to the condition of affairs three years ago, and it shows that the era of depression, born of the extravagance of war times, has passed away. The people were forced to return to something like the old-time economies and thrift, and the result came more quickly than anyone thought, in the reawakening of the nobler industries and the general prosperity secured thereby. How long the present era will endure no one can tell; but unless it should proceed into one of undue expansion and extravagant outlay, there is no reason to anticipate anything but a steady growth and development of the country, in accordance with its wealth of resources and manifest destiny.

As an indication of the demand for labor, which we have cited as a sign of productive vigor, nothing can be more emphatic than the condition of affairs at the great headquarters of immigrants at New York city. A dispatch thence last Friday is as follows:

An unusually large crowd of immigrants swarmed Castle Garden yesterday. An increasing number of applications for help are being received in the Labor Department from all parts of the country. Servants and workmen are in pressing demand. In fact, it was impossible to supply the wants of the country. For the six months ending July 1st, 19,000 men and 5,000 women were sent away from the Labor Bureau of Castle Garden to different parts of the United States. The Fruit Growers' Association of Sumner county, Florida, sent a communication asking for able-bodied workmen to be forwarded to them immediately to work in the orange groves and gardens of that county. Similar letters were received from other parts of the South and West. Fifty immigrants were sent to the Kansas City Smelting Works in Missouri. Fifty more are expected to leave to-day to work on the Texas-Pacific railway, where they are to have \$1.50 a day for two months, and then to receive the usual wages of the region. Out of their first installment of wages \$3.50 is to be deducted for the expense of transporting them to Texas. The Superintendent of the Labor Bureau says that he has stopped answering letters asking for labor, as it is impossible to fill the orders. There are applications on file now for more than 500 house servants, and for any amount of female factory hands to go South, where it is said that hands can make from \$2 to \$8 per week in the factories.

In our own State, there is a good demand for labor, and the ranks of the unemployed have become exceedingly thin. It is, however, just at present the harvest season, both in grain field and orchard, and there is usually plenty to do for all who have the disposition to earn their bread. The true test of the condition of labor demand and supply here will come later in the

year. We expect there will be more chance this fall to secure a hiring for the winter than there has been heretofore, and the city crowds will be smaller and the strolling heggars fewer. There are now so many progressive enterprises under way, both in agriculture and in manufacturing, that the call for trustworthy hands will be certain. It is true that there are many Chinamen now arriving, but as there is apparently more for the Caucasian to do, there is little complaint being made. It is difficult to see how the present fruit crop, which is bringing such fine prices, or the immense grape crop now ripening, could be handled at all without Celestial aid.

**THE OXEYE DAISY IN FAVOR.**—Many of our readers who hail from the Eastern States will remember the old oxeeye daisy, the pest of the hay field and the roadside, and will be surprised to learn of the honor into which it

### Scene in the Orient.

The engraving on this page gives a view in a city of the Chinese Empire, where European civilization has gained a foothold and introduced its architecture. It is well known that Hong Kong, in China, is a British city, having been ceded to Great Britain in 1842. The city stretches along the bay shore for three miles, from the foot of the hills to the water, and contains several fine thoroughfares, with large and elegant houses of brick and stone, surrounded by beautiful gardens, belonging to the merchants, and with a number of stately buildings. Beautiful public gardens have been laid out and other notable improvements carried out. The engraving gives a view of some of the buildings and a glimpse of one of the gar-

### California Mineral Springs.

California is exceedingly rich in mineral springs. Some of them have shown their value both in the hands of the chemists and the systems of the suffering and the afflicted. There are others which are strongly suspected of being very valuable, but there is yet no exact and trustworthy information concerning them. Several conscientious writers have done all they could to place the mineral springs of the State before the world in their true light, but their efforts have been incomplete, because the information they needed did not exist. It seems to us that the subject is a fit one for the expenditure of a small amount of the public money; in other words, that the State of California should do something to make its resources of this character known. It would be a good investment, judged from scientific and philanthropic points of view, and it is quite possible that something would be found which would attract the health-seekers of the world and benefit them, while their money would assist in building up the State. The State Board of Health has shown its cognizance of the importance of our springs by mention of them in its publications, but these records, like those by private individuals, are incomplete. Let the State appropriate money enough to make official analyses of all waters which promise to be valuable, and let these analyses be set forth, and their significance set forth by some one able to make sound deductions in matters of this kind. Such a work prepared under the authority of



COURT YARD SCENE IN HONG KONG—A BRITISH CITY ON CHINESE SOIL.

has come. The Boston *Traveler* says that since the New York belles have taken to wearing five-cent bunches of daisies in their belts the windows of our Boston florists are filled with this flower. Had this craze started 30 years ago, it would have been greatly to the benefit of our farmers, who would now almost be willing to pay five cents a bunch to get rid of this pest, altho there is no prettier flower that grows. The traditional history of this flower in this country is that it was brought over from England during the reign of Queen Elizabeth, and was regarded at that time as a rare and beautiful exotic.

**A GOOD JERSEY COW.**—We learn that the Jersey cow "Daisy Eyebright," imported some years since from the farm of Mr. Griswold, of Orwell, Vermont, and now owned by John Pollard Esq., of Ferndale, Humboldt county, Cal., has recently dropped a heifer calf. Mr. Pollard writes that she gives 16 quarts of milk from which is made two and three-quarters lbs. of butter daily.

Six new wells are about to be sunk in the San Fernando oil region,

dens guarded by a wall and yet open to the orderly people. The well-kept condition of the spacious court and buildings shows the influence of European control.

**SALT** is said to be a good preservative of timber. Fourteen years ago a Mr. Sterling, of Monroe, Michigan, placed two gate-posts of white oak in front of his residence. When they were set, he bored into the top of each with an inch and a half auger, a hole three inches deep, filled it with common salt, tightly plugged it, and covered the posts. Having occasion recently to change the location of the posts, he found them as sound, from top to bottom, as the day they were planted.

The fire on the mountain near Crystal springs, Napa county, was extinguished Monday night. It burned over 200 or 300 acres of timber.

All the Vallejo warehouses are full of old wheat and nobody knows what is to be done with the new crops,

the State, would have more weight than a private publication, although the latter, by some well-known man who had the resources and would be above the suspicions of interest in the ownership of the springs, would soon be accepted by the physicians of the world. The literature of mineral springs holds a prominent place in physicians' libraries at the East and in Europe, and their patients are sent here and there to reap the benefits which may be expected from waters with the specific properties desired in certain cases. California should certainly have a trusted position in this literature, and we think it would be proper for the State to arrange to occupy it.

**BENICIA AGRICULTURAL WORKS.**—Articles of incorporation of the Benicia Agricultural Works were filed July 22d. The company propose to enter into the business of manufacturing and sale of agricultural machinery. The directors are: L. L. Baker, Robert M. Hamilton, and M. M. Estee, of San Francisco; John H. Boalt, Oakland, and F. A. Hill, of San Leandro.



## The Stock Yard.

### Live Stock Notes.

We condense from the pages of the *National Live Stock Journal* (Chicago), the following pertinent notes:

#### Preparing Animals for the Fairs.

The season is now at hand when such breeders as are in the habit of attending the fairs as exhibitors, are putting their stock in what is known as show condition. It is of no use to talk about taking animals just off the grass, and in no more than ordinary breeding condition, to the fairs. Every man of experience knows that to do this is simply to expose himself and his stock to ridicule; the people will not, and the judges dare not, make due allowance for such differences in condition only as are apparent to an expert. The public expect to see the horses, cattle, sheep and pigs that are on exhibition at a fair, in their best estate—they expect to see the highest possibilities that may be attained by the feeder's skill with each of the classes and breeds; and so long as this is the *morale*—the standpoint from which people judge—it is useless to repeat the stereotyped warning against overfeeding and pampering for exhibition. But let breeders do this with their eyes open. The practice is a dangerous one, and almost invariably ends in rendering the animals so prepared and shown worthless for breeding purposes. That there are occasional exceptions to this, does not disprove the general truth of the statement; and we warn young breeders that they follow the demands of custom in this regard at their peril. It lessens the dangers very materially, however, if the show period of an animal is confined to a single season; and we advise breeders, so far as may be practicable, to make this the rule.

#### So Called Sweeney.

The vulgar term sweeney is applied to a real or imaginary wasting of the muscles of the extremities, and mostly referred to as being located in the shoulder or about the crupper. It is commonly regarded as a special evil, and all sorts of cruel practices and nostrums are resorted to for its cure. The cause or causes of a generally negative result of the treatment applied is simply this, that sweeney, or, more properly speaking, wasting or atrophy of the muscles of the horse's limb, is, in the plurality of cases, merely one of the results of chronic disease of some part of the limb, such as a painful corn, navicular disease, and contracted feet, or ringbone, spavin, etc. If a cure of these ailments is possible, the so-called sweeney will either gradually disappear in the course of time, or will yield to treatment; otherwise, the cure of sweeney will prove a failure. In young horses, sweeney, or wasting of the muscles of the shoulder, is often a consequence of unsteady pulling with an ill-fitting collar. In such a case, relieve the animal from work, and apply, for some time, once or twice a day, a portion of equal parts of tincture cantharides and oil of turpentine. The contents of the bottle should be shaken while applying the same. Liberty outdoors, on pasture, will be of additional benefit. Subsequently, give only light work in breast harness, or in a soft, padded, well-fitting collar, until the animal becomes used to pulling.

#### American Horses Abroad.

There is every indication that all parts of the civilized world are coming to an appreciation of the superiority of the American trotting horse above those of any other country for road work. England, Scotland and France, and other European countries have been drawing upon us for breeding stock of this sort for several years past. Australia has recently made a beginning; Japan began the business several years ago; and we now have before us a letter from a subscriber in New Zealand, asking for the address of breeders and a statement of prices at which well-bred trotting stallions, mares and young fillies can be delivered on board the steamers at San Francisco, saying that, if the prices can be made satisfactory, he would like to take a large number yearly. The trotting horse is peculiarly an American creation, and our breeders are destined, at no distant day, to find their largest and best-paying customers in foreign countries; and this foreign demand will doubtless increase in proportion as the superiority of American road horses becomes more generally known.

#### Quarter-Crack.

The edges of the crack should be rounded off, without cutting into the depth of the crack. Cleanse the parts, and soften the hoof by means of poulticing, the shoe being removed. With a view of preventing the split from extending upward, make a cross-cut, or horizontal cut, through the horny fibers, immediately above the split. In extensive cracks, the edges may be held together by means of carefully-inserted rivets. To prevent entrance of dirt, fill the crack with shoemaker's wax. If the split extends through the length of the hoof, remove the hearing of the hoof from the shoe, back of the split to the heel, and apply a bar shoe. Apply a mild blister above the hoof. If the horse can be spared from work, he should be given liberty on pasture during two or three months.

#### Feeding Green Corn to Swine.

Green corn, as soon as it is fairly ripe enough for ordinary table use, is probably the very best fattening food available to the general farmer for feeding swine. The pigs eat it with a pe-

culiar relish, and will grow and fatten upon it with surprising rapidity. No food is equal to this for putting pigs in good "show condition" for the fairs. But while all this is true, it no doubt is a very expensive food when used at this period. In a discussion upon this point to which we once listened, an old farmer remarked that he had "often noticed that when his wife fed his hired men on green corn at the table, one man would often eat four or five ears, while one of these same ears if ripened, ground into meal and made into bread would feed flour or five men." Probably this was oversteating the difference, but it is no doubt an expensive, and in some degree a wasteful use of food to use corn before it is fully ripened.

## THE APIARY.

### Reply to "Notes on Others' Methods."

EDITORS PRESS:—In the PRESS of July 16th, this year, Mr. Lyon, of Cliff Glen, Ventura county "attempts to severely criticize," as he says, my "management and system of bee-culture" in his "Notes on Others' Methods," of that date. I suppose his "pioneer experience" certainly entitles him to be a critic, if not the critic of the Pacific coast. I don't "affirm" to be a pioneer of bee-culture, or to be among the pioneers of the Pacific coast, having lived here since 1852, only 29 years; and having been connected with bees, to own them, since January, 1873. I have read Harbison, Langstroth and Quimby, the last two of which I highly prize. As I dislike the Harbison hive, as I have seen it, I disposed of the book, although there are many good points in it, and supported by practical experiments; but bee-culture is steadily advancing, and these works are getting behind the age. The best standard work to my liking to-day, is Cook's "Manual of the Apiary." It is the latest standard, and the author, who is a professor in the Michigan Agricultural College, has a class devoted to bee progress, and there is not an idea promulgated that is not put to the test and proved or disproved, to the best interest of the keepers.

The *American Bee Journal* takes the lead among magazines and periodicals. It is full of experience, from some of the most practical beekeepers in this country and Europe. It is the only weekly in the bee interest in America, and is devoted solely to the production of bees and honey, and the interests of honey producers, via the advancement of bee-culture, honestly and fairly. I cannot say so much for *Gleanings*, as it has, for a number of years, advocated giving glucose to bees, until, under its advice, numbers of beekeepers are worse off to-day than though they had never seen it. I myself, have lost, by strictly following its advice. I prefer to get the experience of practical beekeepers of experience, than that of the A, B, C class altogether. I acknowledge that I am in that class myself, and I prefer to look forward to looking backward. My experience is still fresh to my memory, and I am still willing to try any possible theory for information; and I will not condemn before trying.

As silence might seem to be an acknowledgment of ignorance, as hinted by my critic, therefore I must reply. I will not try to tire your patience unnecessarily. Mr. Lyon seems to think getting bees in box hives had advice. I will state here that I think in certain cases to procure pure Italian bees in movable frame hives, with worker comb built out straight and true from worker foundation, excepting the two outside combs, the cheapest and best way to buy in the end. But they cost more than many would feel disposed to give; and to pay \$5.00 for a box hive with bees, and take the chance of the combs being straight; or all worker, or mostly drone comb, would be very extravagant, as one would only have the bees after all. Most folks can buy swarms of black bees in box hives in their own vicinity for from \$1.50 to \$2.50 per hive; no freight to pay, no risk in moving. Get them on their permanent stands long enough for the bees to mark their location, and with a good work on transferring they can proceed and get experience and knowledge. If they should fail their loss would be the expense of their experience, and it need not be total. I well remember my first experience, and do not regret it. One cannot succeed unless knowing how to take advantage of failures.

#### Transferring.

One need not drum so hard in transferring as to loosen the comba. With the hive inverted, and with a light box over the mouth, a light jarring will cause the bees to fill themselves and retreat to the top box. With a number of such hives time can be saved, as they could all be started at the same time, so really, it would not take a great deal more time to transfer several hives than one, and the transferring of the first one would make the others easier. The bees should mostly go in the hiving box for security of the queen, they can be emptied on the frames when the combs are transferred, after the combs are in their places.

With the old hive, bottom up, it would be extreme carelessness to smother the bees, and not a bee need be killed. After the side of the hive is carefully removed, and the first comb, the others can be got at to more advantage. Use a wet or damp wing to brush the bees

off the comb onto a cloth in front of the hive, they can be emptied on the frames when thorough. No honey or comb should be spilled on them or the cloth to attract robbers.

Worker comb with brood and drone comb should be kept separate for transferring separate. Broods should be placed in center of comb; empty cells or comb with honey at the outside of frame; fill comb full as possible. Instead of nailing slats or using twine for fastening frames, use wires as described in previous issues of *RURAL*. The bees fasten the comb to the slats, and frequently the comb sags from the upper bar, and does not get securely fastened, which annoys the bees. By using the wires, the combs cannot sag, and if fastened to the wires, there is but a little surface of brood destroyed, and the bees will sooner fasten the top of combs. It saves time, makes a neater job, and one's hands do not get so daubed, and there is less danger of killing bees. The wires are more easily removed when the combs are mended. Most of my information was derived from practical experiences and theories gathered from *American Bee Journal*, *Beekeeper's Magazine*, *Beekeeper's Exchange* and *Gleanings*, copies of which I have for several years back, even including the critic's favorite "A, B, C," which I cannot fully endorse, by experiments, though I get some ideas from everything I read. I believe in trying them gently at first, anyhow, before criticizing. There may be some connecting link we don't see at first that is wanting to secure success.

#### Uniting Swarms.

Mr. Lyon finds fault in uniting bees in March. In this latitude, for the last two years, it was utterly impossible to get queens fertilized before April, and very risky, even then. More got lost than fertilized. By uniting queenless colonies, even in March, there need be nothing lost; one has the hive, also the combs; those having brood could be united with the bees, making a stronger colony to be divided at a better opportunity, instead of trying to raise a few weak queens in weak colonies out of season, not having nest enough to develop the larvae in the "royal cells." Before the last week in April, 1880, my strongest swarms, hives full of bees, used all their stores to feed young bees, and it being too wet to gather honey, they were forced to deposit their unhatched bees in front of the hives, but by feeding them a few days they were the first to swarm. After this I got about tired of raising very early queens. I had had bees swarm in March, but the last two years were exceptions. With such weather in the month of March, where would the bees already hatched be at the time when the queen was hatched, at the season when old bees die off very fast, as ever a "pioneer" must know by this time? Even if the bees started "royal cells," how can one be sure that they are started from the egg, and not from larvae, which do not produce the best queens, or may produce laying workers, as I have seen and know there are such. Which would prove to be the worse kind of loss?

Any apiarist knows that young queens are more profitable for honey producing than an old one is, but must be raised under favorable circumstances. Unless I wish to keep a colony queenless for the purpose of building queen cells, I should unite it with another, until such time as I had a laying queen to give it. Let our friend try it and then report.

#### Top Bars.

There are many apiarists of experience, some pioneers, that still have the beveled top bar, which is not "clumsy," and but little "more expensive" than the flat. I make all my own and prefer them, although, perhaps, a little more trouble to make than the flat, but I can save time in the nailing; and when they are nailed, are stronger than those not beveled. In using foundation, it can be more securely fastened, and faster than with the flat bar. In case of natural comb, bees will follow the sharp edge and build straight combs, and of even thickness, from one extreme corner to the other. I have seen combs built on flat-bottom top bars, with a "tracing of wax," and at the bar part was only  $\frac{1}{2}$  inch thick, and in places commenced  $\frac{1}{2}$  inch below the bar. With bevel top bars I have had combs weigh 9, 7, and 6 lbs., respectively, in Langstroth frames  $17\frac{1}{2} \times 9$  inches. It is a very easy matter to get them heavier, if wished. Simply spread the frames before being sealed up; the bees will extend the cells. Another and very important idea is, the beveled bars give more surface, for the bees to fasten the combs, so that they are more secure against breaking down—a great trouble with flat top bars.

#### Bottoms.

I have had both tight bottoms and loose, and prefer the latter.

To move hives, the bottom should be securely fastened as well as frames. It is not much of a job to fasten the bottom; make an empty hive secure, lift the frames into it, and go through the whole, the same. There are times when one wishes to see the bottom of the hive, without disturbing the bees; blow a little smoke under at the entrance, raise the front, and clean any substance that does not belong there, even moths or worms, that may have lodged there, or even dead bees; and in uniting or dividing, or at swarming, with the bottom board securely leveled and in place, what is easier to take off cover, lay on the ground at the side of the hive, place full hive on that, and an empty one on old bottom board, arrange the combs to suit, and close the hive, with not a bee killed.

Sometimes bees must be removed after dark, then if bottom boards are leveled in daylight, there is no fuss of it when one cannot see

whether everything is true or not. Let any skeptic call and see me; I will deem it no trouble to show my way. Showing is more to the purpose than all mere theory.

#### Tin Rabbits.

No tin rabbits for me, any more; I have had them. *Gleanings* furnishes them, for it is profitable to them. I rabbit out with a Barnes foot-power saw,  $\frac{1}{2}$  inch deep by  $\frac{1}{2}$  inch wide, on one edge of each end at top, and fasten a piece of oak strip  $\frac{1}{2}$  inch by 1 inch with 1-inch brads, for the frames to rest upon, at ends, which raises the frames up  $\frac{1}{2}$  inch above the ends of the hives. The bees fasten them enough, so that the hives can be moved about without danger of the combs slipping on rabbits and crushing bees, which is often the case when tin is used. I have never found them fastened but what I could loosen them without jarring the bees, and they never slip. I have 2 hives out of 80 that have tin instead of wood rabbits. The reason I use hard wood is that a softer wood might split or crack when the weight of combs come upon it, or in removing them, which oak prevents. So much in the name of "Langstroth" and other eminent apiarists, whom I revere.

#### Caged Queens.

I found there was no risk attending the use of caged queens in securing swarms. In case one feels afraid, let him try a just hatched one. I have used both, and could perceive no difference; every time was a success. After using an old queen, she should be caged 24 hours on top of frames, if used for a strange swarm; if not, she can be released immediately with the return of her own swarm. In the meantime combs can be examined and hive made ready for her.

Before denouncing the "new and novel" mode of using a caged queen, let one try it, even "apisarians." I have stopped all swarms, and not lost one that I saw in the air, even when they had a queen of their own. The caged queen is as safe as among her own bees. I have cut out hatching bees and caged them and used them without missing in a single instance. If I have spare queens unfertilized, I leave them occasionally on top of their frames, in their own hives caged, where the bees have fed them for several days, or until they had a laying queen. Sometimes one can get several queens fertilized in the same hive, and not lose one, this way. I have, when a swarm showed a disposition to leave, showered them with a whole bucket of water, with a wisp broom, and often used a number of them, with a helper bringing the water. I never lost but one this season, and that was too high, before I discovered it. I have had to chase some 50 yards or more, although there were plenty of bushes for alighting, only the water brought them; but since I tried the "new and novel," they were hived in short order and extra fun all lost.

#### Clipping Queens.

Mr. Lyon presumes rightly the reason of clipping the wings of queens, but they should not be clipped until well satisfied that they are laying. For fear that the "inexperienced" should "clip all queens as soon as they are hatched," I will say emphatically *don't*. Queens must be let alone until laying, not even handled by their wings. When they have laid a good card of eggs, and brood is being capped over, and regular, then with a pair of small, sharp, pointed scissors, without moving the queen, lift the comb until she is found, and snip off part of one wing as she travels over the combs. I have some that are three years old, and not "maimed" in the least, and prolific even now, and my queens are all as valuable as any on this Pacific coast; at least I would not change with the next best. They are all Italians and bred from the best, selected annually. Cutting a queen's wing does not maim her any more than to cut a hen's wing; but prevents her leaving with the swarm, and the swarm will not leave for good without her. Before the swarm returns, which it surely will, the hive can be changed and made ready, time saved and no harm done. One should have hives easy to examine, and know their condition inside at all times. He then would know whether the old queen or young one would be expected with the swarm. If the hives are low to the ground, as they should be, there is no danger of losing the old queen, if the apiarist is on hand; and if the hives are a good distance apart, and the apiarist is away, when the swarm comes out he will be apt to find a bunch of bees on the ground, inside of which, not hatched, will be the queen. Very seldom have I missed the queen. When I have, it has been my own neglect, in not being on hand. I have lost no swarms after being hived. The only one that I lost this season was one with a young queen from a nucleus hive, that filled her hive and swarmed, and got away because her wing was not clipped.

When bees get the swarming fever, even all the rules are discarded by them, at times, and they will not be satisfied till they have raised a queen. I have cut queen cells and given plenty of room, and they would build more, and I have had to give them foundation to build out, before they would be satisfied.

Sometimes bees will not go into boxes, but fill the lower part of the hive, when the extractor must be used to give the queen room to lay. Then again, the queen will at times go into boxes, and the bees missing her from her usual place on the brood combs, will build queen cells, while the queen is doing her duty in the boxes. So you see even bees will at times disregard "set rules." No presumption about this.



## Use of the Queen Cage.

Now, I will state *why* I pick the queens from the ground, place them in a wire cage, and lay them near the entrance of the hive. By caging, in a roomy cage, I have control of them until they are released. By laying them near the hive, when the bees miss their queen they commence their search for her, even if they have clustered in the meantime, and not finding her, they return to the hive, where they recognize the queen at the entrance, and immediately commence calling, which brings all straggling bees that belong to that hive home. When the bees are streaming in the hive release her, and see that she goes inside. Then that hive is swarmed. The hive being properly prepared by exchanging, they will go right to work. I have had such a swarm on foundation give five full sealed combs in seven days after hiving, when I had to give them more room, the lower part of the hive being full of honey.

My object in having an extractor is to prevent swarming, as well as to get the advantage of the honey season. An old experienced apiarist of good standing among beemen said "if bees swarm they do well, if not they do better." That is, if the apiarist can prevent swarming, he could secure a larger amount of honey, and by keeping off the swarming fever, they will gather and store more honey, which may be a new note to some; but we live in an age of progress, and it is hard to get some, with old ideas set in their heads, to take hold and keep up with what is every day passing about them. Swarming is one of the great troubles of beemen, and how to prevent it is continually being discussed at all the different conventions, in this State and at the East, as any liberal reader will learn.

What answers for one seems not to do for another, some circumstances, owing to as yet unknown causes, interfering. The extractor, used at the proper time, seems to be the mode most generally used, as by extracting at the time that honey is commenced to be sealed, and from combs that have no brood, and putting foundation or empty combs in their places, swarming will be more or less controlled. All beemen know by experience that bees have swarmed, even after "super upon super" have been placed in the hive. When there are a lot of drones hatched in the hive, and the bees have the fever, they will swarm without going in the supers; and the queen will (when honey comes in fast, and the brood apartment is filled to crowd her), go in the supers and lay in the large cells, and raise a large lot of drones in the supers, instead of the bees filling them with honey. Those larvae must be fed, and all insects in the worm state, consume considerable of what might be surplus. I have seen more than one very much surprised beeman, who said his bees swarmed and took all the honey, and left a big lot of drones, when he was just getting ready to take off the sections.

I have had queens return to the hive when they found they could not leave with the swarm; and the swarm would sometimes not cluster, but return also, when the hive must be examined. In case the queen was lost or killed, while the swarm is in the biving box most of the bees are out of the way, and the hive can be attended to. A person may not "risk" his queens if he does not wish to. The box alone may do. I have had no trouble either way. Owing to weather I have had the old queen detained until the young queen had hatched, when both came out together, and others crawling about in the hive (unnatural swarming). The old queen, only one year old, was saved, and the young ones also. Grass and weeds should not be allowed to grow about the hives; the ground should be clear.

In case the old queen should be lost, and swarm return while the young queen is in the cell, the bees will generally cluster in front of the hive in a bunch, on seeing which, after dinner, the apiarist will know at once that that hive must be seen to immediately. All queen cells might be cut out, but one, or the hive divided, or a young laying queen might be given to them, and placed in position for surplus honey, and no time lost.

In dividing the six queens, they were saved, and some of them have full swarms, and supers on now. They had young bees and brood before they were clipped; some are not yet clipped, as they have plenty of room, and are raising brood and building out foundation.

## Two Queens in One Hive.

I don't suppose that Mr. Lyons ever saw, or, perhaps, heard, of two queens in one hive. It is an established fact, with plenty of proof, that with Italians two queens are frequently found in one hive. I will refer him to *Gleanings* even, to prove it, which he must have noticed if he is a careful reader. I don't think any of the different journals failed to mention it. I have observed it a number of times, both being fertilized and walking about on the same comb. I have seen them actually crossing and recrossing on the same comb and within an inch apart, expecting them to destroy each other, but they did not, but both at liberty.

## Knowledge of Bees.

It is a mistake to affirm that we know all about the habits of bees. The same laws that govern Blacks do not govern Italians. This is "an established fact," and when we have the Cyprians, we will have to learn more about them.

If a person infers from my writings that it is natural for the old queen to stay in the hive, while the young queens leave with the swarms, it must be a constitutional quality that prevents him from using his better judgment. I have

seen, when bees wish to supersede the queen by raising young queens, the old queen held a prisoner, her legs bit off, and wings also, to cripple her, that she might not injure the young hatched queen, who was piping on the comb and very much excited at the issue. Probably Mr. Lyons did not know that was a fixed law. Even the parties that he refers to as having "spent years in an experimental apiary," are willing to allow that the bee business is only in its infancy, and the next generation will be wiser than the present, in our line.

Now, Mr. Editor, I wish it were distinctly understood that I only give in your columns what I have *practiced*, and do not ever expect to be at the head of the class. I give what I do give for what it is worth, and hope, before I receive sarcasm, that parties will try some of the ideas before they condemn. If they do not receive benefit, it will be what many of us have experienced; and if they do get an idea, let's have it out where the world may benefit by it. Don't let the light be hid. It is no sin to fail, but don't fail before trying. There are many ways to get at the same object. Most of us have our favorite ways, but we should not take up new ways until proved. Prove them first on a small scale; then, if convenient, we can adopt them. I have much respect for the opinion of others.

J. D. ENAS.

Sunnyside Apiary, Napa, Cal.

DEFERRED.—Owing to the length of Mr. Enas' reply to Mr. Lyon we are forced to defer some other favors from our beekeeping readers until another issue.

## HORTICULTURE.

## Plants and Trees from Sicily.

EDITORS PRESS:—I have received letters from quite a number of persons residing in your State requesting me to send them sumac seed and plants, lemon and olive scions and trees; seeds of forage plants, and of the cereals, etc., for agricultural purposes. But high freight, and the lack of direct steam communication with American ports have been until now almost insuperable barriers, in an economical point of view, to the accomplishment of their wishes.

We have at this time a line of steamers sailing semi-monthly from this port direct to New York, low freight, and making the voyage in from 15 to 18 days, and you will confer a favor if you will through your official position acquaint the agriculturists of your State with this fact, which will greatly facilitate the introduction of such seeds and plants as are thought to be adapted to your soil and climate; and if successfully cultivated will tend materially to the development of the agricultural capabilities of the State.

I have just shipped to Florida a number of trees, olive, lemon and Nespoli del Giappone, to be used in grafting, but I see no reason why they should not be imported for cultivation since they can be delivered in New York in good condition, at a cost of about 85 cents a piece, variety guaranteed, two or three years old, and the lemon trees will bear fruit the following season.

The olive is the most profitable field crop in Sicily, and I see no reason why its cultivation can not be made equally profitable in California.

All orders coming to this Consulate will receive immediate and faithful attention, and it will afford me pleasure to supervise the selection and shipment of trees, plants and seeds ordered.

S. P. BAYLY.

U. S. Consul, Palermo, Sicily.

We are not personally acquainted with Mr. Bayly, but his position would entitle him to trust in such matters. We print the letter in the hope that it may be of use to readers who desire to obtain plants, etc., from Sicily.—EDS. PRESS.

## The Use of Moss in Seed Beds.

At the meeting of the American Association of Nurserymen, held last month in Dayton, Ohio, Peter Henderson, the well-known horticulturist, described a new method of growing seedlings, by which most excellent results have been attained. He said: The past season we raised nearly a half million of cabbage, cauliflower and lettuce plants in this manner, which we sold at \$5 per 1,000, a price as profitable to us as the plants were satisfactory to the buyers. We sowed the seed the last week in February, in one of our green-house benches, so thick that they stood 20 plants to the square inch. These we began to thin out, to prick in hot beds, just as the first rough leaf appeared, placing 1,000 plants in a three by six sash. The handling of that quantity was a big job, but I doubt if one plant in a thousand failed, owing, I think, to a plan we used in preparing the bed on the green-house bench for seeds—a plan that I think well worthy of imitation in preparing a bed for seeds that have to be transplanted, of any kind, whether outside or under glass. We used only two inches in depth of "soil" for our seed bed, which was made up as follows: The first layer, of about an inch, we used a good friable loam, run through a half-inch sieve. This was patted down with a spade and made perfectly level and

moderately firm. On this was spread about one-fourth of an inch of sphagnum (moss from the swamps), which had been dried and run through a sieve nearly as fine as mosquito wire, so that it was of the condition of fine sawdust. On the top of the moss the ordinary soil was again strewn to a depth of three-fourths of an inch. This being leveled, the seed was sown very thickly, and then pressed into the soil with a smooth board. On this the fine moss was again sifted, thick enough to cover the seed only. The bed was then freely watered with a fine rose, and in a week every seed that had life in it was a plant. Now this seems a very long story to tell about what most consider a very simple operation; but it is necessary to give these details to a thorough understanding of the advantages of the method. When the seeds of most plants germinate, where they are thickly sown, the stem strikes down into the soil, the roots forming a tap root with few fibers unless arrested by something. Here comes the value of our one-fourth of an inch of sifted moss placed three-quarters of an inch from the top. As soon as the rootlets touch the moss, they ramify in all directions, so that when a bunch of seedlings is lifted up and pulled apart, there is a mass of rootlets, to which the moss less or more adheres, attached to each. To the practical gardener, the advantage of this is obvious; the tiny seedling has at once a mass of rootlets ready to work, which strike into the soil at once. The advantage of the moss covering of the seed is not so apparent, in the matter of a free germinating seed, such as the cabbage, as in many others, but in many families of plants it is of the greatest value. For example; I, last November, took two lots of 10,000 seeds of *Centaurea candida* (one of the dusty miller plants so much used for ribbon lines); both were sown on the same day, and exactly in the same manner, in boxes of two inches deep of soil. From the moss covered lot we got over 9,000 fine plants, while from that covered by soil, only about 3,000. The same results were shown in a large lot of seeds of the now famous climbing plant, *Ampelopsis Veitchii*, and in the finer varieties of Clematis.

The reason is plain: the thin layer of sifted moss never breaks or hardens, holding just the right degree of moisture, and has less tendency to generate damp or fungus than any substance that we know of.

## THE DAIRY.

## Guernsey Cattle.

Guernsey cattle are now among the fashionables at the East, and that they gain position at a time when dairy cattle are being judged by their actual worth as milk producers rather than by fancy points is all the more creditable to the new candidates for favor. Our readers already know that California has a share in the Guernsey interest, for in our issue of October 4, 1879, we gave an account of the importation of Guernseys direct from the Channel Islands, by Henry Pierce. These cattle have thriven since their introduction, and are now on Mr. Pierce's Yerba Buena ranch, in Santa Clara county. They were shown at last year's fairs, won a gold medal and attracted much attention. We have already discoursed on the general characteristics of the Guernseys, but we find an article by Col. M. C. Weld in the *Rural New Yorker* which adduces new points and we introduce it as follows:

The cattle of Guernsey, whatever their origin and however noticeable their kinship to those of the sister island of Jersey, are an entirely distinct breed, having such pronounced merits that a breeder, if he be inclined to breed for butter, may well question to which breed he should give the preference. The best specimens are decidedly above medium size, many of them approaching the Short Horns in magnitude. They are of good form, with deep, capacious barrels, not lacking in beef points, growing quickly and maturing early. The cows reach the height of their flow of milk and greatest weight at about five to six years old. The oxen are of good size, willing and docile. As beef animals they fatten economically at any age above two years, and their beef is of excellent quality, the fat being laid on evenly and the meat well marbled. The calves are usually large when dropped, and make heavy veal when five weeks old, the Guernseys and their grades showing thus, both in respect to beef and veal production, a great superiority over the Jerseys.

It is, however, as a producer of milk and butter that the Guernsey cow has her special value. Like that of the Jersey, her milk is of extraordinary richness. It is doubtless fully as rich as that of average Jerseys, and in the matter of color, very much superior. The color of Guernsey butter is so intense a golden yellow in June and throughout the summer as to be actually distasteful to many persons, so strong is the impression that the color is unnatural. This color, to a less degree, is seen both in the milk and cream, to which it imparts a rich look which is very agreeable. Guernsey butter pales somewhat during the winter, being ordinarily at its lightest in March, if the cows are fed principally on hay. The majority of them carry the color of their butter well through the winter, so that it is never necessary to use annatto or other dye to give Guernsey butter an

agreeable tint. In this particular the butter of the Guernsey contrasts strongly with the lard-colored product of most cows, including many Jerseys. Among Guernseys, cows yielding 18 and 20 quarts of milk are not rare, and they yield of 14 to 18 lbs. of butter per week has been repeatedly reported.

The Guernseys and Jerseys cross well, and blend their good qualities admirably, the cross bred animals exhibiting the fine stature of the Guernsey combined with the more elegant form of the Jersey; in fact, making the model milch cow in every particular. The butter of the cross-breeds is usually of a character combining the firmness and waxiness of the Jersey with the richer color of the Guernsey. In fact, no better use can be made of unregistered Jersey cows than to cross them with Guernseys, for in the cross we are almost sure to have the best qualities of the two breeds developed.

Grade Guernseys possess the qualities of the Guernsey breed to an extraordinary degree, ordinarily exhibiting them in the color and quality of the skin, and in their milking and feeding qualities. The quantity of milk and both the quantity and rich color of the Guernsey butter are observable also in the grade cows. The Guernseys are, therefore, pre-eminently adapted to those regions where farmers make butter and where beef and veal are regarded as important farm products.

The earliest importations of Guernseys into this country were probably made at a time when no distinction was made between the different breeds of the Channel Islands, and Jerseys and Guernseys passed under the name of Alderneys. In 1840, Mr. Nicholas Biddle, of Philadelphia, imported Guernseys under their proper name, and established a herd of rare excellence, which is still in existence in the hands of his son, the Hon. Craig Biddle. Other isolated herds in New England and in the State of New York fairly introduced the breed to American breeders, and it has steadily increased in popularity from the first. In 1878 the American Guernsey Cattle Club was formed, and the first volume of the Guernsey "Herd Register" was published, since which time the number of breeders and of pure-bred cattle has greatly increased. Within a few years a herd book has been established by the Island breeders, so that now the systematic improvement of the breed and the maintenance of its valuable characteristics may be expected to go on both in this country and in the Island of Guernsey upon well established principles.

Large numbers of Guernsey cattle—chiefly two-year-old, in-calf heifers—are annually exported from the Island to England, where they have long been great favorites. The importations of Guernseys to this country have never been so great as during the past year, and in point of excellence the recent importations compare most favorably with any that have ever been made. The Guernsey herds of the United States are located chiefly in New England, New York and eastern Pennsylvania.

## The Gypsum Test for Milk.

Very little reliability can be placed on the usual tests for milk; but the method given below, from the *Monthly Magazine*, is said to be quite reliable, and is certainly very simple:

A method of testing milk by means of gypsum has been made known by Mr. Bertram Ohm; it is so simple, and apparently so reliable that by its means many householders will be able at once to ascertain whether the milk delivered to them has been adulterated with water or not.

In carrying out this test it is necessary to make use of calcined gypsum, or *plaster of Paris*, in the state in which it is used for modeling; and this can always be procured in good condition in the shops.

One ounce of this plaster of Paris is taken and it is made into a paste with the milk to be tested; the operator takes out his watch and notes the exact time. He observes how long the mixture takes to become solid.

Milk of the specific gravity 1.030, at the ordinary temperature of 60° Fahr., becomes solid under these circumstances in the course of 10 hours or thereabouts. If it contains 25% of water it becomes solid in about two hours; if it has been adulterated with 50% of water, it solidifies in half an hour; and, finally, if it contains as much as 75% of water, the mixture becomes hard and solid in 20 minutes.

Milk which has had its cream taken off, and has a specific gravity of 1.033, solidifies under the same circumstances in the course of about four hours; if this creamed milk has had 50% of water added to it, it solidifies in one hour, and with 75% of water, in the course of half an hour.

Mr. Ohm remarks that the time required for solidification, that is, for becoming hard, is somewhat less if the operation of mixing takes place at a certain degree of heat; but perhaps it is safest to operate always at the ordinary temperature of the room. It is useless to add, for analytical chemists, that the solidified product can be afterward, if requisite, submitted to ordinary analysis—extraction of the butter by ether, the lactine, caseine and salts, by the usual methods.

TO BURN BRICK DARK.—While mixing the clay, spray a small quantity of a solution of one pound of common green copperas in four gallons of water. Or, use as a cheap substitute for the above, ordinary acetate of iron liquor.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges respectfully requested for this department.

### A Visit to the Michigan Agricultural College.

(Written for the RURAL PRESS by JEANNE C. CARR.)

This is the only college in the United States, strictly devoted to agriculture, whose foundation antedates the grant of Congress in 1862, of public lands for the promotion of agriculture and the mechanic arts. To it, on the passage of what is known as the Morrill bill, the people of the State handed over whatever might accrue from the National Benefaction, thus relieving it from the necessity of dependence upon legislative appropriations for its support. Since then, its steady growth and acknowledged usefulness have made it the leading institution of its class, and from it a large number of the professors and teachers of the other agricultural colleges have been obtained. Prof. Bessey, of the Iowa Agricultural College; Prof. Kedzie, of the Kansas Agricultural College; Prof. Daniels, in charge of the agricultural department of the Wisconsin University; Prof. Manly Miles, and other prominent agricultural teachers, served their apprenticeship, both as students and teachers at the Michigan Institution.

From the start, this college encountered opposition. The leading ideas which its friends sought to embody in its organization, met with scholastic derision, and when the people "gave away" the magnificent endowment of the nation to the "clodhopper's college," situated "on the Lansing marsh," the University at Ann Arbor, already well endowed by the Congressional grant for "higher institutions of learning," scarcely concealed its hostility. A prominent educational official of this State, who graduated at the Michigan Agricultural College, informed me that every inducement, even pecuniary ones, were offered to his class, to leave and go to Ann Arbor, in order to break up the farmers' college, and unite its endowments with those of the University. But these and other dangers have been safely passed, for the farmers of Michigan have stood by their own institution, and are to-day so identified with it, that the University is not upon a more solid foundation. Its funds have been most carefully husbanded; the lands were well located, and as only a portion of them have yet been sold, its prospective income is entirely adequate to the extension of its useful work.

The friends of agricultural education, and especially those who labored to obtain the land endowments for the so-called industrial colleges, believed that "education in this line being new, and, as a general thing, undesired by the ones that ought to possess it, is the very reason why the college should render it attractive, thorough and practical."

Not one member of the present Board or Faculty of the Michigan College has had a hand in framing or in modifying the laws by which it is governed. The college is carrying out, in good faith, the wishes of the people, and I have never been more impressed by the loyalty to the essential ideas which ought to be more general in respect to such institutions, than by a speech of Gov. Bagley to the agricultural graduates. He said that their education was given them by the State, not for their own personal and selfish ends, but as a trust to be used for the good of the community in which each one dwelt, and for the State at large. "The added ability, capacity, usefulness, and manhood resulting to every young man going forth from college halls, is simply an investment made by the State—capital lent; and it was due to the State, not less than to the student's own self-respect, that the interest should come back in the shape of better manhood, better private life, and better public service."

No one can spend a week or even a day at the Lansing College without being impressed with the superior moral atmosphere which pervades the institution. I have visited the University at Ann Arbor many times, and some of its professors are life-long and honored friends, but I do not hesitate to say that I would much sooner place a son of 16 in the Agricultural College, and especially if I wished the tendency of his education to be toward, and not away from industrial pursuits.

I found on visiting it, the statement to be literally true, that "no college in the State or country has courses equivalent to its courses of agriculture, botany, horticulture, agricultural chemistry, meteorology and entomology; while, by large modifications of many other studies, they are made to conform to and contribute to the main objects of the institution. The ability to modify instruction in studies which are foundational rather than special, is one of the great essentials. Teachers are more often defective in this respect than in any other." Out-of-door instruction is constantly imparted in connection with the three hours' daily manual labor required of all the students. The general character of the instruction and the spirit of the place is agricultural; all other studies are made subservient. And therefore, although the college exercises no censorship over the vocation of students, a larger proportion of agriculturists have been returned from it to the farms of the State than of lawyers and doctors from the schools established for the benefit of those professions.

My visit was both a delight and a surprise. I went without a letter of introduction, to see for myself, and learn whether agricultural colleges were failures, from actual inspection.

The road from the Capital to the college over some five miles of rather swampy and stumpy or hummocky land, was not prepossessing, and I could not but contrast with it one of the sites proposed for our agricultural college, some 15 years ago, in the Napa valley. But at the entrance to the college farm, all was changed. Meadows deep in timothy and other grasses, generous barns, rich corn fields and orchards, and the finest roads imaginable were the main features of interest. The farm covers some 700 acres, and by contrast with its immediate surroundings, shows the value of underdraining and deep tillage. I met a squad of students working on a new drive under the direction of the professor of civil engineering, and asked if I could see the stock and barns, for I wished to reserve the horticultural and academic departments for a more leisurely inspection. A student was at once detailed to guide us, and we made the rounds of pastures, yards and stalls. There were 18 head of Short Horns, which compared well with Mr. Overhiser's herd; 9 Devons, 14 Ayrshires, and a smaller number of Jersey, Galloway and Hereford cattle; also a few grades. I noticed a very fine yoke of oxen in their stalls, and others at work.

Of swine, there were some dozens of the Berkshire, Suffolk and Essex breeds. The sheep were in their pastures: Merino, South-down, Highland, Cotswold, besides grades and culls—in all, about 1,000.

There were only working horses. I was told that the farm department, as it stood, was valued at, for land in use, \$48,000; stock and buildings, \$18,000. The produce of that year, in wheat, corn, oats, hay, potatoes and wool, was valued at a little over \$18,000, not counting a considerable quantity of wood and compost.

Buildings are not as costly in Michigan as with us; and the whole outfit of the college, including the main building, two boarding halls, chemical laboratory, professors' and President's houses, each with a good barn attached, a farmhouse costing \$3,500, conservatory, cattle, sheep and horse barns, piggery, brick-work shop and tool-house, windmill and apiary, were valued at \$148,500.

It costs a student \$2.75 a week to board at the college, and washing costs 42 cents per dozen. The rate per hour paid for students' labor is 1 1/2 cents, and the students who need to eke out their income there, are enabled to get through at an almost nominal cost.

The President afterward assured me that the students generally liked the manual-labor system, and needed restraint rather than encouragement in that respect. The work-book of the college shows the distribution of students' labor for any day in the year. Except a gardener, foreman and teamster, all the labor in the horticultural department is performed by the students. I found Prof. Beal in the regulation working suit, a spade in his hand, giving practical instruction in horticulture to a class of a dozen or more, and among these young men was a son of ex-President Hayes.

The system by which the varied employments of the farm and gardens are assigned and managed is admirable. One of the students has charge of the tools; each implement is charged against the student using it; when inspected and put in its place the number is checked off. The tools used in the shops are all numbered and lettered, and the same system is maintained in using them.

Ordinarily, the employment of students is varied, so as to give it the greatest value in the production of skill, but students who remain to work in vacations may do so as laborers for adequate compensation. In term time, the students generally work in squads, a Senior acting as a sub-foreman with a number of Freshmen, and the Farm Superintendent overseeing all.

The perfect keeping of the lawns and gardens, the good order and discipline of the institution, the students' organization for self-government were gratifying proofs of the wholesome influence of labor in promoting order, steadiness and manliness of character.

One of the most important features of the Agricultural College work has been the holding of farmers' institutes in various parts of the State, under the general management and control of the State Board of Agriculture and the professors of the college. I omitted to say that this Board constitutes the Board of Trustees or Regents of the College, which accounts for the present identification of the agricultural interest with it. The annual meetings of the Board generally wind up with a love feast at the college, in which the students join, and since the Granger is abroad in Michigan, he also is sure to appear at this festival. The last number of the *Grange Visitor* contains a lively account of one just passed, in which the "inestimable value to the State of an agricultural college, having the making of intelligent farmers for its end, with practical men for its teachers and managers," is fully shown.

I have made this paper long enough, yet have not touched many points of interest in the history of the parent institution, which, since the year 1855, has borne the brunt of popular indifference, University hostility, and other less formidable obstacles to its success, until, having steadily kept about its business of making student-farmers, its farmer-alumni now rally around it, and the leading educational State counts it second to no other of her great agencies for elevating and improving her people.

Pasadena, July 10, 1881.

## AGRICULTURAL NOTES.

### BUTTE.

RANCHO CHICO.—Cor. *Record*, Union: The farm of Gen. Bidwell contains 20,000 acres, mostly of excellent quality, and from the manner in which it is cultivated, the extensive variety and quality of its product, may no doubt be safely termed "the model farm, without a successful rival." Nearly all varieties of grain, fruit and products, and all kinds of stock which are grown are to be found on this place, and of that quality which is only obtained by strict attention to careful selection, best methods and continued improvement in all details. As to the attention paid in the line of cultivation, it may be remarked that upon the entire 1,100 acres of land occupied as orchard and vineyard upon this farm, the ground is so frequently and thoroughly cultivated that besides the thrifty and luxuriant growth of trees and vines bending low under their laden wealth of fruit, hardly weed or blade of other vegetation can be found. The other departments of the farm are carried on with similar exactness, giving employment to a great number of men, and rendering the extensive estate one of great beauty and accomplished results. The pay-roll of his employees last year amounted to \$59,000. A little Indian village, with a population of about 100, is seen upon one portion of the farm, of whom, besides women and children there are about 25 able bodied natives who are furnished with employment.

### COLUSA.

TWO MILLION SACKS.—*San*, July 23: W. A. Mathews told us, the other day, that judging from the number of sacks sold, and engaged, there would be 2,000,000 sacks of wheat in the county this season. We consulted J. L. Jackson, of E. Jones & Co., and he thinks Mathews' estimate about right. This gives us in the neighborhood of 5,000,000 bushels. This would look like a considerable quantity of wheat, if it had not been for the big crop of last year.

THE STEAM WAGON.—From Capt. Roberts, of the Sacramento wood company, the *Chico Record*, learns that the company's steam wagon is working very successfully this season. The engine has been rebuilt and the parts that were found weak have been strengthened. The wagon is now running from the vicinity of Riceville to the McIntosh landing, and draws about 40 tons at a load. Capt. Roberts says that his steam wagon would draw 60 tons very easily on a good, graveled road.

### CONTRA COSTA.

DANGER IN OPEN WELLS.—*Antioch Ledger*: Peter Grennen, a farmer who resides on Marsh grant, has been most unfortunate of late in the loss of valuable horses, three having come to their death by falling into wells in one day. While driving a span of fine animals, one a stallion, attached to a header on Friday of last week, both horses suddenly dropped into an open well in the wheat field and were instantly killed. Had it been wide enough, the header would have followed, but the sides caught, and the weight of the horses was sufficient to detach them from the machine. On the same day a colt fell into another well and was killed. His loss was fully \$500. It is not safe to have too many open pits in the fields. These unused wells should be filled up or securely covered with plank.

### LOS ANGELES.

BEEKEEPERS' MEETING.—*Express*, July 23: The beekeepers assembled July 16, 1881, at the office of C. N. Wilson, Los Angeles. The meeting was called to order by the President. Minutes of last meeting read and approved. Secretary reported no contributions for the fair. The President reported the formation of a local beekeepers' organization in San Fernando precinct on the 12th inst. Chas. Bridges was chosen President, and Joseph Harps, Secretary. On motion it was ordered that a diploma be offered at the coming Horticultural fair for the most appropriate and attractive labels for comb and extracted honey. The Secretary was instructed to correspond with Capt. Gordon, of the Azusa, relative to the organization of a local beekeepers' association in that precinct. J. W. Wilson offered the following resolution: *Resolved*, That we, the Los Angeles Beekeepers' Association, concur in the decision of the Beekeepers' Association of Utica, N. Y., that candying is the true sign of the purity of honey. On motion, J. Haskell was appointed to draft a resolution condemning the practice of San Francisco and other papers quoting all liquid honey (as strained honey is an unknown commodity in our California markets) and present the same to the district convention at its next meeting. Adjourned to meet on the third Saturday in August, at same hour and place.—N. LEVERING, Secretary.

GRAPE STEALING.—*Anaheim Gazette*, July 23: The annual loss to vineyardists by stealing amounts to a large sum, and now that grapes have considerable value, it pays to exercise vigilance. The ubiquitous individual known as "the small boy" is the worst pest to contend against, but there are not lacking children of a larger growth who fail to see the impropriety of invading a vineyard and carrying off as many grapes as they want. One gentleman, while walking in his vineyard the other day, came to a spot where the vines had been stripped of their fruit, and a number of pieces of cloth and grape skins strewn about showed how the grapes had been disposed of. Some women, more thrifty than honest, had invaded the vineyard,

and, sheltered by the foliage of the vines; had plucked the grapes and strained the juice through the cloths for the purpose of making jelly!

### MENDOCINO.

THE HOP CROP.—*Dispatch*: Mr. L. F. Long, of Sanel township, one of the principal hop growers of the county, reports a great improvement in the appearance of the vines lately. The recent warm weather has had the effect of inducing a rapid growth, and where, in the month of May, the indications were that there would be no crop the prospects are now good for a yield fully equal to two-thirds of last year's crop. Should the result verify the prediction, the hop raisers of Mendocino county will have no reason to complain, as last year's product was exceedingly heavy—far above the most sanguine expectations of any one. With like prices this year, a two-thirds crop will give a larger coin return for the use of the land and labor expended than they could possibly hope to realize from any other crop.

### MONTEREY.

CARMEL VALLEY.—Edward Berwick, a resident of the Carmel valley, below Monterey, furnished the assessors of that county with the statement that that valley had produced 120,000 lbs. of butter, 11,000 dozen of eggs, 5,000 lbs. of cheese, and there had been sold 8,000 gallons of milk, all during the year of 1880.

THE CROPS.—*Democrat*, July 23: More grain and of better quality than was expected, is the nearly unanimous report from the harvesters in this valley. Some of the wheat, indeed, will rank as "milling," and a considerable proportion as No. 1, making a showing for the Salinas crop which would be highly satisfactory, were prices good. Concerning these last, few sales if any, having been made, we are left to conjecture as to the effect of the high rates of freight to Liverpool now prevailing. They ought, in accordance with the law of demand and supply, to attract a corresponding number of vessels to San Francisco, but will not do so, some say, for the reason that all over the world there is an extraordinary demand for freight carriers.

RUST PROOF WHEAT.—S. O. Pugh exhibits a sample of the prettiest wheat we ever saw, as grown in this valley or anywhere else. Of a beautiful color, every grain plump and of uniform size, it is emphatically "gilt edge," being so pronounced by a number of experts who were examining it. The year before the memorable rust year, one acre and a half of Mr. Pugh's land was sown to Sonora wheat. The next year, the rust year, the land was sown to the same wheat again, but the crop came to nothing almost, what there was of it being sold to a glue factory. Among the crop there was a bunch of 16 heads that stood tip fresh and green, entirely unaffected by the rust, and when the heads came to maturity, Mr. P. carefully gathered them. The berries from them proving to be of excellent quality, they were the next season carefully sown by themselves, and so on, until the present season, when he reaps about four tons of grain such as the sample in question.

### NAPA.

AGAINST GLUCOSE.—*Star* report of meeting of Vinicultural Club: The following was unanimously adopted: *Resolved*, That we, the St. Helena Vinicultural Association, condemn in the strongest terms any attempt by any party to adulterate our wines and brandies by the addition of any substance of whatever kind, and more particularly by the use of glucose, and that we will expose all parties importing or receiving the same, by publishing their names in the papers of this and the Eastern States, and that all wine dealers purchasing wines or brandies from wine makers using glucose shall also be published in like manner, and that all fair and honorable means shall be used by this society to prevent any attempt at such adulteration of the honest product of our vineyards, believing that the very life and future prosperity of viniculture can be maintained only on the solid foundation of absolute purity of our products.

### SACRAMENTO.

HORSE DENTISTRY.—*Rec*: A most successful operation in horse dentistry was yesterday performed by J. S. Wheeler, the well-known blacksmith, on a horse owned by the McGee brothers. The animal had in its lower jaw a molar which was protruding into the upper gum. It was some three inches in length and had worn to a point from behind, had in it some five nerves, and caused the animal such pain that it was with difficulty it could eat. Wheeler filed a groove a quarter of an inch deep in the tooth and then, with a pair of forceps, extracted the molar. Throughout the entire operation the animal seemed to realize that something was being done for his relief, made no resistance, and though in apparent great pain, gave no evidence of its suffering, save by an occasional whinnying.

### SAN BERNARDINO.

HORTICULTURAL COMMISSION.—*Index*: The San Bernardino Board of Horticultural Commissioners met July 19th, and organized by electing S. E. A. Palmer, chairman, and S. R. Magee, secretary. On motion, they proceeded to ballot for tenors of office, which resulted as follows: S. E. A. Palmer, one year; W. D. Roberts, two years; S. R. Magee, three years. S. E. A. Palmer was elected permanent chairman, and S. R. Magee, secretary of the Board. The county was districted as follows: S. E. A. Palmer has the district on the north side of the Santa Ana river from the first street running



north and south on the east side of Davie's mill, and extending to and including Rincon. W. D. Roberts, the district on the east side of said street, and including all south of the river. S. R. Magee, the district embracing Riverside and Temescal.

#### SANTA CLARA.

**THE CHEESE FACTORY.**—Santa Clara Journal: The annual meeting of the Santa Clara Cheese Manufacturing Co. was held on Saturday last, the 9th inst., at which the principal business done was the election of directors and officers and the examination and adoption of the yearly report. The old board of directors were re-elected as follows: Messrs. S. I. Jamison, L. P. Alexander, Jas. Southerland, A. B. Hunter and R. McComas; and the officers elected are also the same as have so efficiently served during the past year, to wit: S. I. Jamison, President; A. B. Hunter, Treasurer; and R. McComas, Secretary and Salesman. The business was found to be in a satisfactory condition, and the new year was begun with every prospect of continued success.

#### SAN DIEGO.

**TREES WITHOUT WATER.**—Cot. Union, July 23: V. C. Reche at Fall Brook had for years irrigated his beautiful orchard by running water past the trees for a few minutes, about once a week, thus training them entirely to surface roots. Two years ago the water failed. For two years the trees have had nothing but the winter rains, with little or no cultivation of the ground, yet to-day over one-half of them are alive in spite of it. Most of the apple trees have succumbed, but all the peach, apricot and fig trees are still flourishing, the fruit being only a little pinched in size; and nearly all the orange and lemon trees are living, though the fruit is too small. Yet the greater part of these trees are on a high, sandy loam and over 15 ft. from water—many of them over 25 ft. Can there be any doubt about the fate of these trees if they had never been watered? If the roots had been allowed to run downward instead of on the surface? If the natural moisture of the ground had been retained by constant stirring of the top soil? In other words, could not that single thread that was necessary to hold them up have been supplied. A visit to the places of John Mitchell of Fall Brook or J. P. M. Rainbow of the Vallecito, will go far toward convincing any one. It is well proven by many in town that Mr. Mitchell produced last year some of the finest oranges in Southern California. The writer has personal knowledge of the fact that those trees never had a drop of water applied; that the level of the water in the well close by them and on the same level with them is 23 ft. below the surface. All his other varieties of fruit trees are in as thrifty condition as his orange trees. Cultivation has done it all.

#### SAN JOAQUIN.

**THE WHEAT CROP.**—Stockton Herald: Complaints are made by farmers residing in different parts of the valley that the wheat yield is much less than it was estimated previous to commencement of harvest. Many who expected to get from 20 to 30 bushels per acre, have only from 12 to 15 bushels. This shrinkage from the estimate is unusual, as the farmers of this valley have generally underestimated their crops and last year in particular, most of them had to purchase additional sacks after commencing to thresh. This year thousands of sacks are being returned unused. While the quality of the grain raised this year is generally good, the quantity will probably be only about half what it was last year throughout this portion of the State.

**LOADING THE STACK.**—Lodi Review, July 23: A practice which is known as "loading the stack," is prevalent in this vicinity. It consists of throwing pieces of iron—usually bolts—into a stack of headed grain; and when threshing, these iron bolts run through the cylinders, tearing out the teeth and doing an immense amount of damage, often flying to a great distance, and in several cases injuring men at work on the machines. Who these villains are that will thus endanger life and wantonly destroy property, is never known; but steps should be taken to find them out and have them brought to justice. This week, while the Carlisle thresher, of Ione, was at work near Acampo, a chilled-iron plowpoint, having been secreted in the stack, ran through the cylinder, tearing it all to pieces. Thursday, while Jo. Mead was threshing on Sargent's ranch, a bolt, 16 inches long, ran through the cylinder, doing considerable damage. While he was threshing Ayer's grain, a silver-mounted Derringer pistol was run through the cylinders. It had probably been left by some tramp who had taken a night's lodging in the stack.

#### SONOMA.

**RAVAGES OF THE VINE-KNOT.**—Healdsburg Flag: From what we saw last week, in company with Prof. Dwinelle from the University, the phylloxera is scarcely to be more dreaded than the vine-knot. One handsome vineyard 12 years old will lose one-third of the crop this year and probably one-half next year. Some of the vines have been already choked to death by it, others have one side killed, nine-tenths of the vines have the fungus in active growing condition. It occurs on all varieties and upon drained as well as undrained land, and no other tenable cause is adduced but the unusual frost of last fall. At Henry Gird's vineyard, the disease has been present for 20 years, but not in malignant form; and none whatever upon vines planted in adobe soil. We gave last week the only remedies in practice.

#### STANISLAUS.

**WAREHOUSE COLLAPSED.**—Modesto Herald, July 21: On Friday evening of last week the smaller of the two Grangers' warehouses in this place crushed the underpinning and swaying to one side, fell solid on the ground. The weight of the wheat in store, and the temporary arrangements underneath combined to produce the disaster. It is a building about 180 ft. long and 52 ft. wide, and the accident will cost the company somewhere near \$1,500 to put it in repairs. But few of the timbers were broken, and it is thought that much of the material can be used for repairs.

#### SUTTER.

**DR. CHANDLER'S RANCH.**—Marysville Appeal, July 23: In the course of a drive in Sutter county yesterday a reporter called at the ranch of Dr. Chandler. The doctor has an extensive vineyard, covering 50 acres. He grows grapes entirely for raisins, and cultivates mainly the Muscatel and the small seedless grape, which when dried makes the so-called "currant" of commerce. He has for a week past been shipping early Muscadines and White St. Peter's. The yield of grapes for raisins will be only fair on the doctor's place this season. His fine almond orchard is looking well, but the yield of nuts this season will be light. The doctor thinks that oranges cannot be successfully grown in this section; there is too much frost. The trees succeed in the gardens of this city, he thinks, because to some extent protected. The olive is in his opinion better adapted to this soil and climate.

#### TULARE.

**THE FAIR.**—Delta, July 21: Throughout the entire county an active interest is manifested in the organization of a fair association, and all that is now necessary is some prompt action on the part of Visalia. The desire to assist in the enterprise amounts to eagerness, so anxious are the people for something of the kind. There is much fine stock in the country, and especially do stock-raisers desire the association to be formed. Subscription papers will be circulated in Visalia and vicinity the coming week, to test the feeling of the people, and it is a safe prediction that there will be a liberal response. As merely a speculation, the subscription to stock would be a paying investment, to say nothing of the advertising the county would receive in all parts of the State. Tulare county has never put forth earnest efforts to appear before the world in a very favorable light, and persons with money to invest are ignorant of the great advantages this county possesses. There is no better way of letting the country know what this section is than a fair.

#### YOLO.

**THE GRAIN YIELD.**—Democrat, July 23: Yolo county has a large acreage of grain this year, equal to, if not greater, than former seasons. Owing to late rains the winter-sown was late, but fortunately for it the months of May and June were cool and very favorable, so that the farmers became sanguine of good crops, even from this sowing. On some of the high or hilly land there has been a perceptible falling off, in the way of shrinkage, of from 5% to 10%, but this is by no means general, and rather confined to specific localities. Most of the grain on the plains proves to be of good shipping quality, and although six weeks ago many complained bitterly of the prospects, since threshing commenced the majority have been very agreeably surprised. From the information gained by conversing with farmers from all sections of the county, it is evident that the yield is fair, and averages well with former years. And grain buyers themselves do not complain at the average quality of the wheat. The only thing to be regretted is that the price is not as fair as the quality of the yield.

**MILDEW.**—We are informed by Mr. R. B. Blowers that he has, in company with others, examined a great number of vineyards in this county, and finds many of them affected with mildew. Mr. Blowers says sulphur is the best remedy for this trouble, and advises the use of 20 or 50 lbs. of sulphur to the acre. These who have taken this precaution are not troubled with the mildew.

#### NEVADA.

**MEAT SHIPPING.**—Reno Gazette, July 20: C. Derby and Morris Cohen went to Winnemucca yesterday to start up their meat shipping establishment. Mr. Cohen will give the Winnemucca business his personal attention and see that it is run in a business-like way. They have 350 head of cattle in the corral, and if the weather is cool enough they will begin to kill to-morrow. They cannot kill when the nights are hot because the meat will not bear shipping until the animal heat is all out. They will kill 40 head a day to start. The firm is Zimmerman, Strouse & Co., and consists of Louis Zimmerman, Mark Strouse, Chancellor Derby and Morris Cohen. They have four markets in San Francisco and sell 200 beefs a week. They will not try to dispose of their shipments to jobbers, but will sell themselves at retail. They think they will ship some from Reno this fall. The rates from Winnemucca are \$155 per car load, and from Reno \$135. There is a difference of over 12 hours time in favor of Reno.

**THE STATE FAIR.**—The trustees of the N. S. A., M. & M. S. met in Secretary Fish's office to-day. They decided that the fair of 1881 should commence on Monday, October the 10th. The programme is not yet complete, but will soon be handed to the printer. The society will hang up \$5,650 in the speed ring, which is much above the average.

#### European Wheat Prospects.

We glean from our English exchanges some statements concerning wheat prospects on the continent of Europe. It may be said in a general way that England will have a good average crop, and that there is no general failure in any wheat region. Nor will there be any great excess as there was last year in the United States. The prospect is for enough wheat at a little higher average value than during the last year.

Throughout southern Europe cereal crops are, with few exceptions, in a very satisfactory condition. In a majority of districts there will probably be considerably more than an average harvest. It is only in Portugal that the yield promises to be below the average. In Spain and most parts of Italy the promise is satisfactory; in Lombardy, Greece and most parts of the Balkan countries, highly satisfactory. In the lower parts of Bulgaria, Servia and Roumania, however, the spring floods have done great damage. The excessive rains and floods in Moldavia have so injured the crops that only half the average yield is expected.

In Central Europe generally there is promise of a satisfactory average harvest. In Switzerland, the result is expected to be considerably in excess of the average. In Germany, the only provinces where the yield will fall sensibly short of a fair harvest are East and West Prussia, the falling off being attributed to a wet autumn, a severe winter, and a cold, damp spring. From Russian Poland, too, owing to the same causes, the harvest will probably be considerably below the average. In Saxony, Thuringia, and some other parts of Germany, the so-called English variety of wheat (*Triticum turgidum*) has done badly, but the native variety (*Triticum vulgare*) has thriven well.

In western Europe, including France, Belgium and the Netherlands, the cereal crops are generally in a very satisfactory state. It is only in some parts of southern France that the yield promises to be below the average. In Holland, on the other hand, the prospect is highly satisfactory, considerably more than the ordinary yield being anticipated.

As regards eastern Europe, the harvest in Russia will be very unequal in different parts, but the general result will be an average harvest. In several governments the severe winter has killed the seed, and the spring-sown crops have progressed but slowly; but from most districts the reports are satisfactory.

Taking Europe as a whole, the harvest of the present year promises to yield more than the last average. This result will, however, be in part due to the fact that the area sown with cereals is larger than the average for some years past.

#### San Joaquin Valley Fair.

An extra effort is being put forth by the managers of the San Joaquin Valley fair to make this year's exhibition at Stockton a notable success. The Stockton Independent says: The coming fair of the San Joaquin Agricultural Association will undoubtedly prove the most brilliant ever held in the county. The directors are full of energy and are continually adding to the buildings, fixing the ground and improving the track. There is still much to be done, although the present accommodations for the fair surpass those of any other place in the State.

During a recent visit to the grounds it was learned that the stables now number upwards of 200, each 12x14 ft, with an awning protruding several feet over the door. The building for agricultural implements is 175x80 ft., two stories high, and equal to any on the coast.

During the past 12 months much time and money have been spent upon the track, and it is now considered the safest and fastest track in the State. At present there are daily working over 50 horses, which makes it quite interesting to visitors.

This year the speed programme accommodates everybody—long and short distance runners, trotters young and old, fast and slow, walkers, etc. The premiums and purses are very large, in fact nearly double those of any other district fair in the State. The society hangs up more money in purses than the State fair, and already feels the effect of so liberal a programme. Leading turfmen from all parts of the State are daily communicating their intention of taking part in our coming fair.

**THE GLOBE IRON WORKS.**—The Globe Iron Works of Stockton, John Caine, proprietor, is driving work along at a rapid rate, and is furnishing the iron work for a host of valuable machinery. Not the least interesting are the combined harvesters, which cut, thresh and sack at a single operation. Of the Houser pattern there have been 13 built, and all are in operation. Of the David Young "Centennial" pattern, 7 have been sent out. This machine offers to cut, thresh and sack grain for \$1.25 per acre. These combined machines are found to work effectively when the growth of grain is fitted for their operation.

**PATENT RIFLE.**—Chas. Slotterbeck of Lakeport, Cal., is manufacturing his patent breech-loading rifles to order, with telescope sights, for \$125 each. They are a highly prized firearm.

#### News in Brief.

SAN BENITO property is assessed this year at \$4,128,741.

INYO county assessments this year foot up \$1,057,395.

COAL has been discovered about eight miles up the Palouse, W. T.

A CHOTEAU (Montana) merchant has shipped over \$100,000 in furs this season.

SOME farmers in Kern county are overrun by the rabbits. One man shot 300 in a week.

AN investigation into the management of the U. S. Branch Mint of this city is in progress.

THE enterprising town of Redding, at terminus of Northern Pacific railroad, has a \$10,000 school-house.

THE total assessed value of property in San Diego county this year, after making all deductions, is nearly \$7,000,000.

THE foreign Ambassadors refuse the Porte's request to delay the cession of the zone of the ceded territory to Greece.

GRADING on the Eureka and Colorado railroad is to be commenced at once. There is a large force of engineers in the field.

THERE are now more men at work in the mines of the Gold Hill section of the Comstock than at any other time for the past three years.

THE Napa Board of Equalization has denied the application of the railroad company for a reduction of its assessment in that county.

It is estimated that as much as 1,000 tons of freight intended for Montana, will lay over at Bismarck this winter for want of transportation facilities.

A SURVEY is being made for the route of the proposed narrow gauge railroad from Silver King to the railroad. At last accounts they were at Florence.

THE news from Tunis and Algeria is very conflicting. Some reports represent that quiet is returning, and others speak of new outbreaks, actual or intended.

IN spite of the comments of the Italian ministerial press, there are persistent rumors, in well-informed circles, of an understanding between England and Italy.

ALBERT KOSTER, aged 40 years, living two miles below Calistoga, committed suicide Wednesday night by shooting himself. He was married only one week ago.

THE San Francisco mountains, New Mexico, produce snowy agates, garnets and chalcodony, with an occasional emerald as pure in brilliancy as the best Russian product.

THOUSANDS of fish are dying in Donner lake, and the shore of the same is literally lined with their dead bodies. It is said that some miscreants are killing them with Giant powder.

THEY are having race difficulties among the laborers on the California Southern railroad between Chinamen and Mexicans. The last trouble occurred near San Diego.

THE Union claims that San Diego county has more miles of railroad than any county in the State. During the present year nearly 100 miles will be added, making about 250 miles in all.

THURSDAY, at Huntsville, on the Dayton railroad, W. T., a brakeman named James S. Murray fell off a construction train, and two cars passed over him, mangling and killing him.

THURSDAY a salmon was caught at Eagle Cliff, on the Lower Columbia, which is the largest fish ever captured in the river so far as known. It weighed 84 lbs. when dressed and filled 69 cans.

JUDGE HASTINGS is building a wine cellar at Cordelia, Solano county, of about 150,000 gallons capacity. There will be 83,000 gallons of storage tanks and 24,000 of fermenting tanks.

THE Texas Central railroad will be completed to the Rio Grande by the 1st of December. A large force of engineers are to be set to work to survey a route through Mexico and Arizona.

THE case of Master Halsey of the Rodgers, court-martialed at Vallejo, has been decided, after two weeks of daily sittings of the court; but the findings will not be made public for some time.

TWO fishermen named William Lewis and V. F. Finley, were drowned Wednesday near the Astoria cannery, on the Lower Columbia, but their bodies were not found. Both men leave families.

THE Governor of Missouri will offer the largest reward the law allows for the capture of the train robbers. He censures the citizens and authorities of the county in which the robbery occurred.

THE merchants of Prescott, Arizona, are about to unite in the building of a powder magazine some distance from the city limits, and thus guard against a calamity such as that which befell Tucson.

TWO more libel suits for \$100,000 each have been entered against the Denver Tribune Publishing Co. There are now four suits for an aggregate amount of \$400,000 filed against the Tribune. The suits are based on the Tribune's attacks on ex-Governor Evans and the management of the New Orleans road.

WHILE an emigrant train was stopping at Soda Springs, Utah, a few days ago, a boy eight years old, got hold of a shotgun and accidentally fired it off. The charge killed one little girl outright, mortally wounded a baby, which soon died, and injured the mother of the children and another little girl.





### In Memory.

As a guest who may not stay  
Long and sad farewells to say  
Glides with smiling face away.

Of thy sweetness and the zest  
Of thy happy life possessed  
Thou hast left us at thy best.

Warm of heart and clear of brain,  
Of thy sun-bright spirit's wane  
Thou hast spared us all the pain.

Now that thou hast gone away,  
What is left of one to say  
Who was open as the day?

What is there to gloss or shun?  
Save with kindly voices, none  
Speak thy name beneath the sun.

Safe thou art on every side,  
Friendship nothing finds to hide,  
Love's demand is satisfied.

Over manly strength and worth,  
At thy desk of toil, or hearth,  
Played the lambent light of mirth,—

Mirth that lit but never burned;  
All thy blame to pity turned;  
Hatred thou hast never learned.

Every harsh and vexing thing  
At thy home-fire lost its sting;  
Where thou wast was always spring.

And thy perfect trust in good,  
Faith in man and womanhood,  
Chance and change and time withstood.

Small respect for cant and whine,  
Bigot's zeal and hate malign,  
Had that sunny soul of thine.

But to thee was duty's claim  
Sacred, and thy lips became  
Reverent with one holy Name.

Therefore, on thy unknown way  
Go in God's peace! We who stay  
But a little while delay.

Keep for us, O friend, where'er  
Thou art waiting, all that here  
Made thy earthly presence dear.

Something of thy pleasant part  
On a ground of woe cast,  
In the stiller waters glased!

Keep the human heart of thee;  
Let the mortal only be  
Clothed in immortality.

And when fall our feet as fell  
Thine upon the asphodel,  
Let thy old smile greet us well,

Proving in a world of bliss  
What we fondly dream is this,—  
Love is one with holiness!

John G. Whittier, in Atlantic.

### The Three-Toothed Rake.

I suppose the girls of Millburn would all resent the imputation, if I should say that any of them envied little Phebe Bird when she set up housekeeping with Ridgway Dayton, on the finest farm the country afforded, in a house that was in thorough repair and fully furnished. It was an establishment to be proud of, and people said if that young couple did not prosper it would be their own fault.

"There, Ridge," said Uncle Aleck, "is your farm, and stock, and house all paid for, and now I shall do no more for you. If you don't hoe out your row, you'll have to starve. I am going abroad, so I shan't be coming around to advise you and scold you, and I expect it will come pretty tough with you for awhile. But Phebe is a sensible girl, I am happy to say, and I think I leave you in pretty good hands."

Ridge secretly felt rather pleased at the prospect of being "left," but he did not say so. Uncle Aleck was an excellent man to provide, but he was a little sharp in his way, as the young man had occasion to know at times in his juvenile years. The old gentleman himself had been reared under a system which might be formulated in the couplet—

"A boy, a dog and a walnut tree,  
The more you thrash them, the better they be."

The system had been greatly toned down in the case of his orphaned nephew, but Ridge thought it strict enough.

His choice of a wife had pleased his uncle as well as himself, for Phebe was a very domestic girl as well as a cultivated one, and it was the general verdict that "both had done well." Still Aunt Cynthia did tell Ridgway she wished he "had got a wife who would make him stand around a little more."

"Oh, she'll make me stand around enough," laughed Ridge. "You need not be concerned about that."

"She'll have need to," said Aunt Cynthia, nodding her head sagaciously. She had known his manner of life from his youth up, and said he was always a very good boy if he only had a steady hand with him to keep him in order. But Ridge believed "aunts and uncles never did appreciate a fellow." Now it was worth while to have the worshipful direction of such a sweet, appreciative little soul as Phebe Bird,

and he did think himself a lucky fellow, and he was.

A stent, capable hired man was engaged at the outset, who understood his business, and, appropriately, received good wages. So the cares of life sat very lightly on the young farmer's shoulders, though he felt the responsibility of Atlas when he shouldered the world, having not only his own, but his wife's domain to look after.

Just when the serpent entered into this little Eden could not distinctly be told. I have no doubt he "wired in and wired out," among the vines and shrubbery of that "first garden," for sometime before he presented himself to our first mother.

If Ridgway was a little exacting and very particular, Phebe was very self-sacrificing and painstaking; so there was little jar in the machinery. He thought strict order and system about work a very excellent thing—for other people—especially for a man's wife. Breakfast at 7, dinner at 12 and supper at 6, always on the table at the minute, was his standard, but, of course, if he could not be on hand just at that time, it was only necessary to keep things hot and at their best for a half or three-quarters of an hour, and it would be nice for her to fill up the time with sewing, or some little thing of that kind. It need not be lost time to her by any means. Of course a man's work is the important work of the world always.

Ridge, from his inexperience in household affairs, had imbibed a theory that if a woman is but economical, it costs "next to nothing" to support such a small family "on a farm." He was astounded at the cost of sugar and coffee and tea and the dozens of little outgoes every week. It must be there was something wrong somewhere. All his pet theories were getting knocked in the head. In vain Phebe mildly reasoned with him; showed him how long supplies could reasonably be made to last; proposed retrenching on cake for tea, but, of course, he would not hear of that. He liked cake. She never spoke of retrenching on cigars, though some women would. But all her "argufying" was without avail.

"A man convinced against his will  
Is of the same opinion still."

Somehow, the more Ridge thought about it, the more convinced he was that his wife could hardly be a wise manager. He was disappointed because the money did not pile up quite as he expected. That was another demolished theory which considerably set him back. But then he remembered an old saw which says, "a man must ask his wife's leave to thrive," and he was somewhat comforted. Phebe was young. She might yet be induced to change her manner of doing business. Perhaps he had been too indulgent himself, and had provided too lavishly for the supposed wants of the household. He might, and indeed he must, turn over a new leaf. In other words, he would tighten the thumb screws a little and see if the effect on his victim would not be salutary.

Phebe had grown very reluctant to ask for what was really needed in the house, so sure was she of that adverse criticism so intensely humiliating to a woman of fine nature. If water will wear a stone, so will perpetual petty fault-finding eat away all home happiness. If Phebe had been more self-asserting in the start it would have been far better. She could have educated the young man into a reasonable householder. But, instead, she took a very wrong course, and, by dressmaking in over hours, contrived to earn a little money. This went to eke out the scanty allowance her husband thought so munificent for the expenses of "so small a family."

When supper was over Ridge harnessed up and drove to the village in his fresh cool suit, to get the evening mail. It would have been a rest and refreshment to Phebe to go too, but there was the supper to clear away, the milk to set, little Aleck to care for, and Ridge would have thought all things going to wreck and ruin if she should so desert the ship.

"Uncle Aleck is at home, Phebe!" said Ridge one evening in great excitement, as he returned with a letter. "He is coming on here next week. Now I need not tell you how important it is for all of us that we make a good impression upon him. My uncle is a good man, but he has his peculiar notions. He was always lecturing me on economy. If he gets the impression that we are living extravagantly, he may cut me off with a shilling. Try to have little Aleck at his best, and, if possible, keep him from crying. We must study to provide his favorite dishes, for he always feels crusty if his meals do not please him. I have laid by a little money, though not half what I expected—our living expenses have been so high; but I know Uncle Aleck will be gratified to know I have saved even a little."

"There are a number of things we need," suggested Phebe, wearily. "I suppose your uncle will always prefer white sugar in his coffee, and it is much the best for everything. We have none. And the coffee pot is so leaky I can hardly make coffee in it; and the teakettle is a great trouble for the same reason. They really ought to be mended."

"And the same of half the tinware in the house, I suppose," he said with a lofty smile, as he lighted his cigar.

"It is very true," said Phebe, with no smile either.

"Now, don't it seem to you, Phebe," he said, argumentatively, "that three years is a very short time for tinware to last? I think my Aunt Lucinda has pieces she bought 40 years ago."

"Tinware is not what it used to be."

"I know women say so, but after all it depends a great deal upon the way it is used." When upon followed a discourse on the use of pans and basins, that was supposed to effectually settle the question about the necessity of her particular stock being mended.

This modern Pharaoh still persisted in demanding bricks without straw; so with the very scantiest resources, Phebe set about preparing for the dreaded visit. She would have liked a little girl to help take care of baby, but her husband objected on principle. It might look extravagant to Uncle Aleck, and the board of such a girl would be more than her wages.

It was a beautiful day in June, and the country at its best, when Uncle Aleck came. He gave his nephew a hearty hand-shake, and looked over his added pounds of avoirdupois with laughing eyes.

"Farm life hasn't worn you down, I perceive," he said, as he stepped into the buggy.

The supper was excellent, the house like a new pin, baby sweet and fresh in clean, white tucker, and there was only one shadow that those keen grey eyes detected, and that was the worn and faded look of the young mother. It filled him with solicitude, and gave him real pain as he feared his young niece might be in failing health, and his poor boy be left early with only a memory and a pictured face, as he had been these many long years. One thing which had so drawn him to Phebe, was her resemblance to that little ivory-painted picture he bore with him over land and sea. He wondered if there was not a cause for her pallid cheek that might yet be discovered and remedied. Full of this intent, he kept a sharp lookout from under his shaggy eyebrows, as he walked around the premises. The farm was kept up to a state of high thrift and neatness by the hired man, and Ridgway got the credit of it. But indoors there was a scrimped, unhandy look about most of the working implements, which did not escape observation. He saw Phebe tinkering her tins with bits of twine drawn into the holes, and he heard Ridge expostulating with her in the kitchen about some supplies she needed. He sat through a Monday in the cosy sitting-room, where he could hear her toiling at the wash-tub, and hurrying to get up the meals, while she attended to the neglected baby when she could catch a moment's time. His indignation was at white heat by night, and he felt that he could have canonized "that graceless scamp," his nephew, with pleasure, for permitting such a state of affairs.

They walked out after tea and looked at the growing crops, Ridgway feeling unusually well satisfied with himself and all his doings.

Uncle Aleck's first remark hardly chimed in with this sentiment.

"Didn't it ever seem to you, Ridge, as a rather one-sided arrangement that you should have a stout man to help you out-of-doors, and your wife no help at all indoors? 'Turn about is fair play.' Suppose now that you try the business for three years alone, and let her have the help."

"Oh, uncle," expostulated Ridge, "there is steady work for two men on this farm the year around."

"And steady work in the house for two women; and yet you have let a young, delicate wife carry it on single-handed, and, as far as I know, have never remonstrated with her on the slow suicide she was committing. Such havoc as three short years have made! It ought to make a man ashamed, if his feelings are not ironclad, to so overwork a woman he has vowed to love and cherish."

Ridgway reddened at his uncle's plain-dealing, but he was not disposed to admit that he was the one so much to blame.

"I tell you uncle, Phebe has not the faculty of getting along with her work that some women have. It takes her longer than it need to to get every meal. I am sometimes almost surprised."

"It certainly does take her longer than it need to. I have plainly seen that, and now, young man, I'll teach you a lesson. You are to rake hay to-morrow, I believe. I'll fix you a rake, and I'll see you use it." And the irate old man smashed all but three teeth out of a good rake and handed it over to his nephew.

"There's your implement, and I'll come out and see how you get on with it. There'll be no shirking, either. Everything I have seen of your in-door home conveniences has been just that of order. Your wife works with a three-toothed rake from morning till night. It is good to be saving and lay up money, but not if you must grind it out of the dearest to you. No more new rakes for you until I see a different order of things in the house! Let Phebe make out a list of all she needs as we are to gether this evening, and then do you draw a check and foot the bill."

"Why, uncle, you never kept house. You know nothing of a woman's demands. It would sweep every cent I have."

"Let it sweep then. Money gotten dishonestly as that was bad better go to the place it was stolen from. You have been robbing your wife of her life-power, her health and her happiness these three years. It is time you begin to make reparation. I have preached economy to you, it is true, but I never preached dishonesty. If you can't keep your wife in a decent way, break up and let Phebe go back to the good home she came from. You can go into a store in the city and make your own living."

What a desolate picture it was! Leave his pleasant home, his wife and boy, and take up with the old solitary lodgings in a boarding-

house! He felt lonesome at the bare suggestion! Uncle Aleck went on.

"I should like to give your wife this piece of advice: The next time you even hint about what is needed in the housekeeping, and what is not, and suggest retrenchment here and a cutting off there, I want her to walk out and give orders to the hired man; tell him how much grain he must give the horses, how much salt to the sheep; how he must scrimp the wheat when he sows it, and the corn when he plants it. She may tell him to tie up the broken harrow with a string, and not go to the expense of getting it mended, and shall insist on his going ahead if the plow handle is broken—it is too trifling a thing to stop the work for that. All the fault I find with Phebe is that she did not do this long ago. If she had given you a good setting down on the start, and taught you to mind your business, it would have been a blessing all around."

It was pretty plain dealing; but it was a great eye-opener to the young man. He sat upon the piazza for an hour in the moonlight and thought, and thought. Whatever his meditations were, one thought was uppermost—he must gain ground with Uncle Aleck or his chances were slim. That little talk had, as Mark Twain would say, "knocked more conceit out of him than a fit of seasickness." "Humble pie" may not be very palatable, but it is sometimes just the diet to bring one around right. Slowly and soberly the young man "came to himself," and then the foremost thought was—"What a wretch I have been. Can Phebe have a spark of love or respect left for me?"

There must have been something good in the youth, or that loyal heart could not have held fast in her affection for him through thick and thin, as she had done. Uncle Aleck's visit was a godsend to her. He saw a new order of things established in the house, and hung up the three-toothed rake in a conspicuous place in the barn as a standing object lesson. Phebe scarcely knew how to get meals in her renovated kitchen, but her face was as bright as her new saucers.

Phebe soon won back her roses, and went about her duties blithe as a singing bird. She would always laughingly head her husband off whenever he began to allude to the old times, and "set down naught in malice," but charged the whole to "our youth and inexperience."

When Uncle Aleck came back the next year to the christening of the "little Caroline" he made out to her the deeds of some valuable property, and added a codicil to his will in which the ivory picture was bequeathed to this namesake of the fair lady who, to him, was always young and beautiful.—J. E. McConaughy, in Country Gentleman.

### The President and his Family.

During the two weeks that the President has been lying upon his couch of suffering, nothing has been so touching—not even his brave resistance to death—as the love which the entire family has exhibited. Each one seems more concerned about the others than he does about himself, or she does about herself. The first thought of the President when he fell was of his wife and mother, to the former of which he directed a dispatch asking her to come to him, and concerning the latter he forbade any information being conveyed to her that would cause her unnecessary pain. The brave little wife—just off a bed of dangerous sickness—received the news of the attempted assassination with the deepest grief, but with that calmness which comes of the sublimest fortitude. She started for Washington, and upon her arrival was told that she must be perfectly calm as she entered the chamber of her prostrate husband. She replied that she would be entirely so, and stifling the tears that were ready to burst forth, she was. She entered the room as bravely as a soldier ever went into battle, and throwing her arms about her husband, and kissing him, said: "I am here now; it is all right." After 15 minutes of private intercourse—in which no one knows what was said, and has no right to know—the considerate man insisted upon the retirement of the fatigued lady. Soon after she left the room, the wife of the Postmaster General entered, and the President immediately inquired if she had seen "Creta."—Mrs. Garfield's name is Lucretia,—and upon being informed that she had, he anxiously enquired how she bore it, adding that he would rather die than have her again attacked with sickness. The President then fell asleep, and upon waking, he asked Mrs. James where his wife was. She replied that she "was near watching and praying for her husband." He said: "Go tell her to undress and go to bed, and if she will, I will turn over and go to sleep, and will sleep all night. If she will do as I wish, I will sleep all night." Mrs. James conveyed the message, and was instructed by Mrs. Garfield to say that she was then undressing; and the President turned over and immediately fell into a sound sleep. All of his anxiety is for the wife, and all hers is for the husband. His dear old mother, when she heard the news exclaimed: "My baby, my baby! Who could shoot my baby?" These things go to show that the home of the Garfields is a pure home, a home of discipline and a home of love—just what every home should be. Parents should never cease to be lovers, and children, whatever their age, or whatever their position, should never fail to be considerate of the claims of parents.—Western Rural.



## Chaff.

THE only real maizey dance is the Indian green corn dance.

THE tired man who lies abed in the morning is not attired man.

SOME people are so nervous that they cannot even rest assured.

WHAT is the most becoming dress for the earth? The skirt of a wood.

A BARBER and a surgeon don't differ much. One lives by his heads, the other by his heels.

WHEN the pilgrims first landed they fell on their knees, after which they fell on the aborigines.

MEN are naturally charitable, but they have a bad habit of feeling everywhere for the poor except in their pocket-hooks.

THE Louisville authorities have resolved to put down rowdiness, even if they have to arrest every policeman on the force.

A WESTERN humorist, who is courting a girl named Furlong, says it is an eighth of a mile around her waist. He must be a rood fellow.

A CANADA father discovered a pit containing 500 skulls. Must have been the site of an ancient theater to have so many dead heads in the pit.

A KIND writer says: "You can trust a man who loves a horse or a dog." A livery stable man has tried it, and finds there is no money in it.

DOCTORS disagree. Some say whisky hardens the brain; others say it softens it. Meanwhile people without brains will keep right on drinking it, as it don't make an atom of difference to them, not an atom.

LAST week the *Modesto News* gave a handsome puff to a farmer near that town for his superior watermelons, and the very next night the patch so praised was invaded and hundreds of melons stolen or destroyed. The farmer wants no more advertising.

A BETTER *bon mot* than this of Lord Beaconsfield, when near his end, has not lately been reported: He was intimating his purpose to provide for such of his servants as had been only a short time in his service. "As for the others, it will not be necessary to make any provision, as they have already done so for themselves."

A DRYGOODS clerk, who had the most outlandish way of walking, had to go to a distant part of the store to find some goods which a party of feminine customers desired to see. "Walk this way, ladies," he called, as he swung himself off. "But we can't walk that way," cried a pert miss; "we never learned that style, you know."

SWEET simplicity sometimes contains the sharpest sarcasm. A lawyer said to his client, an honest farmer, "Did you go to your opponent and try to settle with him?" "I did, your honor," was the reply. "And what did he say?" "Why, sir, he told me to go to the devil." "And what did you do then, sir?" "Then I came straight to you."

THE CALIFORNIA EQUESTRIENNES.—Horseback riding should be taught the little girls. It is a graceful and healthful accomplishment, and necessary in future life to render a woman able to care for herself. Passing the gate lately at the entrance to a farmhouse which stood a quarter of a mile back from the road, we saw a young woman riding rapidly down the lane with the intention, we supposed, of intercepting the stage. But she made no sign, and we drove on while she bent in the saddle and opened the gate. Before we had proceeded far there was a clatter of hoofs, a cloud of dust swept by, and she galloped ahead out of sight. Going for the doctor, somebody suggested. Several miles along we saw two horsemen approaching. They came fast and furious. One was our fair horsewoman about three strides in advance of a young chap, who was doing his level best with his California half breed. She rode like a Centaur or Phil Sheridan. There was a rush of streaming ribbons and curls, a wave of the whip hand as she looked back with a smile, and the stampede disappeared in a whirly-gust toward the hills.—*Santa Rosa Republican*.

LAUREL GLEN FRUIT FARM.—We have received a card with the above attractive name at the head of it. The announcement proceeds to state that the location is beautiful, game abundant, drives delightful, all of which we fully believe. It is then suggested that rusticators will be furnished with board, etc., during the summer and hunting season. We have no doubt that the board will be good, for Laurel Glen fruit farm is at Soquel, Santa Cruz county, is owned by Isaac Dakin, and the home establishment is presided over by our contributor, Laura J. Dakin. The moral of the above statements is obvious.

ONLY AN IDEA.—James Parton, of the *North American Review*, says: There is no work done in the world which expends vitality so fast as writing for the public. It is a work which is never done. It accompanies a man upon his walks, goes with him to the theater, gets into bed with him, and possesses him in his dreams. If he stoops to kiss his baby, before he reaches the requisite angle a point occurs to him, and he hangs in mid-air, with vacant face and mind distraught. "What's the matter?" says Mrs. Emerson in the middle of the night, hearing her husband groping about the room. "Nothing, my dear; only an idea!"

## YOUNG FOLKS' COLUMN.

## "What Robin Told."

How do the robins build their nest?  
Robin Redbreast told me.  
First a wisp of amber hay  
In a pretty round they lay;  
Then some shreds of downy floss,  
Feathers, too, and bits of moss,  
Woven with a sweet, sweet song,  
This way, that way, and across:  
That's what Robin told me.

Where do the robins hide their nest?  
Robin Redbreast told me.  
Up among the leaves so deep,  
Where the sunbeams rarely creep.  
Long before the winds are cold,  
Long before the leaves are gold,  
Bright-eyed stars will peep and see  
Baby robins, one two, three:  
That's what Robin told me.

—Harper's Young People.

## Little by Little.

"Uncle," said Tom one day, "it seems to me your things don't look as well as they might." They were in the garden; and "the things" the boy had his eye on were the currant bushes.

"I don't expect they do," replied his uncle; "I'm no great hand at a garden. Well, sir, what can you improve?"

"I can try on the currants," said Tom. They want to be trimmed out, the dead wood cut off and the right suckers trained. Don't you ever dig around them and put ashes on the roots?"

His uncle had never done those things; did not know that they ought to be done. He thought, he said, "currants took care of themselves."

"But they can be cared for," said Tom, "and do all the better."

"Suppose you try, boy," said his uncle.

His uncle did not believe much would come of it, but he had reason to change his mind. Much did come of it. All at once, it seemed to him, for time goes fast with an old man, his hedges were loaded with fruit, fine large currants, such as the garden had not seen for many a day, if ever before. People, when they walked in the garden, exclaimed: "What splendid currants you have!"

"That boy knows how to take care of his gold dust," said his uncle to himself, and sometimes aloud.

Tom went to college, and every account they heard of him he was going ahead, laying a solid foundation for the future.

"Certainly," said his uncle, "certainly. That boy, I tell you, knows how to take care of his gold dust."

"Gold dust!" Where did he get gold dust? He was a poor boy. He had not been to California. He never was a miner. Where did he get gold dust? Ah! he has *seconds* and *minutes*, and these are gold dust of time, which boys, girls and grown-up people are apt to waste and throw away. Tom knew their value. His father, and minister, had taught him that every speck and particle of time was worth its weight in gold, and his son took care of them as if they were. He never spent them foolishly, but only in good bargains; "for value received" were stamped on all he passed away. Take care of gold dust.

## Bright and Cheerful.

"Why, mother, how bright and cheerful you look to-night! What has happened?"

"I feel very happy, my dear, because my little boy has tried to be good all day. Once, when his sister Katie teased him, and he spoke quick and cross to her, he turned round a moment after, of his own accord, and said he was wrong, and asked her to forgive him. I believe I should grow young and never look tired or unhappy again if, every day, my little boy and girl were as thoughtful, unselfish and loving as they have been to-day."

Here's a grand secret for you, little one. And now that you know how to make mother happy, may you keep her face always full of sunshine.

GETTING UP IN THE MORNING.—The way to get up in the morning is just to do it promptly. The moment you are called, decide at once to rise. Do not wait until mother's gentle voice is tired, and sister Lucy has determined that she will not call you again, and father comes to the foot of the stairs and calls very seriously: "William! Ebenezer! Rebecca!" and you feel that you must rise in a hurry. Do not put off getting up until you can hardly take time to match buttons and hooks, and you cannot find which strings belong to each other, and suspenders snap, and buttons fly off boots, and things are generally crooked. When first you rise, let your thoughts go to God in thankfulness that you are alive and well, and ready to begin another day. Then wash from head to foot with a sponge and cold water, and dry yourself with a rough crash towel, or take a rub with a stiff flesh brush. You will feel quite warm and glowing after this exercise, which is the better for being rapidly performed. Dress so neatly and entirely, to the last touch of shoe polish and the last flourish of the hair-brush, that you need think no more about your dress all day. Be sure to attend to your teeth. They are good servants, and have so much work to do that they deserve to be carefully looked after, not with irritating powders, but with a clean brush, pure water, and occasionally a dash of white Castile soap.—*Young People*.

## GOOD HEALTH.

## False Exercise.

We use this term to express a contrast to natural exercise. Every part of the system requires exercise, and in order that exercise may promote health, it should generally be gentle, not violent. Animals, if left to themselves, take exercise that is general in the main; they run, frolic, kick up their heels, and play fight, and thus set an example for human beings, who contrive methods of partial exercise, and thereby produce partial muscular culture, and sometimes overtax one part of the system, while the other parts have too little activity. We have entered gymnasiums and seen young men struggle to put up dumb-bells, weighing perhaps 100 lbs. Now, this requires a very powerful effort, and tends to wrench the spine and produce an undue exertion of a part of the muscles, those of the chest and loins in particular. Some may say that the gymnast alternates the arms; but we answer by saying that because one strains the muscles of the right arm by excessive lifting, there is no reason why he should strain the opposite muscles by undue lifting with the left arm. If men would lift a pair of dumb-bells weighing, say 10 lbs., one in each hand, and thus make the use of the muscles equal, simultaneous and harmonious, and all within the just limits of power, it would be much better than to strain and struggle to put up one heavy affair.

A great objection to the usual exercises in the gymnasiums is that the chief desire seems to be to outdo everybody else, and only those who are specially well endowed with muscular power make any show at all.

We like what are called "free gymnastics." The horse, the calf, lambs and kids have free gymnastics. \* \* \* Free gymnastics are a series of exercises without dumb-bells, clubs or other apparatus. In this method persons are not obliged to overwork. To practice this let the person stand erect, fill the lungs and strike out first one arm and then the other, then both, then advance one foot and strike out with one hand and then the other, and thus take exercise with the shoulders, arms, back and legs. Persons can thus take abundant exercise and bring themselves to a state of perspiration, and at the same time incur no danger of a strain. In these methods the action of the muscles is harmonious, and may be vigorous or gentle, and always useful; besides, it costs nothing in the way of apparatus or tuition, and can be taken every night and morning and at midday by teachers, students, clerks, literary men, and all girls and women.

A series of such exercises every day would tend to build up the muscular system better than taking irregular exercise at a gymnasium once or twice a week, where one is very apt to be led to over-exercise. When a person is half dressed in the morning, or half undressed at night, he can take exercise that will make the blood fairly tingle in the extremities, relieving the brain and vital organs, especially the digestive organs, and thus promote sleep at night, and growth and vigor during the day. \* \* \*

People as they advance to old age should take easy, active exercise. One who walks considerably, keeps his feet and legs in better condition than those who keep themselves housed up and sit a great deal, or always ride when they can. Nothing shows age more than a tottering step, and he who keeps his legs in good working order by a good deal of walking, manages to keep up a very general circulation, and, of course, promotes the general health, and in this way will avoid many of the pains which age is usually made accountable for. If a man use his bones and muscles as he advances in years, he is not half as likely to fall; or if he fall, to break a bone, because the bones are kept in healthful condition by means of daily exercise. Everybody knows that if the arm be suspended in a sling, from any cause, it becomes soft and flabby. In the same way the bones become weak and brittle by non-use, nature declining to furnish them with food or nutritive support if they are not called into use. If an elderly person can stand well on his feet, he brisk and nimble in walking up and down stairs, he not only has more comfort and independence, but appears better, more vigorous and younger, and isn't half as liable to accidents as those who, by taking but little exercise, become clumsy, awkward and ungainly in their walk.—*Physiological Journal*.

DECAY OF THE TEETH.—The acids which cause the decay of the teeth are conveyed in the secretions of the gums and the mucous membranes of the lips and cheeks, and the usual points of attack are in the interstices and the grooves in the facial walls of the teeth. The calculary nature of the saliva is antagonistic to the acids, and preserves the teeth from their dilapidating influence. Teeth are protected from disease by the following conditions: Their regular shape and order, that the situations for the deposit of acids be as few as possible; the conservation of the teeth from noxious influences by constant brushing; the healthy structure of the tooth itself, and of the mouth generally. Heider observes that the yellowish white teeth are less subject to the attacks of caries than those of a bluish shade, the enamel of the former being much harder, and the molars have been found to contain more mineral substance than the incisors.

## DOMESTIC ECONOMY.

## Cooking.

EDITORS PRESS:—Very often during the last year when I have taken up a paper, I have found one or more articles about cooking; and sometimes I have thought the opinions advanced were not quite just, but too hard on women cooks. One writer declares there is very little good bread made in the world, or anything else that is as scientifically compounded as it ought to be, and demands that cooks shall weigh all their ingredients so as to have food prepared according to the laws of health. There are so many different sized cups, he says, that a recipe calling for measures by the cupful is of little account, and if followed will rarely make a healthy article, as there will be too much of one thing and not enough of another. In short, "women go by guess," and their cooking is simply experiments for which stomachs must suffer. But now suppose they all weigh these little matters, and go to the cooking schools and learn all the best ways. What will the result be if men still go on adulterating almost every article they are expected to use? Every little while there are startling developments about sugar, syrup, yeast powder, cream of tartar, soda, butter, honey, spices, etc. One chemist makes from a certain quantity of sugar, two sheets of tin. Another tells us that sugar and syrup are now manufactured from a certain acid and old rags. And when sugar is brought from the East and then sold as cheap or cheaper than that manufactured in California, I am suspicious of it. If it is white granulated, I am afraid of ground glass; if it is brown, I think of acids and rags; so I choose sugar made in our own State. The same with syrup; not long ago our grocers began to advertise an Eastern syrup called "Golden Drip." It was very thick and clear, but not very sweet. What was it made of, sugar cane or acid? I want no more of it at least.

As for soda and cream of tartar, the cheapest is very often the poorest, and if you can get the pure in no other way, the druggist will be sure to have it.

But what won't man do next, if he makes the honey and the honey-comb so cleverly as to deceive, and fair looking butter of tallow?

Now, after adulterating so many articles of food, for I have not mentioned all, they give us such poor cooking utensils, such shoddy spoons and tinware. I can remember how long my mother's tin plates and pans lasted; they are gone so quickly now-a-days. I think we must go back to wooden bowls and pudding sticks. Supposing in all our recipes, weights were used instead of measures, would they be any more likely to get printed correctly, unless there was a cook to superintend the editing of them?

What funny mistakes are often made, and what messes we should get if we followed them. For instance, in two of our best papers I read this recipe for drawn butter: "Take one tablespoonful of butter, one teaspoonful of flour and one of water or milk." Instead of teaspoonful of flour it should be tablespoonful. Another says to can strawberries: "Take 3 lbs. of berries to 7 lbs. of sugar." It evidently means 7 lbs. berries to 3 of sugar.

Other mistakes I have seen, yet I like a paper to have recipes in it; you are sure to get ever so many good things to a few typographical blunders, so I think I will contribute a few recipes. An Eastern lady told me how to make

## Bean Porridge.

And as old-fashioned things are fashionable now, you will like bean porridge. Take a heef bone and a quart of beans, put on to cook early; when well done, take out the bone, leaving the bits of meat, and thicken with a little graham flour. Boil a few minutes longer, and serve; it is excellent. Be sure and put in water enough at first.

Mrs. M. J. Locke told me how to make a delicious soup, and as her poor dear hands do not write much just now, I will tell you. Early in the morning put on a soup bone in cold water; after it has cooked awhile take vegetables and pare them, one parsnip, one carrot, one turnip, one potato, one onion, yes, one of each kind. When they are all well cooked stir in just a little graham or corn meal to give it consistency, then set your colander over your soup dish and pour all in, when the nice soup will run out, leaving the meat and vegetables to make a hash or to be eaten cold.

Soquel, Cal.

L. J. DAKIN.

## Canning Peas and Beans.

EDITORS PRESS:—Will some of your readers please give recipes for canning peas and beans, and oblige.—Mrs. B. B. CAPELL, Willits, Mendocino Co., Cal.

STUFFED STEAK.—This makes an excellent substitute for the expensive roast. Select a good round steak, pound, season with pepper and salt, cover with a nice dressing of bread crumbs, roll up and tie tightly with twine. Pour a little hot water into the dripping-pan, add a spoonful of butter, put in the steak and bake, basting frequently.

TO KEEP PRESERVES.—Apply the white of an egg with a brush to a single thickness of white tissue paper; with which cover the jars, lapping over an inch or two. It will require no tying, becoming when dry inconceivably tight and strong, and impervious to the air.





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Saturday, July 30, 1881.

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## The Week.

And now come the fairs. The season will begin next Tuesday, August 2d, with the opening of the Mechanics' fair in this city. This great aggregation of products, manufactures and merchandise set to music and adorned with beauties of nature and of the arts, has become one of the divisions of the year in San Francisco, and serves as a diversion, as well as to draw the attention of the people away from the winds and fogs and dust of August weather. The evenings in the spacious courts and galleries of the pavilion or in the enclosed garden, musical with the play of fountains, is a great relief to the people when the streets are full of weather, and the theatres, lecture halls and libraries have become wearisome to those who frequent them. There is assurance that this year's exhibition of the Mechanics' Institute will be a notable one, and the month from August 2d to September 3d, should be marked by those from the interior who are city-ward bound during the days of the fair.

Another week has left the President of the United States just about where it found him, with a prospect of recovery, but yet a possibility of a decline. Since our last report he has undergone unfavorable symptoms and has apparently triumphed over them. The interest of the people in his recovery continues unabated, and prayers and earnest wishes from a nation attend the surgeons' movements. The end cannot be foreseen, except one looks through the lenses of hope and trust.

The harvest proceeds, and now nearly all tools but those of the thrasher are laid aside. Soon will begin the midsummer vacation of the grain grower and his season of visiting and recreation before the early rains start the plows again.

## Profits in Peaches.

Last year there was sensation enough in apricots one would think to suffice the matter-of-fact fruit grower for a decade; but here is excitement again already, and the peach is the creature of the occasion. All men in the fruit business, either as growers or dealers, say they never saw before what they see this year. Canners and their agents have scoured the country for peaches, have contracted whole crops at above 4 cents per lb., and have then devoted their time to corralling all the peaches which miss them in the country and come on sold to the wharves of San Francisco. Nor do they propose to release the later fruit, but expect to take it as late as it comes. We have heard of a contract for the fruit of one of the leading peach orchards in southern Alameda county at 4½ cents per lb.; and as this is a late ripening district, it is plain that the canners propose to make a season of it.

The price and the eagerness for peaches are so notable that they should be put upon record, as they promise to be of value in our horticultural history. There are several causes uniting to produce the present condition of affairs. In the first place, it is understood that our canners have accepted unusually large orders this year, and are obliged to pursue the raw material to fill them. This argues the increasing popularity of California canned fruit, and is the thing which all have hoped for and some have constantly predicted. Our cans are going into all parts of the world, and the quality is so acceptable that people long to have an abundance of them. Thus, our market is steadily increasing, and the natural result is louder calls upon the canners and increased zeal on their part to secure the fruit. The old time, when the canner acted as the scavenger and took at a low rate what the consumptive demand did not require, has passed away, and we find the canners not only hiding against the local consumer, but actually taking the fruit out of his mouth. This is it which leads the fruit merchants to stand over the dozen or so baskets which the canners have allowed to pass between their drays, and exclaim to their up-town customers: "There never was anything like it in California."

Probably the destruction of the Eastern peach crop this year has had much to do with the exceptional demand for California peaches. Our canners have been prone to warn the peach growers against charging too much for their fruit, else they could use Eastern canned peaches to fill their orders, and the California fruit would go to the dogs. Their sermons are not heard this summer. Their time is occupied in bidding against each other and forcing up the prices, and, wonderful to relate, the fruit growers are willing to take all the money they can get.

Our own peach yield this year is somewhat spotted, certain regions have suffered by the heavy spring frosts, and this gives the usual advantage to those whose fruit buds were not injured. So far as we know, then, the exciting value of canable peaches this year is due to at least three considerations: the unusually large demand owing to the increasing popularity of our fruit; the demand which comes hither because the Eastern production was a partial failure, and the moderate production in this State.

This year's experience will lead to an increased disposition to plant peaches this fall. Last year the nurserymen's supplies of apricot and certain varieties of peach trees were swept away by the demands of planters, and there is a prospect of a similar run upon the tree rows this year. The bidders have been active this summer in setting buds of the popular varieties, but there is reason to believe that their supplies will again be exhausted. We believe it is altogether wise to increase the peach orchards in places where the tree does well, but it would also be well not to make the present year's experience a criterion by which to judge the prospects for a series of years. The duration of this year's values is not to be looked for, for there are some factors now involved in the situation which will not be in force hereafter, probably, except now and then when this year's conditions may be reproduced. But it is not necessary that the extreme prices for this year's fruit should be always realized. Peaches can be sold much cheaper and still pay the grower well. The increase in the number of canning establishments and their progress in securing profitable outlets for their products, will insure the future of the peach and some other fruits, and will bring due rewards for the enterprise in planting which now is so wide-reaching.

THE HORTICULTURAL COMMISSIONER IN LOS ANGELES.—We learn from the *Commercial* that the petition of Matthew Cooke and others to the Los Angeles county Supervisors to have a Board of Horticultural Commissioners appointed, was denied. Mr. Cooke will now appoint a Fruit Inspector to examine all fruit that is shipped into or out of the county, and confiscate such as shall contain destructive insects. The railway company will receive only such fruit and fruit trees for shipment as has a certificate from the Fruit Inspector that it is free from dangerous insects. In short, the county is to be quarantined.

## California Wheat-Shipping Points.

The address of the retiring President of the S. F. Produce Exchange brings forward prominently the fact which all acquainted with the subject have noted, and that is the movement of wheat shipping away from San Francisco and toward other points here and there around the bay. We have been prone to consider this tendency a good one on the whole, not that we love San Francisco less, but the State more, and we like the building up of business points as near to the productive fields as possible. Thus when the ships can be laden in the Carquinez straits and taken thence to Liverpool for less than the same could be handled and sent forward from San Francisco, why should the wheat grower pay the cost of rolling his grain 40 miles or so farther? There is evidently no reason why he should, for he is ceasing to do it. Last year San Francisco lost a good part of the wheat because of storage and ship loading at Port Costa and vicinity, and this year the tendency toward loading in the upper bay will be still more apparent.

President Clayton, in his address, gave the figures of loadings, for the last three harvest years, as follows:

	1878-79.	1879-80.	1880-81.
San Francisco, ships.....	143	110	103
Oakland.....	62	37	33
Vallejo.....	65	18	97
Benicia.....	—	—	31
Martinez.....	—	—	1
Port Costa.....	—	—	84
Totals.....	275	265	349

In relation to the subject, President Clayton says: It will be observed that with a great increase of tonnage the number of vessels loaded in San Francisco has actually decreased, until now we do not handle at our wharves even 30% of the grain shipped to Europe. This, too, in the face of the attempt made by the Harbor Commissioners to facilitate the handling of the grain here through the construction of the grain sheds on the sea-wall. The freedom from wharf charges at Port Costa, Vallejo, Benicia and Martinez, is more than an offset for the extra charges for towing. If the transfer of so great an amount of business to other points is owing to natural advantages, the citizens of San Francisco have no cause for complaint; but if this is caused by the limited jurisdiction of the Harbor Commissioners, this limitation amounts to a direct discrimination against the city.

It is certain that San Francisco cannot complain justly. For a long time ships loading here have been submitted to expenses almost amounting to extortion and it is little wonder that the victims will fly elsewhere just as soon as the opportunity offers. It is only fortunate that such an escape was possible. Now there are other expenses which should be considerably lightened up and there will not be so much reason to put up charters to the disadvantage of the grain growers as there is at present.

In connection with mention of the meeting of the Produce Exchange, the *Bulletin* recalls some general facts on the shipment of California wheat, which are valuable from a historic point of view, and should be preserved for reference. It is shown that it is now nearly 13 years since the first wheat ship was loaded with California wheat away from San Francisco. This was the *Daniel Marcy*, which took her cargo aboard at South Vallejo in September, 1868. There were four ships loaded during that cereal year at the same point. The completion of the railroad from Sacramento to Vallejo made the above movement possible at that time, and the operation of that and other roads has contributed to the same end ever since. It was not until August, 1870, that Oakland Point was made a place for the loading of wheat ships. These two points have been the only real rivals to San Francisco in the loading of wheat ships until last year, when Port Costa and Benicia were made available by the ferry introduced between these points by the Central Pacific railroad company to accommodate the overland trains. The annexed table gives the localities of wheat loading for the past 13 years:

Years.	San F.	Oakl'd.	S. Val.	Misc's.	Total
1868-69.....	101	—	—	—	175
1869-70.....	103	—	31	—	194
1870-71.....	71	16	36	—	123
1871-72.....	24	12	7	—	43
1872-73.....	189	106	44	—	339
1873-74.....	94	77	76	—	247
1874-75.....	116	82	63	4	265
1875-76.....	75	35	64	—	174
1876-77.....	114	85	103	5	307
1877-78.....	58	14	37	—	109
1878-79.....	142	62	65	—	269
1879-80.....	118	37	118	—	273
1880-81.....	103	33	97	124	357
Totals.....	1,438	559	745	133	2,875

The miscellaneous column above for 1880-81 includes the 84 ships at Port Costa, 31 at Benicia, and several at Wilmington, Los Angeles Co.

HUMBLEBEES IN NEW ZEALAND.—We read that New Zealand rejoices on the safe arrival of two fertile humblebee queens out of 18 shipped from Scotland. They were caught and sent on ice in a torpid state, and this is the first successful one out of many attempts to import them. Hitherto red clover could not thrive there, as it could not be fertilized, but the long proboscides of the humblebees will effect this object. Some authorities dispute the need of humblebees in this connection, and have seeded red clover where the insects could not get at the blooms. However, the New Zealanders persist in their importations.

## QUERIES AND REPLIES.

## U. S. Agricultural Implement Museum.

EDITORS PRESS:—An appropriation having been made by Congress to erect a building for the exhibition of agricultural implements and machinery, I wish to communicate with manufacturers of such articles, and shall be greatly obliged for copies of any recent lists, or partial lists, of such manufacturers which you may have at hand.  
—E. A. CARMAN, Acting Commissioner of Agriculture, Washington, D. C.

In compliance with the above request, we prepared and sent forward as complete a list as we could name of those making agricultural implements in this State. We print the request of the department in order that any who are manufacturing implements especially adapted to use in this State, may correspond with the Commissioner of Agriculture concerning securing a place for them in the implement museum about to be arranged. It is eminently proper that a comprehensive collection of the improved agricultural appliances of the country should be made and the National Capitol is the place to establish it. If the collection can be made representative, as we hope it may be, it will be a splendid object lesson to impart a knowledge of agricultural practice in all parts of the country. It will be of service not only to our own people but to the world, for at Washington the world's representatives are located and to the capital of the country naturally come the host of travelers. They will see implements which will strike them as peculiarly adapted to use in their own parts of the world and the result will be an increase in our exports of agricultural machinery, a trade which has already attained handsome proportions. For these reasons we bespeak the favor of California agricultural implement makers toward the new project at Washington, and urge them to offer for permanent exhibition a specimen of their handiwork. There is so much that is new and interesting in California agriculture that there is special reason that the implements and machines employed should be fully shown. Let each inventor or manufacturer correspond with the department.

## California Climate.

EDITORS PRESS:—In reply to Eastern inquiries regarding California climate, it is impossible to write from any one part of the State. California is too large in extent to admit of such a thing. For instance, the thermometer may indicate 100° in Chico, Butte county, while it is not more than 75° or 80° at the City or any of the coast towns. I was born and raised between the parallels of 43° and 44° north latitude in Canada. I lived three years in Oregon and Washington Territory; have been as far north as Victoria, British Columbia, and have visited Panama twice. I have lived in the city of San Francisco and Santa Cruz and several of the inland towns of California. I have also spent one whole year in Kansas, and now, if asked to give my opinion on the choice of a home in either of the aforementioned places, I believe I can suit myself just as well right here, in California, as anywhere. Here we can adapt ourselves to any desirable climate that our constitutions call for. Here we are favored on the north by lofty mountains, snow-clad the year round, which lend their cooling influence to the valleys below, while on the south the ocean, with all its healthful influences, ever aids in equalizing the temperature of the atmosphere. Then, being, as we are, surrounded by such healthful influences, let the wind blow as it will, we are always happy.—IMMIGRANT, Willow Dell Ranch, Olampo, Colusa Co.

## Cinchona Cultivation.

We see by the last number of the *RURAL PRESS* that the culture of the cinchona is being practically experimented with in this State, and that a number of seedlings have been sent to different sections for tests. The thought occurs to us that it would be a good plan to try and cultivate this tree in those portions of our State afflicted by chills and fever. Quinine is the sovereign remedy for that disease, and we think the presence of the tree from which this drug is made, in those districts, would have a beneficial effect.—Solano Republican.

There is little chance that this intimate commingling of cinchona and malaria can be consummated. The low lands which yield most chills and fever are subject to heavy frosts in winter, which would kill cinchonas, root and branch. If the cinchonas succeed at all it will be in the elevated, frostless belts, and not on the plains. There is no evidence that the mere presence of the tree has any prophylactic effects. If we can grow the bark in any part of the State it will be good enough, for the manufactured quinine will be cheapened and thus the shakers along the rivers will be benefited.

PROGRESS IN STOCKTON.—A business agent of the *RURAL PRESS*, who was following his pleasant vocation in Stockton last week, brings us tidings that the city of the plain is advancing in many ways, and there is a brisk and confident feeling among the citizens. He reports much building as in progress; building of homes and workshops and temples of trade. There is discernible a disposition to build and adorn for permanent enjoyment; men of abundant means, both new comers and old residents, are securing handsome homes, and this is one of the most expressive indications of permanence and advancement in a town. We are glad to hear these things. Stockton is in the midst of a vast productive country, and the condition of the town is an index of the prosperity of the region which surrounds it.



## Fox Seedling Pears.

The outline engravings on this page have a melancholy interest. They show the forms of three pears which hid fair to be well known in future fruit lists and they come before the public the same week with the burial of the man who originated the varieties which the outlines portray. We have had the engravings ready for some weeks awaiting descriptions of the fruit, and the subject arranges itself for publication just at this moment.

B. S. Fox was a pioneer horticulturist and nurseryman and is known in all parts of the State and beyond. He established himself many years ago on a beautiful piece of ground near San Jose and his business increased and his property rose in value until he became one of the richest men in his line of business in the State. After long devotion to his work, Mr. Fox resolved to give this summer to travel and observation abroad. The San Jose *Herald* relates the events which ensued.

Mr. Fox left San Jose during the latter part of June for a trip through the East and Europe. He went partly for pleasure and partly to improve his stock, and add a variety of specimens to his nursery. Before he had crossed the continent his health began to fail, and when he had reached New York he was unable to sail. Fearing that this sickness might prove serious, he started for home

deal of time and trouble, and received an occasional cut through the papers and otherwise—the writers thinking, no doubt, that I stopped talking because of their failure to come up to the mark. Everything has worked out to my satisfaction, however, and I claim now, louder than ever, that at their respective times of ripening there are no large pears superior to them in flavor, size and good shipping qualities. I have in my possession letters from nearly all the leading Eastern pomologists to bear me out in this assertion.

The engravings on this page show the outlines of three of Mr. Fox's seedlings which have triumphed over his severe tests, and have succeeded at the East as well as in California. Fig. 1 is the P. Barry, named after the well-known Rochester, N. Y., horticulturist. It is distinguished from the old Barry pear by the initial, P. It is a golden russet pear, and is in season in California from the middle of December to the middle of February, and is acknowledged to possess high merit by those who have tested it here. At the East, it has also achieved fame. The *Rural Home*, speaking of a specimen grown in Rochester, says: "The pears remained quite hard until March, when they were brought into a warm room and placed in drawers. In a few days, they ripened into pears of excellent quality, about the size of the Anjou, deep yellow, russeted, fine-grained, melting and juicy, and it promises to be a valuable spring pear."

Fig. 2 is the Col. Wilder, named for the distinguished President of the American Pomological Society. Its table season in California is

siah Hoopes, the well-known fruit expert. He says: "Mr. Fox, of California, has been so unusually fortunate in raising many new seedling varieties of the pear that some of our Eastern fruit-growers, whose experience has been exactly the reverse, have taken fresh courage from his success, and will imitate his example. One of his winter varieties (the 'Fox') is of the largest size, rich russet-red in color, or in some specimens golden russet; flesh fine-grained, hnt-tery, juicy, with an exceedingly pleasant sub-acid flavor; quality decidedly best." The specimen tested was not ripe until the first week in October, but its maturity was evidently hastened by its early removal from the tree."

The death of Mr. Fox must be regarded as a great loss to the horticultural interest of the State, with which he was connected from its inception, and which he has promoted in many ways. Mr. Fox was an active member of the State Horticultural Society, and the first member to depart since the organization of the society.

## The Mechanics' Fair.

On Tuesday next, August 2d, the exhibition of the Mechanics' Institute will open in this city. Already nearly all the floor space has been applied for by intending exhibitors, so that the success of the exhibition is assured. As applications for space still continue to come in, how-

## Pure and Impure Water.

If there is any one subject connected with the household which requires more attention than another it is that of pure water for man and beast. Every medical man knows that impure water is a fertile source of disease in human beings, and innumerable outbreaks of a typhoid nature have been distinctly traced to this cause. Many of the diseases in cattle have their origin from the impure water which they are compelled to drink. In many localities in this country a "mud hole" or "sink" filled with partly stagnant water is the only source of supply for farm animals during the long hot summer, and it is no wonder that diseases of various kinds follow such treatment.

Machinery and tools for obtaining good pure water have, of late, been perfected and simplified, so that there is no reason why every man should not have an abundant supply, both for household and stock, no matter where he is. Thousands of large land owners would be justified in purchasing the necessary machinery and tools for prosecuting their own work in this direction; and people with small places in the country would find it to their interest were

Fig. 1.

Fig. 2.

Fig.

NEW CALIFORNIA PEARS ORIGINATED BY THE LATE B. S. FOX, OF SAN JOSE.

and had come as far as Council Bluffs, when he was prostrated. He telegraphed to his nephew, Richard Fox, of his illness, and he started last Monday to meet his uncle. When he reached Council Bluffs he was shocked to find his uncle dead. Mr. Fox was one of the pioneers of this county, and was honored and respected by all who knew him. His nursery on the Milpitas road is one of the best in the State, and is kept in the best order. Mr. Fox was never married, but leaves a maiden sister, a nephew and two nieces, to whom he has been as a father. He was 66 years of age, and a native of Ireland.

We have not data at hand at this moment to prepare a suitable sketch of Mr. Fox's life. They will no doubt be supplied hereafter. One of his diversions and an enterprise in which he had great hope and interest was the production of new seedling pears, hoping by his efforts in this direction to enrich the treasures of the fruit-grower. He worked with great patience, fruiting an immense number of seedlings and discarding all save a few which commended themselves to his favor. And in his decision as to desirability he was most cautious and exacting. Although he has been engaged in this sort of propagation for years, he had but just resolved to distribute his new varieties the coming fall. Thus he has died just at the real beginning of his enterprise. He would not finally decide on retaining a seedling until it had fruited at the East and he had the favorable verdict of Eastern pomologists on Eastern-grown specimens. In a letter which Mr. Fox wrote to the editor of the *RURAL PRESS* a short time before he started on his Eastern journey, he says:

You are well aware that the list of pears is already large and unless something extremely good is offered, there is no use adding to it. For this reason only have I been slow to place them on the market. Of course I was long ago convinced of their superiority, but my say-alone would not do, neither would testing them in California alone, for, deservedly or not, we have a reputation abroad for exaggeration regarding the products of our soil. To get around all these points I have lost a great

from January to May, thus being possessed of remarkable keeping qualities. The Wilder is of a beautiful yellow color. It is described in an appendix to Downing's work, and has achieved fair fame at the East. The *Country Gentleman* says: "Judging from specimens examined, we would place it as high as any early winter pear we have ever seen, taking size, appearance and excellent quality into the account."

Fig. 3 is a pear which the originator named for himself "B. S. Fox," and it bids fair to be a worthy reminder of his deeds to coming pear growers. It is of a cinnamon-yellow color and ripe from October to November. We have the pleasure of hearing testimony on our own account to the worth of this variety, as we have tested it thoroughly in its season. In size, combined with the quality of "coming up" well (as the fruitmen say of a fruit which ripens well when packed somewhat green) and of beginning to decay at the surface instead of at the core—in these market points the pear is excellent and very desirable. The flavor classes it among the tart pears, but it is a most mild and delicious tart. In short, in its keeping points, in its size and in its characteristic richness of flavor and abundant juice, coupled with its time of ripening, it is a most valuable addition to our list of fruits. Mr. Downing says, in his second appendix to his second revised edition: "B. S. Fox," is thought by some to be one of Fox's best late fall varieties. Fruit large, oblong, ohtense, pyriform; skin clear, bright yellow, nearly covered with rich, golden russet; stalk rather short, stout, inserted obliquely by a lip in a slight depression; calyx small, open hasin medium uneven; flesh whitish, fine, juicy, melting, sweet, rich and excellent."

Another expression of Eastern opinion on this fruit we find in the New York *Tribune* by Jo-

ever, it will be as well for those intending to exhibit to begin to utilize their space as soon as possible, or they may not have as much as they want, as space will soon be in demand.

These fairs have done a vast amount of good to this city and to this coast. They bring producer and consumer together on good terms. The manufacturer exhibits to the people among whom he lives and to whom he will sell his goods, and shows there his products in all their forms. That these exhibitions are appreciated is evidenced by the crowds that attend them, and the very full exhibits made. This year we are more prosperous in this city and State than for some time past, and the fair ought to excel preceding ones. Judging from entries at present writing, and what is known to be forthcoming, a very large and varied exhibit of California products, natural and manufactured, will be made.

There will be no premiums awarded for fruit this year, but there will be abundant opportunity to display fine samples or interesting new varieties which the growers wish to show for their own or the public interest. All exhibits of this kind directed to the Superintendent of the Mechanics' fair, Mr. Gilmore, will be carefully shown, distinctly labeled, etc. For the florists, there are liberal premiums awarded because of the cost and labor required to show plants and flowers. It is expected that this department of the fair will be richer than ever before, and it will attract California plant lovers and those from abroad who are in the city during the fair.

The Mechanics' fair offers a good opportunity to bring forward new agricultural inventions and fine samples of implements already in use. We hope our friends in all parts of the State who have good things of this kind, will not fail to place them on view.

they to club together and purchase the necessary outfit for sinking wells convenient to house and field. In the cities there are men who sink these wells for a specified price per foot, where the geological peculiarities of the section are known.

In view of the certainty of finding good water as a rule, if proper effort is made for it, it is wonderful that the people in some of our cities go on year after year, paying outrageous prices for outrageous fluid, while the strata beneath are full of pure water and the hills adjacent will pour forth bountiful supplies by tunneling. This is especially true of the beautiful city of Oakland, where, in many cases, the people pay more money for the wretched water they drink than for the bread they eat. There can be no doubt that wise co-operative effort would free them from the ills they now submit to. An exchange has the following forcible remarks on the subject:

The people of Oakland are the vassals of the Contra Costa Water Co., and, as a rule, they bear their bondage without murmuring, but of late there have been complaints of the bad quality and limited quantity of the water supplied, and, though punishment will follow, it is quite probable these complaints will continue. It is strange that a community of 40,000 people will, from year to year, stand the gross impositions of a water company that is small in every conceivable small way. Lake Chabot, the fountain from which is drawn the water consumed by the people of Oakland, is a lake but in name. It is, in fact, but a dammed up gulch in which is caught the seepage from the surrounding hills. The supply is not equal to the demand. In summer this water is foul with animalculæ and large-sized bugs. In winter it is so impregnated with mud and sand as to be unfit for use. The rates charged for this libel on the name of water are extortionate, and no reductions are ever made in charges, no matter how often there is a failure of supply. At times during the summer season there is not sufficient water to supply the Fire Department in case of an extensive fire. Yet the people of Oakland stand this imposition.



## Our Home Industries.

## The Mechanical and Manufacturing Interest of San Francisco.

The following facts and figures from the annual report of the Assessor to the Surveyor General, will show the statistical features of our home industries:

Artificial stone manufactories 2, men employed 124, value of manufactures \$328,950.

Axle grease manufactories 2, men employed 11, value of manufactures \$39,480.

Barrel manufactories 3, barrels made 356,291, men and boys employed 184, horse power of steam engines 80, barrels made for use of sugar refineries 76,650, syrup kegs made by tub and pail factories 13,650, value \$221,350.

Bag manufactories 5, men, women and boys employed 284, number of bags manufactured 15,073,740, value \$2,188,450.

Bed spring manufactories 3, men employed 28, copper wire used 583 tons, aggregate value manufactured \$198,000.

Bedstead manufactories 5, men 264, lumber 440,000 ft., value of manufactures \$143,000.

Bel lows manufactories 2, men 12, bellows made 1,600, value of manufactures \$32,000.

Bedding 7, men 341, value \$819,000.

Billiard tables 3, men 20, tables made 127, value \$28,000.

Boots and shoes 56, men, women and boys 2,430, value \$1,508,000.

Box factories (wooden) 6, men 305, lumber 8,505,000 ft., value \$957,600.

Box factories (paper) 5, men, women and boys 62, boxes made 639,500, value \$46,200.

Box factories (cigar) 3, men, women and boys 140, boxes made 240,000, value \$110,000.

Brass foundries 8, men 290, value of, including copper 500 tons, \$510,000.

Breweries 43, men 356, hops 632,500 lbs., barley 26,450 tons, beer made 356,500 barrels, value \$2,415,000.

Brooms 14, men 80, brooms 50,000 dozen, value \$150,000.

Broom handles 2, men 10, handles made 800,000, value, \$12,000.

Brush factories 3, men 34, value \$79,200.

Candles 4, men 161, candles manufactured boxes 241,500, value \$563,500.

Carriages and wagons 30, men 180, carriages and wagons made 500, railroad street cars and dummies 120, value \$330,500.

Coffee and spice mills 16, coffee ground and roasted 5,700,000 lbs., chocolate 327,000 lbs., spices ground 500,000 lbs., value \$1,167,000.

Corset factories 4, men and boys 20, value \$15,000.

Coffins 4, men 32, value \$115,500.

Cordage and rope 1, men 110, hemp rope 2,600 tons, value \$560,000.

Clothing 12, men and women 4,830, value (including overalls, suits and underwear) \$3,662,500.

Cigar factories 200, men, women and boys 3,250, cigars 90,750,000, cigarettes 9,900,000.

Cement pipes 2, men 135, value \$402,500.

Crackers 4, men 130, value \$1,120,000.

Chemical works 2, men 53, value \$520,000.

Carriage springs 1, men 17, springs made (tons) 130, value \$60,000.

Cutlery 2, men 37, value \$52,500.

Dry docks (floating) 2, men 15, capacity of docks (1,180 tons, 1,800 tons) 2,600.

Dry docks (stone) 1, men 6, total cost of work \$675,000.

Electric machinery works 2, men 45, capital \$165,000.

Elevator manufactories 2, men 28, value \$7,700.

Fringe factories 5, men and women 60, value \$86,250.

Flour and feed mills 8, men 90, flour made (barrels) 204,000, hominy made (tons) 247, buckwheat and rye flour (tons) 385, oatmeal and groats (tons) 2,760, cornmeal and farina (tons) 3,960, feed barley (tons) 9,720, cracked wheat (tons) 864, split peas (tons) 636, graham flour (barrels) 6,360, cracked corn (tons) 732, ground feed (tons) 1,320, pearl barley (tons) 720, run of stone 52.

Foundries, boiler and iron works 15, men, 1,200, pig iron (tons) 18,270, bar iron used (tons) 16,250, rivets used (tons) 350, California iron used to June 30th (tons) 1,200, value, \$3,120,000.

Fur manufactories 5, men and women 55, value \$270,000.

Furniture manufactories 18, men 1,610, lumber used (fr.) 1,080,000, value \$1,839,750.

Gas works 1, men employed (about) 400, capital stock \$10,000,000.

Glass works 1, men and boys 180, furnaces 22, pots 7, value of manufactures \$213,400.

Glass cutting 2, men 20, value of manufactures \$53,000.

Gloves 20, men and women 207, value \$180,000.

Glue 1, men 15, glue (tons) 150, neatfoot oil (gallons) 6,500, value \$100,000.

Gold refineries 1, men 50.

Gutta percha and rubber 2, men 11, value \$17,200.

Hat and caps 18, men 192, value \$342,000.

Hose and belting 5, men 19, hose 1,200 ft., belting 129,000 ft., value \$150,000.

Harness 50, men 350, value \$1,000,000.

Ink and mucilage 1, men 10, made annually, 10,050 dozen.

Ice manufactories 3, men 42, tons made 2,640, capital invested \$108,000.

Japanning and galvanizing manufactories 2, men and boys 16, value \$21,000.

Jewelry manufactories 16, men 168, value \$552,000.

Lead and shot manufactory 1, men 140, lead pipe and shot made 4,700 tons, value \$7,000,000.

Lead smelting works 1, men 116, value \$760,000.

Last manufactories 2, men 11, lasts made 18,700, value \$24,200.

Linseed oil works 2, men 60, oil cake 4,300 tons, capacity of works yearly 8,000,000 gallons, value of oil \$580,000, value of cake \$135,000.

Macaroni and vermicelli 6, men and boys 36, macaroni and paste made (boxes) 154,000, value \$154,000.

Marble works 22, men 253, value \$632,500.

Matches 8, men 60, matches made gross 408,000, value \$672,000.

Malt houses 6, men 58, grain malted tons 16,900, value \$505,000.

Mirror manufactories 2, men 7, capital invested \$172,500.

Musical instrument 2, men 16, value \$10,000.

Oil clothing 4, value \$11,000.

Oakum 1, men 21, bales made 10,500, value \$42,000.

Pickle and fruit preserving 11, men and women 1,955, fruit and meats put up (dozen cans) 575,000, pickles put up in kegs 59,800, value \$1,840,000.

Powder works 1, men 31, powder made 1,331,500, value \$450,000.

Provisions packing 2, men 145, meats packed 8,500 barrels, pork 8,000 barrels, ham and bacon 2,500,000 lbs., lard 1,300,000 lbs., tallow 50,000 lbs., value of investment in real estate, fixtures, etc., \$130,000, value of products, \$1,450,000.

Pump manufactories 2, men 16, pumps made 380, value \$90,000.

Rolling mill 1, men employed 319, scrap iron used 17,314 tons, coal consumed 11,660 tons, value \$1,104,950.

Salt works 3, men employed 52, number of tons 19,550, value of salt ground \$217,500.

Safe and vault works 1, men 20, value \$30,000.

Saw manufactories 2, men 33, value \$110,000.

Sash, blind and door 15, men 2,100, ft. of lumber consumed annually 11,050,000, value \$5,040,000.

Silverware 3, men 50, value \$150,000.

Shirt 3, men and women 1,100, value \$500,000.

Slippers 25, men and women 1,000, value \$470,000.

Soap 21, men 345, pounds soap made 25,200,000, value \$2,735,500.

Sugar refineries 2, men 320, sugar (raw) used 80,560,000 lbs., white sugar made 29,550,000 lbs., yellow sugar made 31,880,000 lbs., syrup made 647,000 gallons, value \$6,635,000.

Tanneries 43, men 380, bark used annually 5,860 cords, hides of all kinds 393,300, value \$1,932,000.

Tool manufactories 11, men 79, value \$50,000.

Type foundries 2, men and women 46, value \$50,000.

Vinegar 2, men 20, vinegar made annually 24,000,000 gallons, value \$180,000.

White lead 1, men employed 75, tons manufactured 2,400, capital employed \$250,000.

Windmill manufactories 2, men 10, mills made 110, value \$22,000.

Willow ware and baskets 2, men 8, value \$6,000.

Wine casks 1, men 210, casks made 3,800, value \$84,000.

Woolen mills 2, men and women 819, blankets made annually (pairs) 93,600, hosiery (dozens) 14,040, wool used (lbs.) 3,000,000, cloth and tweed (yards made) 702,000, flannels (yards made) 800,000, value \$1,755,000.

Wire rope 1, men 46, amount of wire consumed (tons) 600, value \$320,000.

Wire works 2, men 48, value \$75,000.

## The Engineers and the Debris Dams.

Col. Mendell and other engineers and experts have examined the brush dams on the Yuba and Bear rivers, with a view to learning their present condition and to observe their effects. All parts of the Yuba dam were thoroughly inspected, and it was found to be in very good condition. Commissioner Knox says:

We found two breaks in the Yuba dam. One was from 300 to 400 ft. wide, and about a quarter of a mile from the south end. It appears that the whole structure at this point has gone out.

About half a mile farther on is the other break, which is in the neighborhood of 700 ft. wide. There are evidences of brush remaining at places over the break along the bottom, but this cannot be definitely determined now, as the river is still running through these nearly the whole width. The most of the way, however, it is only a few inches in depth, but the slickens beneath is soft and not inviting to an over degree of curiosity. From this point to near the north end of the dam no injury has been done whatever, and so far as can be seen the crest has not settled in the least out of range. The top of the dam is covered with heavy driftwood, much of which is composed of logs two ft. in diameter, which have caught upon the crest and been left there as the river fell.

Above the portions of the dam where there has been no breaks, the sand and gravel is filled in and retained within two or three ft. of the crest of the dam, and the height is apparently continued with ascending grade as far up as can be seen, with an occasional small boulder two or three inches in diameter. Upon the lower side of the dam the sand is from 4 to 6 ft. lower than above. From immediately below

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where the water pitches over the dam, and down for a distance of several hundred ft., there has also been a large deposit of debris caused by the slower movement of the water, and which grows less again as the water regains its velocity.

Within the dam, where the breaks occurred, of course the sediment which had been filled in was carried through and into the river again below, and channels with sloping sides are thus formed inside the dam, leading to these breaks and extending as far above as could be seen from the crest. We were informed by a man who resides near by, that prior to the breaks in the brush work, the water above the dam presented the appearance of a lake, being nearly still, and the accumulation of sediment apparently even the whole way across. The dam from one end to the other, including the mattresses below, where not covered too deep with sand, is now a dense growth of willow, except at the breaks. This willow growth has sprouted from the logs and brush of which the dam is composed, and presents the appearance of a green ridge, extending from one bank of the river to the other, and is from three to four ft. in height. New roots are thus forming, and the entire structure will soon become formidable from this new growth, and indestructible to any action of floods, and by slowing the water, if the old breaks are repaired, will stop the sediment and cause a building up and raising of the crest of the dam to quite an extent without artificial means. This is as Capt. Eads and the engineers stated would be the case, and but for the untoward circumstances which caused the breaks, the dam would now be growing into an indestructible barrier the entire distance between the high lands upon either side of the river.

## Confidence in the Dam.

Colonel Mendell and his assistant were highly pleased with the portions of the dam which remain intact, and are extremely anxious to have the breaks repaired, being entirely confident that by so doing the experience of another winter will demonstrate that the original opinion of the engineers, that these structures could be made to perform the office for which they were intended, was correct. So confident is Colonel Mendell upon this point, that should the Drainage Act be declared by the Supreme Court to be unconstitutional, he would, if he had Government money at his disposal, repair these dams at once to prove their success.

At the Bear River dam they found two breaks. One near the north end is from 300 to 400 ft. long, and the other is about 100 ft. long and near the south end. Between those two breaks are settles in three or four places. This dam is also found to be growing a thick mat of young willows the entire length, except at the breaks. My impressions are that not so much sand and gravel deposit has been made in this dam as on the other river, but a very large amount is to be seen above, and is filled in to considerable depth.

THE BELL CLAPPER.—It has been supposed among antiquarians that the clapper is a modern addition to bells, and that it did not form a part of those employed in Japan and China. Henry O. Forbes, however, writing from Snatra, says that when in Java a year ago he saw, in the possession of a gentleman there, a bronze bell dug up on the site of one of the old Hindu settlements, of which now only the graves remain. It had lost the clapper, but the hook to which, doubtless, the clapper was attached, existed still.

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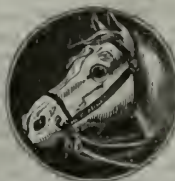
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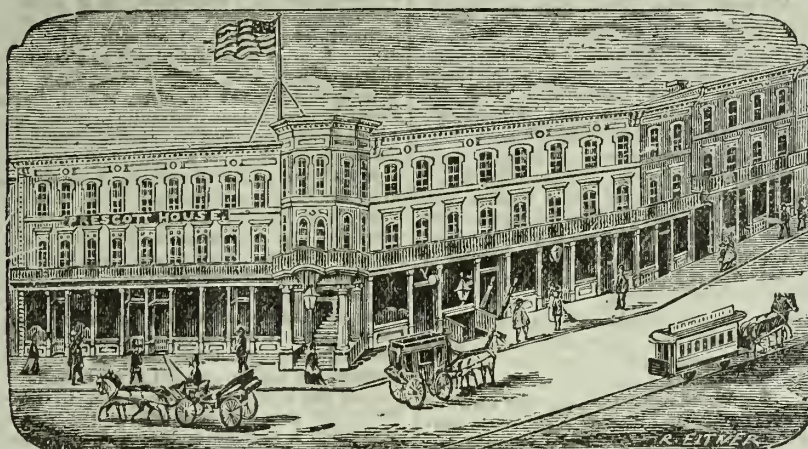
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## PATENTS AND INVENTIONS.

### List of U. S. Patents for Pacific Coast Inventors.

From Official Reports for the "Mining and Scientific Press," U. S. and Foreign Patent Agents.

FOR THE WEEK ENDING JULY 12TH, 1881.

- 9,793.—PILLOW SUAM HOLDER—Re-issue—J. R. Adams, Oakland, Cal.  
 9,802.—BARREL TAP AND FAUCET—Re-issue—E. T. Barlow, S. F.  
 244,115.—DUST PAN—Edma L. & M. A. Deitz, Oakland, Cal.  
 244,051.—STEAM BOILER FURNACE—C. F. Hall, S. F.  
 244,210.—ORK AMALGAMATOR—W. H. Howland, S. F.  
 244,241.—MACHINE FOR GRINDING ORE—W. H. Howland, S. F.  
 244,134.—TIMBER FRAMING MACHINE—Isaac Lepley, Amador, Cal.  
 244,139.—RUNNING GEAR FOR CARRIAGES—M. J. McCue, S. F.  
 244,144.—FEEDER FOR THRESHERS—John Ransford, Stockton, Cal.  
 244,117.—STEAM WAGON—A. H. Elfers, Bakersfield, Cal.  
 244,147.—TENSION APPARATUS FOR CABLE R. R.—H. Root, S. F.  
 244,080.—COMPOSITION FOR DISSOLVING THE COATING OF GOLD IN ORE—J. F. Sanders, Ogden, Utah.  
 244,038.—ORR FEEDER—Edward W. Wagner, Enterprise, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s Scientific Press American and Foreign Patent Agency, the following are worthy of special mention:

**TIMBER FRAMING MACHINE.**—Isaac Lepley, Amador City. Dated July 12, 1881. No. 244,134. This is a novel method for framing timbers of all kinds, but is specially useful for mining work. It consists in the employment of cutters, which are caused to rotate upon a suitable frame, and this frame is moved both vertically and horizontally by means of slides and guides, so that the cutters may be carried across the timber upon either or all four sides to form a tenon, dove tail or other cut; and, if desired, a round tenon may be formed by the use of a link, which has one end fixed to the frame so that the slides will move in a manner to carry the tool around in a circle. This machine was described and illustrated in detail in the MINING AND SCIENTIFIC PRESS of January 22, 1881.

**STEAM WAGON.**—Aug. H. Elfers, Bakersfield, Kern county. Dated July 12, 1881. No. 244,117. This invention relates to that class of wagons adapted for the use of steam as a motor. It would be difficult to describe the details without the use of engravings. The wagon, however, is so made as not to require a special engine. By making the crank adjustable it can be made to accommodate itself to the stroke of almost any engine, and hence a farmer who has already a steam threshing engine can use it to drive this wagon, by removing it from its own truck and placing it upon the wagon, and connecting its piston-rod with the driving shaft, and adjusting the crank to the stroke of the engine. In order to reverse the engine and drive the wagon in an opposite direction a peculiar construction is adopted, whereby the inventor is enabled to do this with simply one eccentric, by changing the throw of said eccentric.

**FEEDER FOR THRESHING MACHINES.**—John Ransford, Stockton. Dated July 12, 1881. No. 244,144. This invention relates to certain improvements in the feeding device which supplies unthreshed straw to the cylinders of threshing engines. It consists in a series of notched inclined feeding timbers or arms, placed side by side, and operated by an eccentric or crank to give them a reciprocating motion. Each arm being provided with peculiarly constructed flanging forks, the upper ends of which push forward the mass of straw above, while the lower ends push that below and keep the spaces between the reciprocating arms clear. The position of the device with regard to the threshing cylinder must be determined by convenience. Generally, of course, it should be attached to the threshing machine, so that its reciprocating arms could feed the straw down to the front of the cylinder; but whether on top or toward its lower part must be decided by circumstances.

**THE YOSEMITE HOTEL.**—This, the leading hostelry of Stockton, has blossomed out in a new life of excellence, and the enterprising landlord, Mr. Cavin, has had the establishment thoroughly renovated, recarpeted, refurnished, refitted, and enlarged his accommodations to meet the increasing demands of the public upon his gentle and generous services. The coming fair, which is promised to be the greatest ever held in the valley, will find the Yosemite hotel fully up to its requirements.

**IMPLEMENTS AND MACHINES.**—The large implement warehouse of the Grange Union at Stockton is well filled with all kinds of valuable devices and machinery for agricultural use. The Union has a wide range of farming experience in its direction, and is thus able to meet many needs. Its operations are conducted with much enterprise.

### Industrial Items.

The capital of a cotton mill near Boston has grown from \$160,000 to \$2,500,000 in 10 years.

A BOSTON man has invented a machine that manufactures seamless paper boxes at the rate of 20 per minute.

The length of the railroads built in the United States in the year ending April 1, 1881, was 6,113 miles, twice the mileage of the preceding 12 months.

CAREFUL inquiry by the *Age of Steel*, published in St. Louis, refutes the statement that there is an over production of pig iron in America. All steel mills agree that they prefer American iron to the foreign.

A LARGE grain elevator about to go into operation in St. Louis will employ as elevating power three gas engines, which will be located in the cupola of the structure. The experiment will be watched with much interest.

THIRTY-NINE locomotives were shipped from the three locomotive works in Patterson, N. J., during the month of June. This number was never exceeded but once. The average weight of engines is constantly on the increase. Four of the locomotives were sent to Spain, being part of an order of 10, the first ever received in America from that country.

AMERICAN machine-made watches, which have driven the English and Swiss hand-made articles out of domestic markets, are now proving formidable competitors for the markets of the world. The Waltham Watch Co. now turn out 750 watches a day and employ 1,600 work people, the demands of their increasing foreign and domestic trade force them to enlarge their facilities. This is being done by replacing the older buildings with new and larger ones, whereby the force employed will be fully doubled. The increase being from about 1,000 employees to 2,000.

IN 1830 not a single locomotive engine had been built in America. The first two were brought from England that year. The number of locomotive engines in use January 1, 1879, was 16,445, valued at \$164,450,000; the number of cars, including palaces and freight cars, was about 300,000, which at a low estimate, would cost \$60,000,000. About one-tenth of those now running must have been rebuilt probably five times, since 1830, at a cost of \$382,225,000, making a total of \$1,146,675,000, or about twice as much as England has invested in ships. Besides this, we have built locomotive engines for export to all parts of the world. Of all those used in the English colonies, from 95% to 99% were built in the United States. Since 1870 we have exported \$25,000,000 in locomotive engines, and double that amount in cars.

**THE BEEF BONANZA.**—The great stock growing industry of the newer West is claiming its proper place in the agricultural literature of the country, and the records of its growth and of the opportunity for promising labor and investment, are of great interest. The latest work on the subject which has come to our notice is "The Beef Bonanza," written by Gen. J. S. Brisbin, U. S. A., whose official duties during the last 12 years have brought him into close acquaintance with the country and with the enterprising men who are peopling the great expanse which used to figure on the maps as the "Great American Desert" with splendid flocks and herds. Gen. Brisbin has great faith in the industry which he describes, and he gives full record of the facts upon which his confidence is based. His observations are of the most practical character. He writes of the pasturage of the great plains, of the cattle and their rate of increase and the value thereof, the cost of starting a herd and of maintenance, the facilities of transportation—all being drawn from the actual experience of the many cattle men with whose operations he is fully acquainted. His book may be commended to all who seek information on this interesting and important branch of our industrial development. "The Beef Bonanza" is published by J. B. Lippincott & Co., of Philadelphia, and for sale by J. A. Hofmann, 210 Montgomery street, S. F.

**GOLDEN GATE SEPARATOR.**—J. C. Bowden, of Stockton, is manufacturer and patentee of the Golden Gate separator. It is built in two sizes, one for hand-power and one for horse-power. The smaller machines have been in use since 1872, and we are assured that each machine has an average capacity by actual count for the season of 52 days' work of 15 tons per day, and wheat can be cleaned for \$1 per ton. The larger separators have a capacity for cleaning 50 tons per day. On these the suction fan is applied. On both machines the revolving sieve is used. It not only cleans wheat, but barley. Nothing is lost, and all kinds of grain, shrunken and plump, are graded as they are discharged at different spouts. It is so arranged that it will take out blocks of wood and other light trash by suction.

**MATTESON & WILLIAMSON.**—The large and well equipped manufactory of this firm is now in better shape than ever for the execution of its wide range of manufacturing. The establishment is one of the features of Stockton. The firm is now making furniture on a large scale as well as driving ahead the manufacture of many useful implements and machines.

### How Slate Pencils are Made.

In making slate pencils, broken slate is put into a mortar run by steam, and pounded into particles. Then it goes into a mill and runs into a "bolting machine," such as is used in flouring mills, where it is "bolted," the fine, almost impalpable, flour that results being taken to a mixing-tub, where a small quantity of steatite flour similarly manufactured is added, together with other materials, the whole being made into a stiff dough.

This dough is kneaded thoroughly by passing it several times between iron rollers. Thence it is conveyed to a table where it is made into "charges," or short cylinders, four or five inches thick, and containing eight or twelve lbs. each. Four of these are placed in a strong iron chamber or "retort," with a changeable nozzle so as to regulate the size of the pencil, and subjected to tremendous hydraulic pressure, under which the composition is pushed through the nozzle in the shape of a long cord, and passes over a sloping table slit at right angles with the cords to give passage to a knife which cuts them into lengths. They are then laid on boards to dry, and after a few hours are removed to sheets of corrugated zinc, the corrugation serving to prevent the pencils from warping during the process of baking, to which they are next subjected in a kiln, into which superheated steam is introduced in pipes, the temperature being regulated according to the requirements of the article exposed to its influence.

From the kiln, the articles go on to the finishing and packing-room, where the ends are thrust for a second under rapidly revolving emery wheels, and withdrawn neatly and smoothly pointed. They are then packed in pasteboard boxes, containing 100 each, or 10,000 pencils in a shipping box. Nearly all the work is done by boys, and the cost, therefore, is light.

**WHY STONE WALLS ARE DAMP.**—The walls of a stone house, and sometimes of a brick house, are covered with dampness. This is due to the very same cause by which dew is deposited on grasses, or moisture on the side of a glass or pitcher that is filled with ice water and is brought into a warm room. The walls become cold, and as stone is a non-conductor of heat, they remain cold for a long time. When the weather changes suddenly from cold to warm, the air becomes filled with moisture, for the warmer the air is, the more moisture it will absorb. When this warm air strikes the cold wall, the moisture is deposited on it from the air, which is suddenly cooled by contact with them, and as the warm air is continually coming in contact with the walls, the dampness accumulates until it appears like a dew upon them and pours down in streams at times. It is easily prevented. No plaster should be put directly upon brick or stone, but furring strips should be nailed to the wall and the laths be put on these. Cellars are frequently made very damp in the same way by too much ventilation in warm weather.—*N. Y. Times.*

**BUHACH.**—The brisk demand for this effective insecticide is illustrative of the way a thoroughly good thing will take in California when there is a use which calls for it. The crop gathered on the Merced county plantation and prepared at the mill in Stockton will not nearly approach the amount needed, and orders are being filled in part only. We have tested this year's product and find it stronger and more sudden in its effect upon insects than any we have had before. The process of preparation has been improved, and the full power of the plant is now presented in most forcible form. We learn from the advertisement of the Buhaeh Co., in another column, that they have decided to sell the seed of the plant, which they secured after long trial from Dalmatia, and there is quite a promise that it may be profitable to grow it as a crop to be sold to the company to be prepared in their establishment for the market. More than this, the plant has such insect-destroying qualities that it may perhaps be grown for that purpose among other plants or an infusion of the blossoms used on a large scale in killing pests in field, orchard or garden.

**FEBRIFUGE.**—We hear high praise of the anti-fever-and-ague medicine prepared by J. R. Williams, of Stockton, and known as the "Little Gem." It is said to act very agreeably and effectively in overcoming and warding off the fiend of the low-lying districts.

**H. C. SHAW.**—This well-known manufacturer of Stockton is preparing for a big year in the sale of his well-known implements. He is increasing his facilities and accommodations for manufacturing, and his famous gang plows will cut a larger figure than ever before in the great fields of the valley.

**WOOD WORKING.**—George Lissenden, of Stockton, has one of the best wood-working establishments in the interior. His machinery is varied and excellent, and he is now doing much creditable work. His facilities may be commended to those having need of good timber made into almost any useful form.

**MANSION HOUSE.**—The Mansion House, Stockton, J. H. Cross, proprietor, is a temperance hotel at which accommodations can be secured at very reasonable rates. It is a well kept and pleasant establishment.

### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. F. OSBORN—San Francisco.  
 G. W. MCGREW—Santa Clara county.  
 M. P. OWEN—Santa Cruz county.  
 J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
 JARED C. HOAG—California.  
 F. W. CROWELL—Yuba and Sutter counties.  
 D. W. KRIEGER—Napa, Nevada and Placer counties.  
 G. H. HOPKINS—Amador county.  
 A. LEONARD MYER—Utah and Idaho Ter.  
 C. E. WETMORE—Alameda county.  
 J. M. WOLFE—California.

### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

### Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on, or address H. F. D., this office.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

ANDERSON SPRINGS, in Lake county, 19 miles from Calistoga (over a grand, picturesque route, via Mt. St. Helena) are among the best in this State. They are situated in the midst of a natural park, full of beauty and interest to the naturalist. Good home-like accommodations at reasonable rates are invariably furnished by the Anderson family.

**HOW TO STOP THIS PAPER.**—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**BY TELEPHONE.**—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

**MANSION HOUSE.**—First-class in every respect.—When you visit Stockton stop at the Mansion House. Free Coach to the house. J. H. CROSS, Proprietor.

## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, July 27, 1881.

There is rather more life in the Wheat trade. Ships have been taken freely at top rates, even up to £4. Ship-pers, it is understood, have much grain now in hand which they wish to get off. The price of choice Ship-ping Wheat has advanced a little, choice lots of No. 1 having brought \$1.45. Buyers are making a discrimination in favor of the new crop.

The latest from abroad is the following:

LIVERPOOL, July 26.—Good to choice California Wheat, 9s 7d to 10s. The spot market is firm and higher; cargoes steady and unchanged.

#### Freights and Charters.

The following charters are reported: Ship *W. W. Crapo*, £2 15s, from this port to Liverpool or Havre direct, spot charter; the ship *Grecian*, 1,677 tons, Wheat to a direct port, at £3 17s; British bark *Helene*, 1,179 tons, Wheat to Cork, U. K., £4; ship *Sea King*, 1,572 tons, Wheat to Liverpool or Havre, £3 17s 6d.

#### The Foreign Review.

LONDON, July 25.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: All crops have been checked by the change to cool temperature and cloudy and showery weather. Under the forcing influence of exceptional heats, Wickets have made a fortnight's progress during the week. Before the close of the present week, harvest will have commenced all over the country, and should dry weather continue, a large proportion of the crop will be threshed from the fields without stacking. Red magots are alarmingly prevalent in some districts. Native Wheat is so scarce, and the fresh supply being retarded somewhat, prices were firm, and the top quotations were sometimes exceeded for the best samples. Attempts to enhance the rate for other kinds proved abortive. Millers will not advance.

#### Eastern Grain and Provision Markets.

NEW YORK, July 23.—Wheat is unsettled, and the market opens higher on the movement of cliques, and after deals are made prices go off. Cash Wheat is neglected by exporters. Pork is in better demand and firmer. Lard is lower and dull.

CHICAGO, July 23.—The *Times* has voluminous reports from the entire Northwest, which are fully synopsized in its head lines: "A Certainty that the Wheat Crop of the West will be far Below the Average; Yield in Illinois, Iowa and Indiana Poorer than for Many Years; Brighter Outlook in Minnesota and Dakota and the far Western States; Extensive Reports Concerning the Army Worm and the Damage it is Doing; Cheering News from Great Corn Fields of Illinois."

CHICAGO, July 23.—The week's storms have interfered materially with the week's business, as evidenced by the fact that the clearings are only \$38,000,000, although they still exceed those of the same time last year. Jobbers, however, report a fair business in most departments of trade. The financial world continues satisfied with the present state of affairs, and plenty of money is easily loanable at good rates. The activity in money was chiefly due to the unusually heavy calls for margins on 'Change. The fact that although wheat has advanced 7 or 8 cts in a week, carrying other Grains and Provisions with it, and that only 2 small failures are reported, goes to show that dealers are much more cautious, and business being done on a more substantial basis than was formerly the case. The appreciation of values of products dealt in on 'Change is enormous in the aggregate, but there has been no nerv-









The Capital of this old and favorite company has been increased to

**\$600,000.00,**

All of which has now been fully paid up in U. S. Gold Coin, and invested in such securities as are not liable to loss by fire, and are readily convertible into coin.

**Assets, \$840,004.43.**

Having but a very limited amount exposed to loss in this city, and its business being so conducted as to be free from serious loss by conflagration anywhere, the "Old" California is now prepared to offer a quality of indemnity second to that offered by no other insurance institution, whether domestic or foreign.

C. T. HOPKINS, President.  
L. L. BROMWELL, Vice President.  
ZENAS CROWELL, Secretary.  
E. T. BARNES, Asst. Secretary.

### ZIMMERMAN

IMPROVED, GALVANIZED IRON,  
PORTABLE, FIRE-PROOF,  
**Fruit and Vegetable Drier.**

SIMPLE IN CONSTRUCTION, ECONOMICAL  
IN FUEL CURES THE FRUIT IN  
FROM 2 TO 3 HOURS.

It has the approval and hearty indorsement of nearly all the leading Fruit and Agricultural Journals of the country.

**Over 13,000 in Successful Operation!**

Awarded a Silver Medal by the Mechanics' Institute, San Francisco, September, 1880. Send for Illustrated Catalogue with Testimonials to

LINFORTH, RICE & CO.,

323 & 325 Market Street, San Francisco.

LOCAL AGENTS WANTED.

### FOR SALE OR EXCHANGE.

The Thoroughbred Roan Bull, New Year's Gift 17818. Bred by Cyrus Jones of San Jose, Cal. Calved, January 1, 1874.

Got —, by Grand Commander.....\$2085  
1st dam, Duchess 9th, by Baron Aldrie..... 9476  
2d dam, Duchess 7th, by Duke of Aldrie..... 2743  
3d dam, Duchess, by Sir Grey..... 432  
4th dam, Henrietta, by Sir Alfred..... 938  
5th dam, Lucilla, by Imported Romulus..... (2019)  
6th dam, Helen, by Bertram 2d..... (3144)  
7th dam, Ruby 2d, by Bertram..... (1716)  
8th dam, Ruby, by Young Sir Dimples..... (271)  
9th dam, Daisy, by Wellington..... (678)  
10th dam, Beauty, by Duke..... (224)  
11th dam, Lucy, by Young Cornet..... (905)  
12th dam, —, by J. Brown's Red Bull..... (97)  
Grand Commander \$2085, by Imported Royal Commander \$6914, out of imp. Goody Two Shoes, by Lord Lyons (26877).  
Baron Aldrie 9476, by 12th Duke of Aldrie 5534, out of Baroness 6th, by Royal Oxford (1874).  
This splendid Bull is in fine condition and warranted kind and gentle. A child can handle him. Address  
**R. THOMPSON, San Jose, Cal.**

## Caledonian Mills OATMEAL!

**ABSOLUTELY PURE!!**

MADE FROM SELECTED WHITE OATS. The most delicious breakfast food. No other preparation makes such sweet, wholesome porridge. Greatly superior to ordinary oatmeal mush. For sale by all the principal grocers.

### CALEDONIAN OATMEAL MILLS.

Sansome Street, near Pacific, San Francisco

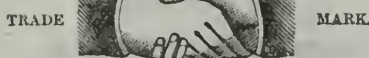
### WINDMILLS HORSE POWERS.



BUILT AND REPAIRED AT  
No. 51 Beale Street, - - - San Francisco.

Send for Circulars.

**F. W. KROGH & CO., (Successors W. I. TOSTIN.)**



### LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.60 per gallon. For directions and testimonials apply to **FALKNER, BELL & CO.,** Sole Agents, 430 California Street, S. F.

### To Fish Raisers.

I am now ready to sell Carp which were imported from Germany in 1872, in lots to suit. Address

**J. A. POPPE, Sonoma, Cal.**

## Nathaniel Curry & Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

**Sharps Rifle Co., of Bridgeport, Conn.**

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit

## C. D. LADD,

821 Kearny Street, - - - - - San Francisco, Cal.

SOLE AGENT FOR THE PACIFIC COAST FOR

**THE BALLARD RIFLE, AND MARLIN'S NEW BALLARD REPEATER.**

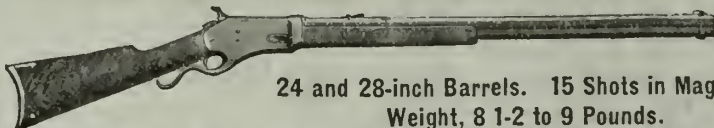


A FULL LINE OF  
WINCHESTER  
and KENNEDY,  
SHARPS, BALLARD,  
and REMINGTON  
RIFLES.

Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to suit. Liberal discount to the trade. Send for Special Price List for Marlin's New Repeater and Ladd's Improvement on the Kennedy Rifles.

**SEND FOR 1881 PRICE LIST.**

## THE KENNEDY REPEATING RIFLE.



24 and 28-inch Barrels. 15 Shots in Magazine.  
Weight, 8 1-2 to 9 Pounds.

USES THE WINCHESTER MODEL 1873 CARTRIDGE, 44 CALIBRE, 40 GRAINS, CENTER FIRE. Out of 500 Glass Balls thrown from a trap, 479 were broken with this Rifle. Prices Low. Circulars on application to

**E. T. ALLEN, Pacific Coast Agent,**

416 Market St., San Francisco.

## RECORD OF SUPERORITY.

1878-AWARDED  
**J. H. STROBRIDGE,**  
First Premiums:

Pen 5—Breeding Ewes.....\$22.50  
Pen 5—Yearling Ewes..... 22.50  
Pen 5—Ewe Lambs..... 22.50  
Pen 3—Ram Lambs..... 22.50  
Yearling Ram (1st and 2d)..... 38.50  
Two-year-old Ram..... 22.50  
Ram and 5 of his Lambs..... 30.00

### Sweepstakes:

For best Ram of any age or breed, and 5 of his lambs.....\$75.00



### THOROUGHbred SPANISH MERINO SHEEP.

We offer for sale this season 200 head Superior Rams, Yearlings and two-year-olds. Also 100 head Yearling Ewes and 50 head aged Ewes. These sheep are all free from disease. Are LONG STAPLED, WHITE WOOLED and HEAVY SHEARERS. Have a faultless constitution. Are larger and in better condition than any flock of Thoroughbred Spanish Merino Sheep in the State. Orders by mail promptly filled. Our ranch is only 14 miles from Oakland, by rail. Trains running each way every few hours. **J. H. STROBRIDGE, Haywards, Alameda Co., Cal. E. W. PEET, Agent.**

## HEALD'S PATENT PORTABLE STRAW-BURNING ENGINES.

The above Engine is the safest and most powerful in the market, lighter than other Engines, and no danger of explosions. An explosion of Heald's boiler has never occurred. Two sizes are made; either size will run the largest separator. All the latest improvements have been added to the boiler and engine. Is ready to stand a test any time. Is guaranteed perfect in all its parts, and will do the same work with less water and fuel than any other engine in the market. With one of

### HEALD'S BARLEY MILLS,

It will thresh and grind at the same time, all the separator can thresh. For further particulars, Address **J. L. HEALD, Vallejo, Cal.**

Engine can be seen at D. M. OSBORNE & CO., 33 Market St., S. F.

## A CHANCE TO VISIT FRESNO COUNTY.

### The Fresno Colony,

Which adjoins the Town of Fresno, being one of the finest locations in the County for Colony purposes, is now being sold off in 20 acre lots at \$50 per acre, with undisputed title to both land and water, and on terms to suit all.

We assert without any fear of contradictory proof, that the grapevines on irrigated land in Fresno County, produce at least one-third more grapes per vine than any other portion of the State. G. G. Briggs, of Yolo County, a few days since remarked, "of a truth, this seems to be the home of the Grape, Pear, Peach and Apricot."

We only ask all who are seeking homes or profitable investments to come and see what we have; none go away without expressing surprise at the productions of our soil.

A GRAND EXCURSION will leave Stockton and San Francisco on August 15th, for Fresno. Tickets good for five days, and only cost \$7 for the round trip; free conveyances from Fresno to all the Colonies.

**THOMAS E. HUGHES & SONS, Fresno, and 314 Montgomery Street, S. F.**

## At the SANBORN WAGON DEPOT,

24 and 26 Beale Street, S. F. Cal.

## WAGONS

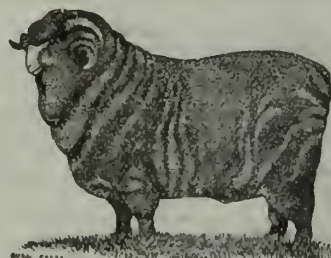
Three sizes of THOROUGH-BRACE WAGONS, with 1, 2 or 3 seats. Eight sizes of EXPRESS and DELIVERY WAGONS. Three sizes of FOUR SPRING WAGONS, with 1, 2 or 3 seats. Besides Business Wagons and Buggies.

Also, all sizes of FARM WAGONS, made by Mitchell, Lewis & Co., of Racine, Wis., who make the best Farm Wagons in the world. All our Wagons are fully warranted. **A. W. SANBORN & CO.,**

This space will be used by H. D. NASH & CO., 906 K street, Sacramento, Cal., Manufacturer of "The Improved Nash & Cutts Grain Cleaner," giving a full description of their new combination Gang of Seives, for separating Barley, Oats and Cheat from Wheat.

## LOOK OUT FOR IT!

Thoroughbred Spanish Merino Sheep.



**E. W. WOOLSEY & SON,**

FULTON, SONOMA COUNTY, - - CALIFORNIA

There is not only a constant demand for improved stock, but among intelligent sheep farmers is the demand equally constant for purity of blood and reliability of pedigree. We aim to meet this requirement, and in our importations have secured the best pedigreed Rams to be found on the Vermont State Register. It is this blood and quality we are offering, and upon these have been awarded First Premiums from the State Board of Agriculture at Sacramento for the past two years, and we were awarded by the same Board a majority of all premiums in 1880, viz.: 1st Premium on Best Stock Ram of 2 years of age and upward; 1st Premium on Best Buck Lamb; 1st Premium on Best Ewe Lamb; 1st Premium on Best Ram and Five Lambs. We were also awarded three First Premiums and the Sweepstakes at the Golden Gate District Fair of 1880. We will simply state that for length and beauty of staple, weight of fleece, with vigor of constitution our sheep cannot be excelled. We shall welcome our patrons at the ranch or orders by mail. City Address 418 California St., San Francisco.

## BUCKS.

We have 40—Corner 10th and Howard Sts.—Thoroughbreds, extra fine animals, "LONGWOOL" and "EUREKA" blood. Never Exposed to Scab! Prices, Low Down. Wish to sell. **HOMER P. SANE & CO.,** Lick House, S. F.

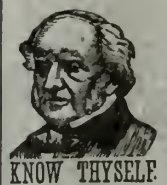


Calvert's Carbolic  
**SHEEP WASH.**  
\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON, S. F.,** Sole Agent for Pacific Coast.

### GOLD MEDAL AWARDED

the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled the "Science of Life or Self Preservation," bound in finest French muslin, embossed, full gilt, 300 pp. Contains beautiful steel engravings: 125 prescriptions. Price, only \$1.25, sent by mail, illustrated sample, 6 cents. Send now. Address **Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch street, Boston.**



KNOW THYSELF.

## GUNS

Lowest prices ever known on  
Breech-Loaders,  
Rifles, and Revolvers.  
**OUR \$15 SHOT-GUN**  
at greatly reduced price.  
Send stamp for our New  
Illustrated Catalogue (B)  
**P. POWELL & SON, 239 Main Street, CINCINNATI, O.**

50 Lithographed Chromo Cards, no 2 alike, 10c. Name in fancy type. Conn. Card Co., Northford, Ct.



## Seeds, Plants, Etc.

**R. J. TRUMBULL & CO.,**  
Growers, Importers, Wholesale and  
Retail Dealers in



FLOWERING PLANTS, BULBS, FRUIT AND OR-  
NAMENTAL TREES, ETC. FANCY WIRE DE-  
SIGNS, GARDEN TRELLISES, SYRIN-  
GES, GARDEN HARDWARE, ETC.

FREE TO APPLICANTS.—OUR DESCRIPTIVE ILLUS-  
TRATED CATALOGUE OF SEEDS, TREES, PLANTS, ETC.

**R. J. TRUMBULL & CO.,**

419 and 421 Sansome Street, S. F.



**B. K. BLISS & SONS,**

Importers, Growers and Dealers in Garden, Field and  
Flower Seeds, Dutch Bulbous Roots, Summer Flower-  
ing Bulbs and Garden Requisites of every description.  
Catalogues mailed to all applicants. Address

**B. K. BLISS & SONS, 34 Barclay Street, N. Y.**

## PEPPER'S NURSERIES.

Established in 1858.

For sale, all kinds of Fruit Trees, Vines and Fruiting  
Shrubs raised without irrigation. Also, a general assort-  
ment of Evergreen Trees and Shrubs, deciduous Flower-  
ing Shrubs; Roses in assortment. Conservatory and Bed-  
ding Plants in great variety. Send for Catalogue and  
List of Prices. Address **W. H. PEPPER,**  
Petaluma Sonoma County, Cal.

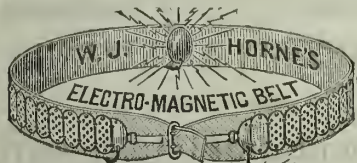
## Attention, Fruit Growers!

As the Budding season is at hand, I am prepared,  
where quantities are wanted, to grow any variety of  
Fruit Trees for 1882 at Reduced Rates.

Correspondence solicited. **ISAAC COLLINS,**  
NURSERY, Haywards, Cal.

## COTTON SEED

For sale in quantities to suit, by **McAFEE BROTHERS,**  
202 Sansome Street, San Francisco, California.



Patent, Nov. 11, 1879,  
Patent, Nov. 9, 1880.

Medical Electricity.

**HORNE'S ELECTRO-MAGNETIC BELT.**  
(The Only Genuine.) Received 1st Premium State Fair,  
Electro-Magnetic Belts, New Style, \$10; Electro-Magnetic Belts,  
Extra Appliances, \$15; Electro-Magn. Belts, 9 Improvements, \$20  
GUARANTEED ONE YEAR. BEST IN THE WORLD.  
Will positively cure without medicine—Rheumatism, Paralysis,  
Neuralgia, Kidney Disease, Impotency, Rupture, Liver Disease,  
Nervousness, Dyspepsia, Spinal Disease, Ague, Piles and other  
diseases. Send for illustrated catalogue, free. Also  
GUARANTEED RELIEVED,  
or Cured. Send for Illustrated  
Catalogue. Hundreds of cures.  
**W. J. HORNE, Prop. and Manuf'r.**  
702 Market St., San Francisco, Cal.



FIRST PRIZE State Fair  
and Mechanics' Institute  
Fair, awarded to the **CALIFORNIA ELASTIC TRUSS**  
for the Best IMPROVED TRUSS-  
ES. Address or call on **CALIFORNIA ELASTIC TRUSS CO.,** 702  
Market St., S. F. Send for Cata-  
logue of Wonderful Cures.

**M. COOKE** **R. J. COOKE**

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento  
ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

Communications Promptly Attended to.

**COOKE & SONS, Successors to COOKE & GREGORY**

## SHOPPING

Done in **SAN FRANCISCO** for Ladies and Gentlemen,  
and COMMISSIONS OF ALL KINDS EXECUTED with  
judgment and taste especially in

Dry Goods, Fancy Work and Music.

Samples sent free. Circular and references given on  
application to **MISS E. H. MAYNARD,**  
1521 Washington St., S. F.

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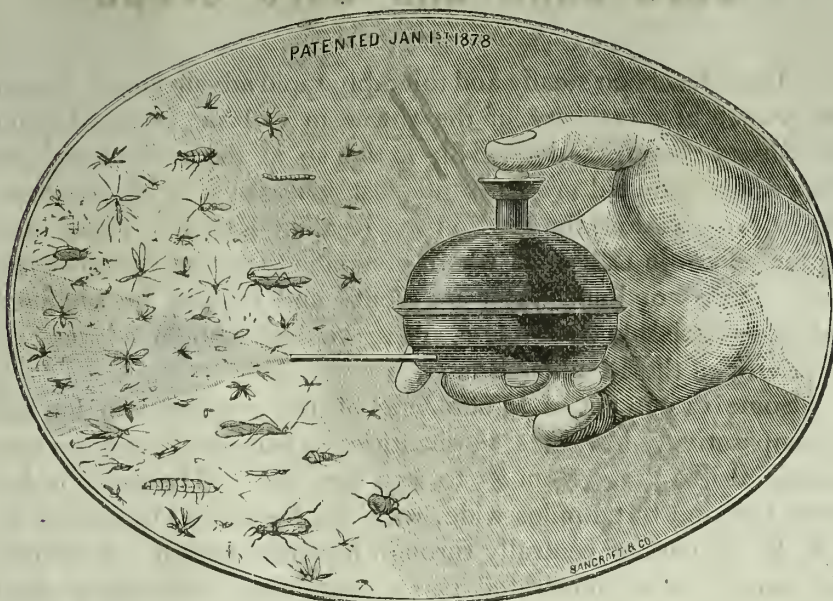
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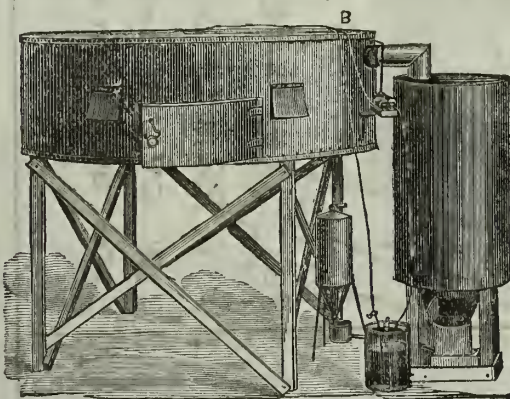
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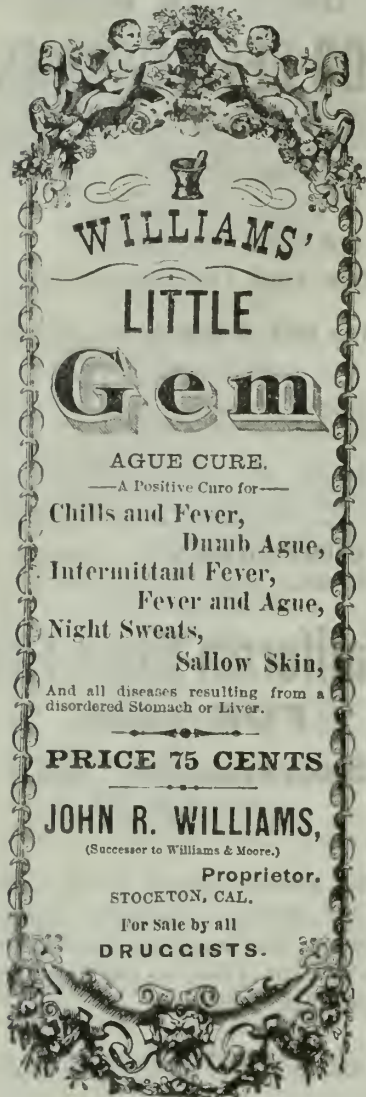
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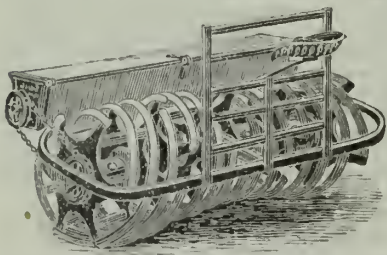
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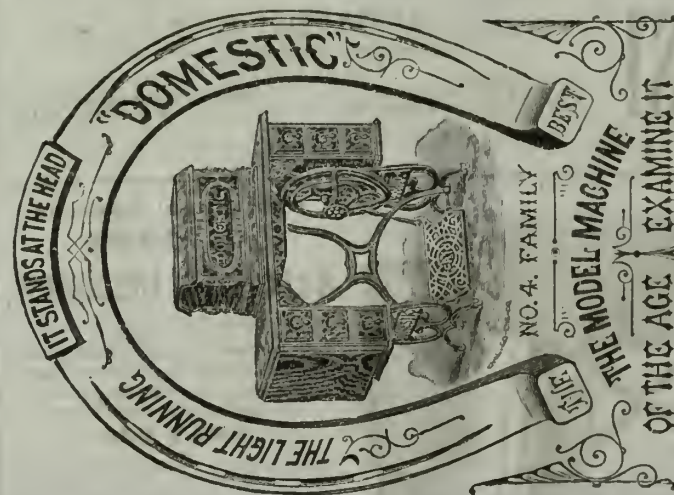
The Drier that opens its sides every ten minutes to raise the trays loses fully one-quarter of the heat, thereby losing one-quarter of the capital in fuel.

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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, AUGUST 6, 1881.

Number 6

## The Golden Gate Park.

A few years ago the outside lands of San Francisco, westward from Devisadero street, were often the source of fierce contention for possessory right by various parties, not unfrequently resulting in bloodshed and death to the retainers of adverse claimants. How long this state of affairs would have lasted it is hard to say, had not some far-seeing persons succeeded in having a portion of the land in question sequestered and finally, by legislative enactment, devoted to public use in the shape of parks. The property once secured, it was not

In fact, it was a miniature Arabia—there was *Stony* and *Sandy*, but the third part was lacking. Kind nature, with bounteous hand, had decked no portion of it with lofty trees and luxuriant herbage, and the lonesome traveler derived but little comfort and society from the presence of vegetable life. Out of such an allotment how nearly has been constructed Arabia Felix, may be ascertained by spending a day within its bounds. Noonday and midnight are not more opposite than

### What it Was and What it Is.

It seems to be an institution created for the people, and a more cosmopolitan thing than its visitants can hardly be found. Representatives from every class and condition of society enter

toiling in the "sweat of his brows," becomes invigorated and refreshed as he takes his walk, with the happy family group about him, and marks how the desert has been made to blossom as the rose.

### The Conservatories.

This structure is favorably situated on a commanding site between the main drive and the north ridge road. The building is about 250 ft. in length, covering an area of about 15,000 sq. ft., and exceeded in size only by the Government conservatory, at Washington. Oriental in style, graceful in outline and highly ornamental. The main entrance, or reception-room, is 23 ft. square, substantially furnished, and ornamented with a fountain in the center. From this room

The arched room on the extreme right of the building is set apart for the cultivation of the larger and rarer aquatic plants. A circular pond, 23 ft. in diameter, has been constructed here, with the necessary heating apparatus, and the general public already know the result. In this tank the *Victoria Regia* lily reigned supreme, surrounded by the less pretentious, yet still beautiful sisters of her tribe.

### The Ferns.

Although not confined to any one portion of the conservatory, more may be found adjoining the lily pond than anywhere else. The collection comprises all the finer varieties, such as tree ferns, staghorns, climbing ferns, adiantums, and in the more sheltered nooks the magnificent



OUR GREAT PLEASURE GARDEN—THE CONSERVATORY, GOLDEN GATE PARK, SAN FRANCISCO.

Photographed by I. W. Taylor.

long in being turned to account. With this end in view, the Governor was authorized and directed, within 30 days after the passage of the act, to appoint three Commissioners, who were to hold office for four years without compensation, each Commissioner to be a freeholder and resident of San Francisco. The first Board of Commissioners was composed of Messrs. S. F. Butterworth, D. W. Connelly and C. F. McDermot, and to them and their successors our city will ever be greatly indebted for what is now the most delightful resort on the coast. We have never heard what the gentlemen had to say on being shown their field of labor—certainly nothing could have been much more uninviting.

The grant consists of a parallelogram about three miles in length by half a mile in width, and contains in the neighborhood of 1,050 acres, of which fully three-quarters were desolate sand dunes, relieved here and there with a hill of red rock suitable for making roads.

its portals, and the gay equipage of the millionaire often presses hard on the tattered garments of Lazars. During the year just passed the gatekeepers have reported the entrance of the following: Carriages, 42,745; double huggies, 47,070; single, 170,302; total vehicles, 260,117; equestrians, 37,526; pedestrians, 834,863; in vehicles, 780,501; total, 1,652,993.

For the accommodation of these visitors there has been constructed (linear measurement) of drives and bridle paths, 48,632 ft., covering an area of 2,055,630 ft., and of walks for pedestrians, 10,000 ft. This does not include road making done by the Bush fund.

These walks and roads have been on every hand embellished by the gardener's art, until, in her gay attire, the park enfolds a vast variety which is pleasing to the human mind, and consequently has a tendency to tranquilize the agitated passions, exhilarate the man, and render all around him delightful. Here he who has been confined with the business of the week,

the visitor enters the rotunda—a circular room 56 ft. in diameter and about the same number of feet in height. An octagonal space in the center of the rotunda is occupied by several varieties of rare tropical plants; and the dryness of the atmosphere is relieved by the spray from a fountain set in the center of all.

On the right of the rotunda is the Orchid house, an arched room, 35x50 ft. There are many rare and beautiful varieties of this strange family to be found here, representing a monetary value of hundreds of dollars, principally the gift of our public-spirited citizens. The space not all being taken up by the orchids, an infinite variety of other beautiful flowers have been introduced, presenting the great difficulty of deciding which is possessed of the greatest charm; yet certainly, nothing can be much more beautiful than the collection of gladioli here assembled. The beauty of the flower steals upon one, and almost before we are aware of it, we are absorbed in admiration.

Farleyense shows how beautiful a thing may be yet bear no flowers. There is probably no form of growth that attracts more attention than ferns. Their delicate foliage causes them to be sought for cultivation, or their fronds are carefully gathered and dried by the ladies against the time when occasion offers for spatter-work. They furnish to botanists a broad and inviting field for investigation, but their greatest beauty can be brought forth only with the microscope. Thus they appeal to the scientific element of man's nature as well as to the æsthetic, and while they gratify the taste, furnish food for the intellect.

We doubt the existence of a superior floral display anywhere in the world, and a 30-year old city being the possessor of it must commend, abroad, our admiration of the beautiful, as well as the public spiritedness of our citizens.

On the left of the main building is a wing

(CONTINUED ON PAGE 59).





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

## Shasta County Notes.

EDITORS PRESS:—Our favorite, the RURAL PRESS, brings so seldom news from Shasta county that I cannot refrain from sending a short report of our doings here, and of the county in general. Shasta offers many inducements to the settler of small means. A few of them are: Cheapness of the land, plenty of rain as to secure a crop every year, moderation of temperature, abundance of timber and a lovely freshness, which the trees and brush impart to the landscape even late in fall.

I have a ranch on the Cottonwood creek, 10 miles from Cottonwood station. Two years ago when I came here there were only a few farmers here besides those along the creek. Now there is farm touching farm. Even the railroad land has almost all been taken up. The new settlers have come in a great part from Colusa county, and are industrious and progressive—far more so than some of the old ones, who have a natural dislike for fencing and plowing.

Sheep-raising has been carried on here to some extent, and not to the benefit of the country. Most of the people interested in that business did all in their power to discourage immigration. But what has done more lasting harm, is that these herds reduced the high grass and wild oats, which could be cut for hay about 20 years ago, to the height of only a few inches. This diminution of the protective covering of the soil now gives to the water in heavy rain-falls—which we have every winter—a free and unimpeded course. The water rushes down hill and breaks up whole tracts of fertile land, so destroying it forever. It has done great damage in the Bald hills. Sheep-raising, of course, contributes to the wealth of the State, but it does it, at least to a certain degree, in the same manner as hydraulic mining—leaving behind desolation. Raising of herds and farming are from their nature antagonistic (the old history shows many illustrations of it), but it deserves our highest consideration as soon as the former becomes subservient to the latter; then it means improvement of stock and farm, and what first was a rude occupation, has now become an art.

I started from San Francisco with a team, with the determination to find suitable Government land. Our journey was to be direct to Shasta, but when we—my son and I—came within a few miles of Cottonwood, we happened to meet with a gentleman of Red Bluff. He informed us that there was some vacant land yet a few miles up the creek, and he gave us at the same time the necessary instructions where and how to find it. So we abandoned our road and went up the Cottonwood. Since this moment we received from everybody whom we met the most discouraging information. The first were two men on horseback, who told us that there was no land left of any account; that all the settlers were obliged to leave by-and-by, and that no potato would grow in any of the land up here. All further news which we collected was of the same kind. But we did not get disheartened, traveled on, found land and filed on it at the Shasta Land Office. This land, the only one which was yet vacant on the creek, had often been looked at by parties, but was as often rejected with the treacherous expectation of finding something better. I took to heart the wisdom of Goethe's verse, which I try to translate as follows:

Wilt thou wander, always wander:  
Look! the good thing lies so near!  
Only try to catch thy fortune;  
Is the fortune always here.

And so I took possession of it. It proved to be an excellent spot, and I am quite satisfied with it.

Last year we did much hard work, fenced, cleared, made levees to protect the land on the shores of the creek from being washed off, and planted trees and vine cuttings. Our oats for hay, which we only could sow late in March, yielded almost nothing; none of 1,500 cuttings grew, and 50 out of 100 trees planted were destroyed by the borer. Our garden was also an entire failure, not having chosen the right spot. This was a bad beginning. I believe I saved the rest of the trees (all of them having been affected), by cutting freely and vertically through the bark, as advised some time ago by a writer in the RURAL PRESS. Twenty-five more grew this spring from the root.

Notwithstanding our failures, we did not give up. We cleared new fields, fenced and built, and now we have a large barn full of hay, a field of corn and dhoura, which are almost ripe; a good many sacks of potatoes, beans, cabbage, onions, melons, pumpkins, oyster plants, cucumbers, etc., and plenty of all, so that we have something to live on almost the year round from our own produce. Late potatoes, which we tried, have large bushes and were full of blossoms, but they have only few little potatoes under. People are of the opinion generally that the Early Rose will not keep through the winter. My garden embraces two acres, but cucumber and pumpkin vines became much crowded, and we had in consequence a hybrid fruit of the shape and skin of the pumpkin growing on a cucumber vine. I thought this

worth mentioning. We raised all without irrigation. Our cucumber patch is only about 20 ft. square, but we had plenty cucumbers to eat, some to give away and we pickled three barrels besides, which ornament our store-room. We had this year a few peaches and cherries from our young trees, but hardly enough to get the taste of them. Next year we can expect a few more. Trees grow well here without irrigation. A farmer, three miles east from here, started a nursery last year, and all his trees do well. I planted 60 of the Department tea seed, which came for distribution this spring, but only one of them sprouted, and the plant died when two inches high. Mr. LeDuc has been much abused, principally by the Eastern papers. He shares the fate of physicians, who are often praised for that which they did badly and not to their own satisfaction, while they are often blamed for what they did to perfection, effecting real and lasting good. All laws of nature and those governing society are universal. It is not impossible that notwithstanding all that has been sneered and ridiculed about it, out of the small beginning may result in a few years a more general culture of this precious plant. Was the introduction of the orange in Italy, France and Spain, not beset with the same difficulties?

I had been advised not to plant any beans, as they would have large bushes but bear no fruit; but I had found out in the meantime that all such information, given with wise faces, was little reliable, and as I saw no reason why they should have no fruit, I tried four kinds—the little white, yellow and red bean and the lima bean. The three first ones did well; the yellow proved to be the most productive. The lima bean, which grew slower and appeared to be much later, hangs full of pods.

I believe that all farmers who are entirely illiterate and are opposed to all reading, are not able to make rational deductions. What they announce has only the appearance of truth, for they do not consider all the circumstances which govern a case, and are not able to take a sufficiently broad view of the matter in question, so that their experience can have no value to themselves or to others. I have to thank the RURAL PRESS for what little I know of farming in this State, and I consider it my safest advisor.

Farming is carried on grand here, though with exceptions, in a rather primitive way, and this is the reason that crops sometimes fail here. We get every winter plenty of rain. If the soil has been summer-fallowed and the seed put in early, all our trouble will be rewarded by a good crop. Most of the upper land—in distinction of the creek bottoms—is good, although there are some sections which are gravelly, and there, of course, no grain will grow well. In the Bald hills the soil is adobe; below the hills and on the plains, there is red sandy loam; near the banks of the creek, mostly covered with white oak and brush, the soil is more heavy, and contains more clay. Upon some of the hilly shores of the creek and the more even land between them, we meet with a gray friable soil of disintegrated rock, which, I believe, is well adapted to grape growing. All this land, when well cultivated, produces good grain.

To give an idea how farming has been carried on here, I have to mention only, that parties have thrown manure in little gulches and deep places near their fields where the water stands, merely as material to fill up. All their doings bear the same general character. They do not try to raise what they need for daily use, like the Pennsylvania farmer who never spends one cent for victuals except the most necessary groceries and are known to keep an excellent table. In short, too many California farmers make no garden—this Alpha and Omega of good husbandry. They go on borrowing till their credit is exhausted, starve, and finally leave disgusted, to make room for more enterprising men. It may be questioned, whether these people do not deserve more pity than blame, formed as they are, by inherited dispositions and fixed circumstances, but justice requires to defend the other party—the land—from the result, to be worth nothing.

There has been some agitation to introduce a fence law in this county, but I believe this measure would come a little too early. This county is, with exception of the plains and river and creek bottoms which form the different valleys, to a great extent very hilly, and has always been considered predominantly a cattle-raising country. The time is only short since agriculture has received much more attention, and the area of cultivated land is yet small in proportion to that covered with trees and brush. This part of the county is well adapted to hog-raising. This year we shall have an abundance of acorns. Some swamp oaks of mine bear acorns three inches long.

Shasta county is not the place for those who look for large continuous fields of thousands of acres, and for those who want only to raise large quantities of grain. He who settles here must, besides raising his own grain and perhaps a little to sell, keep cows, hogs, horses and poultry, and plant trees and vines. There is a market for all near by.

This spring, farmers came together to consult about building a school and meeting-house, but the project wrecked on the eternal rock of egotism. I do not doubt, however, that the attempt will soon be renewed under the pressure of advancing civilization, and that it then will be successful. The appreciation of Shasta county is only the matter of a little time. We can afford to wait for it.

RICH. SCHULTZ, M. D.

Cottonwood, Cal.

## HORTICULTURE.

## Plants Worth Trying in California.

The following is part of the report of H. Behr and W. G. Klee, a committee appointed by the State Horticultural Society to select from Baron Von Mueller's writings such plants and trees as they deemed worth trying in California. The following was submitted at the meeting of the Society, July 29th:

*Acacia decurrens* var *mollissima* (the black wattle of South Australia): Is, in the hay counties, a well-known ornamental tree. Its great value for tanning is, however, but little known; as experiments in Ferd. Von Mueller's laboratory show the artificially dried bark contains from 30 to 54% of tannin; the meroantile bark has, however, 10% more moisture, nevertheless, it is extremely rich, only one and a half lbs. of this bark being needed for one lb. of leather, while five lbs. of English oak are requisite. *A. mollissima* is one of the most rapid growing of the large-growing acacias, and deserves planting, especially in dry, sandy, treeless regions. According to our experience it does not thrive in a tenacious, wet soil.

The variety *dealbata*, or, as it is called by the colonists, the silver wattle, is distinguished by the ashy hne of the foliage and by maturing its seed in less than half the time than the *decurrens* proper. It is a fine tree for lumber, but is especially a very great heater, and most valuable as a source of fuel; on this account it deserves planting in treeless regions, aside from its beautiful appearance.

*Acacia pygmaea*, *falcata* and *saligna*: Are small trees; very valuable for binding drift-sand and for tanning, specially *pygmaea*.

*Acacia horrida* (the Doornboom or karra doorn of South Africa): Is, as well as the Australian *A. armata*, available for hedges; the latter is quite hardy along the coast. Of all the numerous Australian acacias that grace our gardens, none deserves as much to be planted as the *A. melanoxylon*, known as the black wood. This tree will, under favorable circumstances, reach 80 ft. The wood is most valuable for furniture, railway carriages, boat building, casks, billiard tables and pianofortes (for sound boards and actions). The fine grained wood is cut into veneers, takes a fine polish, and is considered almost equal to walnut. It is the best wood in Australia for bending under steam. Besides all these uses, the bark is available for tanning—air-dried bark containing from 15% to 28% of tannin. As the black wood acacia is a rapid grower, and is hardy where the blue gum will thrive, and even withstands lower temperature, we have here one of the most desirable timber trees that deserves planting on a larger scale just as much as the favorite eucalyptus. The black wood acacia is not alone raised easily from seed, but can also be propagated from suckers that appear in great abundance where a tree is cut down.

*Acacia harpophylla*, from Southern Queensland: Is said to furnish a great deal of the bark for tanning, and a wood, brown, hard, heavy and elastic. It attains a height of 90 ft., preferring sand lands to the exclusion of other trees; wood pervaded by a violet odor.

Maples (*Acer*): Among the numerous beautiful members of this genus the California species, *A. macrophyllum*, certainly deserves a place. Though not very tall, it forms a splendid shade tree for streets and avenues, and if taken proper care of is of rapid growth.

*Acer platanoides*, the so-called Norway maple, deserves trial, as well as the sycamore-maple (*Acer*).

*Pseudo-Platanus*: Both thriving in the same climate as the English oak (*Quercus robur*), that has proved so well adapted to the coast region of this country. The well-known sugar maple, growth comparatively fast, and recommends itself to all old residents of the States east of the Rocky mountains.

*Albizia julibrissin*, from Caucasus to Japan: Is a favorite ornamental shade acacia in South Europe.

*Amyris terebinthifolia* (Brazil): Has proved hardy in Victoria (Australia), and deserves, therefore, trial in California, as an avenue tree.

*Angophora intermedia*: Is the so-called apple tree of Australia, belonging to the myrtle family and a close ally of the eucalyptus, but a better shade tree than most of these.

*Brachychiton acerifolium* and *populneum*: Sterculiaceae trees of Australia, very ornamental both for foliage and flowers; the so-called flame tree, *acerifolium*, is perfectly hardy in the locality of Berkeley. Their growth is comparatively slow.

*Buddleia Madagascariensis*: Of these ornamental trees one of the largest and prettiest may prove hardy in sheltered localities.

*Castanopsis chrysophylla*, the oak chestnut or Western Chinquapin: Is a native of California; though in the dryer part of the State it only reaches the size of a dwarf shrub, it becomes a stately tree in the moist northern counties, reaching as much as 125 ft. in height; like many other California trees yet to be mentioned, the oak chestnut deserves to be cultivated in the park and garden.

*Casuarina*, the she oak or horsetail pine (*Casuarina*): These singular trees can hardly be recommended as shade trees, but among them we find some of the most durable timber trees, most of them content to live in the barren coasts as well as in the saline marshes and alkaline

lands. If pollarded like willows, they will produce a young shoot that cattle will live on.

*C. equisetifolia*, from East Africa, South Australia, South Asia, North Australia, Polynesia: Attains as much as 150 ft. in height; splendid for fuel, giving great heat and little ashes; timber tough, as many of this species will also live in saline ground; the yield of fire wood from this tree has been estimated to be four times as great as any return from any tree in France. In India it grows on pure sand, and is much used for railway locomotives. The cost of rearing *Casuarinas* in India has been from £4 to £8, and the return after only eight years, £13 to £32.

*C. suherosa*, the erect she oak of Southeast Australia: Is of fine dense growth; endures the climate of the bay counties well; quadrivalvis, glauca, torulosa and others are valuable for their wood, and all deserve rearing in suitable localities.

*Ceroxylon andicola*: The wax palm of New Granada, ascending the Andes to 11,000 ft. elevation. One of the grandest and at the same time one of the hardiest of all palms, reaching a maximum height of 180 ft. Trunk exudes a wax, as much as 25 lbs., being obtainable at one time.

*Chamerops martiana*: A species of palm found in Nepal as high as 5,000 ft. above the sea, forming a beautiful tree 50 ft. high.

*Cocos australis*: One of the hardiest of all palms, if not the hardiest, withstanding a temperature as low as  $\div 8^{\circ} C.$ ; therefore even harder than the date palm; it is a native of southern Brazil to Uruguay and the La Plata States. *C. yatay* from the same region, together with *C. datil* form forests here; the latter producing date-like fruits.

*Corynocarpus laevigatus*: The karaka of New Zealand, and the principal forest tree of the Chatham Islands, attaining a height of 60 ft. It is to be regretted that this beautiful tree cannot be recommended for general planting; it will, however, live in sheltered localities along the coast; for instance in Santa Cruz, but will stand only a very slight degree of frost.

*Drymys wiuteri* (*magnoliaceae*): Is the Canolo of Chile, sacred, under the name of Boighe, to the original inhabitants; reaches in river valleys a height of 60 ft. Wood never attacked by insects (according to Dr. Philippi.)

*Eucalyptus*: This extensive genus has found great favor in California, and planting of gum tree forests is perhaps on the increase, especially the blue gum. *E. globulus*, though this, no doubt, is the latest grower, it is by no means the most valuable. Of the extensive list mentioned by Ferd. Von Mueller, we shall but mention a few, and refer anyone who desires full information on this subject to the *Eucalyptographia*, just published by that author. By far the most important for California is the red gum, *E. rostrata*, which, as far as our knowledge goes, is but little known here. Strange as it is, the red gum sold in San Francisco and neighborhood is mostly *E. viminalis*, a valuable rapid grower, but in regard to the quality of wood, greatly inferior to *rostrata*. This species will withstand more water inundation than many other eucalyptus, while the timber is one of the most durable and strongest for underground work. As it is naturally found in moist ground with clay subsoil, it cannot be expected to thrive on the driest hills. It will, however, grow in saline soil.

In Australia it is preferred to any other eucalyptus for railways and bridges, for ship building, and in fact for any kind of durable work below or above water, as well as for underground work, and is second only to the famous Jarrah (*E. marginata*) in resisting the attack of the chelura and limnoria, the teredo, or even the white ants.

*E. marginata*: Is the Jarrah or Yarrah of western Australia; the wood of this tree is even more durable than teak, resisting the attacks of all borers known. On account of its color it is termed mahogany, and need for furniture, as it takes a beautiful polish. The Jarrah has not been found to be a fast grower as compared with *globulus* or *obliqua*, but infinitely faster than most other hard-wood trees, especially deciduous ones. Unfortunately, it is somewhat more tender than either. Of the other two species, specimens 4 and 5 ft. high having been killed at the experimental grounds at Berkeley the year before last, nevertheless others slightly sheltered escaped, and a specimen this year has survived the season unprotected. The great value of the timber makes it, however, most desirable that this tree should be tried in the southern part of the State, where there no doubt could be found localities warm enough for it. It makes the best wood on ironstone ranges, and on the whole the wood from the hills is darker, tougher and heavier than that of the plains. The Yarrah is not of the tallest eucalyptus, but reaches, nevertheless, an enormous size; stems have been measured 80 ft. to the first branch, and 32 ft. in circumference 5 ft. from the ground.

*E. platyphylla*: Is a species from Queensland, said to thrive in exposed localities and produce very large leaves; one and one-half ft. long and one ft. wide.

*E. citriodora*: From Queensland, furnishes an excellent timber, and is pervaded with an easily-extracted, lemon-scented oil.

*Fagus Cunninghamii*: The Victorian and Tasmanian beech is a magnificent evergreen tree, not rarely 200 ft., furnishing excellent wood—the myrtle wood of the trade. Thriving only in rich damp soils, we can hardly expect to grow it where timber is most needed; but it would form a valuable addition to our shade trees in parks and large gardens.



**Ficus Sycamorus:** The sycamore fig tree of the Orient; a splendid shade tree of enormous size; one of the trees in Cairo belonging to this species, legends connect with Christ, is still growing.

**Flindercia Oxylyana:** The yellow wood of N. S. Wales and Queensland, as well as F. australis, are both valuable hard wood, timber trees, reaching as much as 150 ft. in height.

**Jacaranda mimosifolia:** From Brazil, furnishes the beautiful palisandre wood; has proved hardy at Sidney and will therefore probably thrive in sheltered localities in the southern counties.

**Knightsia excelsa:** Another proteaceous tree, the Rewa-rewa of New Zealand furnishing a most beautiful wood, specimens of which may be seen at the University cabinet collection.

**Laurelia aromatica (Laurineae):** A handsome evergreen tree, resembling the California bay-tree; is a native of Valdivia, Chile, where it produces a wood not attacked by insects. We believe that the seeds distributed by the Bulletin office under the name of Bayoto are of this tree.

**Quercus robur (the English or German oak):** One of the most valuable of all timber trees; deserves trial, not alone as an ornamental shade tree, but for its timber. In Berkeley this tree has made the extraordinary growth of four ft. the third season, out-doing all other oaks; and from Australia comes the report that it withstands even the fiery winds of the desert.

**Quercus densiflora, or the chestnut oak of California,** better known perhaps as tanbark oak: This beautiful tree, found associated with the redwood, is undergoing a wholesale slaughter; and, maltreated as it is, it is no wonder that it never has attracted attention as a shade tree. In the redwoods this tree is seen to great disadvantage, but, grown by itself, it forms one of the most handsome trees in existence. Combining the pretty staminate flowers of the chestnut with fringed cups of the burr-oak and the evergreen foliage, more like certain banksias in texture, it is of the most remarkable and finest trees in California, well deserving a place in the garden, park and avenue in preference to many most highly prized trees of cultivation.

California possesses several very handsome oaks worthy of cultivation, as the black oak (*Quercus Kelloggii*), the golden oak, large live oak (*Quercus Chrysolepis*), but as California trees perhaps are outside the scope of this report, we must satisfy ourselves by calling the attention to these few.

**Santalum album santalaceae:** Is a small tree found in India, ascending to temperate regions in Mysore. The famous fragrant sandal wood is the product of this tree.

**Santalum Preissianum:** Is an Australian sandal wood, called the native peach, the quandong or catunga by the aborigines. The fruit is edible, and can be reared in desert tracts.

**Schima Wallichii:** A ternstroemiaceous tree from Indian mountains to the altitude of 5,000 ft., growing to the height of 100 ft. and yielding a valuable timber.

### The Apricot.

The following essay by Dr. J. Strentzel, of Martinez, was read at the last meeting of the State Horticultural Society: The Bonanza tree of California, with its glossy foliage, blossoms of snow and rose, and golden, nutritious fruits rivaling the famous apple of the Hesperides in beauty and ancient renown, is at the present time one of the most extensively cultivated and highly prized fruits of Central Asia. Our climate is favorable to its growth; our commercial facilities and enterprise admit of its distribution as an article of trade to all the marts in the world; and the extent of its culture, and, consequently, the augmented prosperity of our people by this industry, can scarcely now be fully appreciated; hence any information regarding its growth and propagation is of great interest to every land-owner.

The habit of the tree of early blossoming, subjects it to injury by late spring frosts, and, to avoid this, a sheltered location is required, a gently rising hillside of western aspect is proved to be best adapted in warding off the morning rays of the sun; a certain haziness in the atmosphere, artificially produced by smoke, and natural near large bodies of water, has the same effect.

A rich, mellow, loamy soil is required to produce a good growth, its fertility to be kept up by the free application of ashes, bonedust and barn-yard manure. Ample space should be given for spread of the branches and full exposure to the sun's rays or rather abundance of air for breathing—25 ft. distance between trees is fully needed.

The tree belongs to the natural order of *Rosaceae* and the genus *Prunus*. Its relationship with the plum and peach admits of using either for stocks to graft or bud the apricot upon, as the seedling apricot does not do well on many soils. Some prefer the plum for its reputed adaptability to grow in heavy or cold ground, but it suckers badly, its wood is of slower growth. Both these objections are avoided by using peach seedlings of healthy, stocky growth. Crawford's seedlings are well adapted. To secure the desirable success,

#### Only Select Trees

Should be planted in orchard. The majority of nursery trees are stunted, crooked, thorny brush, requiring a couple of years' growth to bring

them into shape. I find two-year-old peach seedlings, budded and transplanted early in the season, in the dormant bud, preferable to older growth. A single stem only should be allowed to grow, favoring the symmetrical development of the branches forming a perfect low cone easily shortened into a desired form—this treatment secures an abundance of regularly distributed bearing wood, and stoutness of limb to uphold a reasonable quantity of fruit—accessible to the picker, and fully exposed to light and the sweetening rays of the sun. All the preceding labor would be lost if the trees grown are not of the quality best adapted to our uses.

It is fully within the scope of fact that a tree of choice fruit in the sixth year from planting will secure a revenue of \$5, a sum representing interest on a capital of \$50, certainly an ample incentive for exertion, and of vast significance in a monetary point of view, when there are vacant spaces to raise a million of trees on spots now producing inadequate returns for hard labor in scanty grain crops or rank weeds. The enterprise in its beneficial effects is so astounding, as there is no danger of over production, that some without knowledge may consider the statement overdrawn, in plain parlance a California yarn; whereas it is under mark, as can be amply testified by members of our society. The simple fact that our State may secure the monopoly of supplying the canned and dried fruits of the apricot to the greater part of the United States and Europe, because it cannot be grown economically by them, and no other fruit is more sought for and in demand, resolves the question. The slow progress heretofore made in its culture can be ascribed to the many worthless, unproductive varieties first introduced, and lack of canning and drying establishments. Now ample trial has proved the kinds desirable to raise and the canning establishments are insufficiently supplied.

#### Varieties to Cultivate.

The Breda is an old variety, of small size and of delicious flavor, unsurpassed for jellies and jams, and its sweet kernel is very palatable—an additional source of income. The large Early, a large, showy fruit, but a shy bearer through Central California. The Royal, accepted as most profitable to raise, prolific and of good quality. The Peach—fruit of the largest size, fine color, of delicious flavor, a good bearer—is superior to all others in quality. The Moorpark, a little inferior to the above and a shy bearer in places; can be improved on by careful pruning—its large size is the main recommendation. There are many old varieties named in the books, also some good seedlings grown in California not yet fully tried. Some of the above named varieties do exceedingly well at one point and are of less repute at another, but they can be considered as "stand-bys" for extensive orchard planting—veritable bonanzas, without "slickens," to secure for our people a well-deserved prosperity.

### Olive Oil Making.

The following paragraph on the clarifying of olive oil is by Ellwood Cooper, of Santa Barbara, and should be read in connection with his previous article on olive oil making, which was printed in the Press of March 12, 1881:

Filtering or clarifying is a very simple process. The most common method is to have a series of five or six boxes, one above the other, each with cotton batting in the bottom. The oil passing the sixth will be beautifully clear and ready for market. I use cylindrical tin vessels, holding about three gallons each, one fitting in the other in tiers of three, with fine wire sieves in the bottom of each. On these sieves I place two or three layers of cotton batting. The oil is passed from one tier to the other until clear. The clarifying can be done by the sunlight; also, it can be bleached and made much lighter in color, but not without injuring it. When it is adulterated artificial heat is necessary in the process. When once heated it loses a part of the nutty flavor, and is liable to become rancid when exposed to the air. It should be kept in an ordinary cool place, not exposed to sunlight or heat; neither should it be handled any more than is absolutely necessary in the filtering and bottling, and should not be shaken after being bottled. The mucilage contained in the oil will not separate for a long time after the oil is ready for use, and as it does not injure it, is not, therefore, objectionable. It will sometimes form in the bottles, like globules of water, or in films settling to the bottom as sediment, and when shaken will give it a muddy appearance, which, with the common prejudice against all table oils that are not perfectly clear, renders it unsalable, as consumers consult more the eye than the taste. The oil is better when new and fresh, and what is gained in the appearance by its remaining a longer time in the tank is more than lost in its freshness and delicacy of flavor.

To sum up the cost of the machinery in the making of the oil, we have as follows: Drier, \$150; mill, \$250; two presses, \$500; two tanks, \$200; filterers, \$50; corker, tin foiler, \$50; wooden building, \$400. Total, \$1,000.

A piece of zinc placed on the live coals in a hot stove will effectually clean out a stovepipe, the vapors produced carrying off soot by chemical decomposition.

## FORESTRY.

### The High Sierra and its Royal Robe.

[Read before the assembly of the C. L. S. C., at Monterey, July 7, 1881, by J. G. LEMMON, and furnished for publication to the RURAL PRESS.]

The Sierra Nevada is a rich, lordly, bejeweled prince among our mountain ranges. Other chains of mountains ribbing the earth are usually high-raised elevations, composed principally of large, rounded mountains swelling their bosoms toward the sky and trailing their thin, tattered garments far out over extensive, abutting foothills to the flanking plains.

The long Rocky Mountain range, the backbone of North America, is of this class. It rises so gently from the plains on each side, that the traveler by the Union Pacific can scarcely discover that he is on a mighty swell of the earth's crust, or detect the exact spot where he passes the broad saddle of the highest point.

But our Sierra Nevada is not so. He is distinguished alike by the geographer or the traveler, for the steepness of his majestic uprise from the plain, the rough-hewn and splintered form of his thousand peaks, the high elevation of their pinnacles ever bearing their crowns of snow; but most of all, he is pre-eminent for his bounteous and beauteous enrobing forest, his royal, parti-colored garment.

Like an Oriental monarch, he reclines in state upon the bosom of the great treeless plain of Western America, enwrapped from head to foot—600 miles—and from side to side—140 miles—with a dense forest of evergreens, interspersed with many-colored, deciduous-leaved trees, like insertions of brilliant figures in a royal emerald robe.

This enrobing forest—the noblest in North America—is perforated along its raised center line, or axis of the Sierra, by a thousand peaks rising through the mantle into the region of perpetual winter, while both slopes are rent by a million valleys depressed through the robe into the middle region of changing seasons. Often these valleys are still filled with water from the melting snows above, forming lakes of matchless purity and beauty.

The snow-crowned peaks are the sparkling diamonds of this wealthy prince, the valleys and lakes are his resplendent emeralds and pearls. The former flash upon the voyager floating on the far western Pacific or the toiler over the wide eastern desert; but the royal robe, with its decorations of valley and glen, its gems of tree and shrub, flower and fern, reveal themselves to the miner in the canyons, the farmer herding his flocks in the grassy valleys, or the hunter pursuing his game through the forest.

But, of course, these peculiarities are observed most of all by the lover of nature, who explores the Sierra with heart attuned aright and perceptions opened by interior appreciations, for it is an old saying:

"Tis the world within creates the world without."

Such a visitor's first emotions are a mingling of astonishment, awe and delight. If he has explored tropical countries, he will be disappointed by the fewness of species, perhaps, but surprised by the great multitude of individual trees and their large size. If he is familiar with Arctic scenes, he will miss the dwarfed trees and monotonous sameness so foreign to the Sierra.

#### Vegetation in the Zones.

Two other comparisons are pertinent here, also. In tropical countries, life presses in and holds the ground against fierce-opposing contestants. This is especially observable in the vegetable world. A small spring issuing from a mountain side in Arizona or Mexico will be attacked at its very source, and its waters absorbed by the eager rootlets of a hundred species of plants, a broad-headed hackberry or a tall cottonwood crowning the mass of foliage and striking its roots deepest under the rock floor of the spring. Streams large enough to feed all the thirsty gourmands by the way, and yet escape to the plains, are marked all through their winding course by a broad border of vegetation.

Shade and northern inclination also foster vegetation for obvious reasons; hence the north slopes of most of the peaks, and especially of the steep ranges of Arizona, have a vestiture of forest, though it is mainly thin and low.

In Arctic climes, the cold, long winters forbid all but a few especially hardy plants from gaining a foothold. The entire face of the country being moist, the plants are not alone found along streams, but equally dispersed, varying only by conditions of elevation or inclination. The water courses are bordered with meadows composed usually of but one or two species of grass or sedge.

So, also, large forests will be found containing but one or two kinds of trees, and these are small, dwarfed and snow-bent, at length reduced to prostrate creeping bushes on the shores of the Arctic sea.

But the Sierra of California occupies a middle position between torrid and frigid regions, a position most favorable to the producing of large forests containing many species of noble trees and rich valleys of diversified flowers.

#### Trees of the Sierra.

The enrobing forest is composed mainly of evergreens, not one species of which is identical with any at the East—if we except a little, dwarfed variety of juniper, that barely reaches the Sierra from the east. It shares, however,

several species with the Rocky mountains at the east and the Coast range on the west.

Chiefest among these evergreens is the chief of all trees—the "great Sequoia." So much has been written and sung about this tree, detailing its immense proportions and setting forth its history and destiny—I, myself, contributing to the local papers several articles in times past—that I will not add words here to this truly marvelous tree, the worthy king of the vegetable world.

Next to the "Big Trees" in size, but far excelling that species in loveliness, are the four species of fir trees inhabiting the high Sierra. These species arrange themselves in pairs as "red-barked" firs and "white-barked" firs; but they train together oddly; that is, each red fir has a white brother in attendance, like Don Quixote with Squire Sancho Panza. One of these ill-assorted pairs, viz., *Abies magnifica* and *A. concolor*, inhabit the southern portion of the Sierra, while the other pair, *Abies nobilis* and *A. grandis*, are met with in the northern regions.

#### The Fir Family.

The fir family is at once distinguished by the symmetrical shape of the tree, which is conical or fusiform; the limbs radiate horizontally in whorls of three to nine; the branches and twigs, also the leaves on lower limbs, are all disposed in the same way; hence, they resemble large fans, and touching each other at the sides, they form strata of airy basket work, that sit within one another in a diminishing series from bottom to top.

The cones of fir trees are borne on the long, uppermost limbs, and stand upright on the terminal, robust twigs. They are composed of numerous close-set scales, which fall away at maturity, together with the large, winged seeds, and leave the rachis or naked core of the cone remaining on the tree. Hence you never find fir cones lying about under trees as you do of the spruce, pine and cypress.

Chief of the fir trees, both in size and beauty, is the "red-barked fir," a name by which both the southern form and the northern is called—and very properly, too, for the bark of both is a deep madder red when exposed; and they resemble each other in all essential details except one. The northern red fir, *nobilis*, has long, exerted bracts protruding from the cones and depending along the sides. The southern red fir, *magnifica*, is generally devoid of these exerted bracts.

This species has been all along mistaken for the *Abies amabilis* of Douglas, and California botanists will probably continue to call it by that lovely name, notwithstanding Dr. Engelmann's recent clearing up of the whole matter, and conferring of the equally appropriate name of *magnifica*.

Travelers aver that no tree known exceeds these species of fir in their grand, symmetrical uprise and the delicate tracery and airy beauty of their foliage. One has but to visit a grove of these stately trees—notably around the base of Shasta—to receive impressions of grace, beauty, loveliness, majesty and perfection, that will serve for mental enjoyment while memory endures or the soul can comprehend.

Trees of these two red firs—*nobilis* and *magnifica* (or *amabilis*)—form dense groves on high plateaus, 6,000 to 10,000 ft. altitude. Their color is a dark olive green, and their favorite position is usually just above the thinner forest of pines, with their lighter shades, while just above the firs is usually found a fringe of the next family to be considered.

#### The Silver Spruce.

*Tsuga Pattoniana*, extending its beautiful, pyramidal figure, and green and silver foliage far up the canyons, becoming dwarfed, at last, to bent, prostrate, snow-laden bushes at the foot of the glaciers or snow-clad pinnacles.

One can hardly, without inspection, imagine the beautiful effect produced mainly by the differences of tints displayed by these trees, which are otherwise widely different in aspect. The "silver spruce" trees, a true alpine inhabitant of the Sierra, is often, in sheltered localities, very large, and with its soon tapering trunk and outline, they form an exceedingly graceful tree. The longest limbs are below, becoming diminished until the top ends in a spire. The limbs all start downward from the trunk, then curve outward, lastly upward, bearing the small, purple cones in clusters from the ends of the terminal branches, like wide-spreading fingers.

Associated with the silver spruce is often found a variety of the Eastern juniper spoken of, a low, creeping, prickly-leaved shrub, covering rocks and knolls, remarkable principally for being the only conifer tree from the East which reaches California, and it is singular, and perhaps fitting, that he should *crawl* thus into our Sierra flora.

Also, a variety of pine usually keeps close company with these last mentioned alpine trees, but, like them, must be dwarfed to low, thick-browed shrubs, bearing its small, globular cones on its short, stout, white limbs. This pine is the variety *albicaulis*, of the species *Pinus flexilis*.

#### The Pines.

The last paragraph leads us to the discussion of the trees which compose the great mass of the Sierra forest, the beneficent pine, the most abundant, the easiest manufactured, the tree best adapted to various uses of all the trees on earth. They compose eight-tenths of all the trees that clothe the earth, and contribute three-fourths of the material for our houses, mills, bridges, roads, wharves, vessels, etc.

(CONTINUED ON PAGE 90.)



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges respectfully requested for this department.

### Grange Work.

In an address of the Master of the Florida State Grange to the subordinate Granges, we find the following paragraphs:

Why is it that some of our Granges are flourishing and others are languishing? Look to your interests, Brother Grangers. The hard work of putting the Order on a permanent footing is over—the ground is cleared, fences made, land broken and our crop planted, and it is now for us to cultivate what we have sown; we will be rewarded in proportion to our labors. My subordinate Grange has members in it who have grown independent as far as this world is concerned; who, when they entered the Order, were poor, needy and dependent. They have become independent by living up to the teachings of the Grange; they never miss a meeting; they are my neighbors. They are what I want to see every farmer in the land. To attend your Grange and live up to its teachings is to become independent. Will you do it?

Monopolies are growing up around us and in our midst, and unless the farmers are organized they are powerless, and their homes, sooner or later, must pass forever out of their hands into the possession of syndicates, railroad magnates, etc.

Every class is thoroughly organized except the farmer. How long will they remain out of the Order? How long will they allow the profits earned by the hands of their children and themselves to go into the possession of others? If the farmers of the South do not organize, become educated to their true interests, it is only a matter of time for every farmer, white and black, to have a master. Thousands have a master now, they have no more control of the produce they and their children make, under the heat of the summer's sun, than did the slave before the war.

When Patrons engage in the mercantile business they ought to adhere as near as possible to our co-operation, then they would still be benefited by the Order and feel an interest in its success; besides they would succeed in business where others fail.

**GRANGE INFLUENCE IN POLITICS.**—The *Grange Bulletin* says: We are progressing. The principles inculcated by the Grange are being adopted by others. The power and just demands of the farmers of this country are being felt. A first-rate anti-monopoly plank was inserted in the platform of one of the great political parties of Ohio at its State Convention a few days ago. As good Patrons and good citizens, it is our duty to so labor "in our own party" until anti-monopoly planks shall not only be inserted in the platforms of all parties, but that all candidates shall be pledged to it before receiving nominations, or if nominated, before receiving our votes. With good men in all parties working for this and other reforms, and good candidates in all parties, we shall reap a joyous harvest in the fields where we have been planting the seed and tilling the crop all these long years.

**THE GRANGER'S WAREHOUSE AT PORT COSTA.** The *Patron* says: Bro. Adams, manager of the Grangers' Business Association of this city, informs us that the building of the warehouse of the Association is progressing finely, and will in a short time be ready for the reception of grain on storage. The capacity of the building in course of construction will be about 30,000 tons, to which additions will be made as occasion may require.

**PICNIC AT EDEN GRANGE.**—We hear that it is on the tapis to have a picnic and Grange reunion at Eden Grange, Haywards, on the second Saturday in August. The occasion will no doubt be like those which have been held heretofore under the auspices of this Grange, a grand success.

**LOOKING TOWARD THE STATE GRANGE MEETING.**—At the last meeting of Sacramento Grange a committee was appointed "to see on what terms the railroad company will sell accommodation tickets to Santa Rosa, so that a large delegation of its members can attend the State Grange in October next."

**THE COMING MOTOR.**—The recent discovery of an improved form of portable electricity seems to have opened anew the inquiry as to what will be the "coming motor." The "Koeley motor" seems, after a brief renaissance, a few months since, to have again been relegated to the things of the past. In the meantime, Prof. Gamgee is trying to talk and write up his "zero motor." This power is supposed to be developed by some kind of evaporation. It is assumed that the details are set out in his letters patent, but we believe no one, unless it be the professor himself, has yet been found who professes to understand, even from his description, what he has got. To the ordinary mind "it is as clear as mud how he does and how he don't do it." Hence it appears that the dear public must get along as well as it can with ordinary steam until some "new thing" is fairly removed from the realm of the experimental.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

**DRIED PEACHES.**—*Chico Record*: The second shipment of dried peaches went to San Francisco to-day from the Rancho Chico orchards. The peaches were of this year's crop and weighed over 15 tons. About one month since nine tons of peaches were shipped to San Francisco, making a total shipment of 24 tons of dried fruit from the orchards this season.

#### COLUSA.

**AGRICULTURAL FAIR.**—*Sun*, July 30: There is stirring talk of getting up an agricultural fair in Colusa, in October. This is undoubtedly an excellent thing for the county. Colusa, as we have often shown, is the richest agricultural county in the State. She has as many fine horses, as many fine cattle, as many fine sheep and as many fine hogs as any county in California, and there is no reason why her productions should not be brought together in a home fair. It is not every one that can take their stock or their productions off to Sacramento to exhibit at the State fairs. Let us, therefore, have a home fair.

**FLOW FROM THE ROAD.**—Charley Brincken, a farmer of the upper end of the county, called our attention the other day to the fact that most farmers laid out their lands for plowing so as to throw the earth toward the road every year, and this soon raises a ridge, so that the road is practically a pond, and where there is no fence the travelers are tempted to drive on the grain. Now he suggests that by taking the other course and throwing the earth from the road, a few plowings will leave a nice drain both for the road and land, and make it impossible for wagons to tramp the grain down. We think this is a matter of sufficient importance to attract universal notice.

#### CONTRA COSTA.

**THE AGRICULTURAL MACHINE WORKS AT VOLONA.**—*Martinez Gazette*: We had the pleasure of a call this week from Mr. Heald, of the Vallejo Foundry and Machine Works, who has projected the establishment of extensive works at the Volona station, nine miles below Martinez on the railroad, for the manufacture of steam threshing engines, separators and other agricultural machinery and implements. Mr. Heald is now largely engaged, and has been very successful in the perfection and manufacture of steam engines and other threshing machinery for which he considers the chosen locality at Volona a much more favorable one than where he is, and, indeed, the best to be had in the State. The new works are planned upon an extensive scale, and a village site covering an area of 20 acres is being surveyed and platted, and work on a fire-proof building 100x300 ft. for foundry and machine-shop is to be commenced in a few weeks, to be followed by the erection of another workshop of like character and dimensions when the first is completed. The site is on the land of the Edwards brothers who have donated five acres and a wharf franchise to Mr. Heald and his associates in the enterprise.

#### FRESNO.

**INDUSTRIAL CONDITION.**—*Expositor*: The industrial condition of Fresno county, and in fact of the whole San Joaquin valley, is exceedingly flattering. Its rich agricultural lands, and its abundant facilities for irrigation, are becoming generally understood and appreciated, and settlers are continually coming in, to avail themselves of the opportunity offered to secure homes that they can render valuable and pleasant by their own industry, while yet the land is cheap. The farmers are generally contented and prosperous. The crops, though light, bring the top of the market, because the berry is plump and solid, and they will realize enough from it to carry them through the season nicely. The fruit interest continues to increase, and another season will see the acreage devoted to orchard and vineyard largely increased. The trees and vines already planted are thrifty and healthy. The grape interest seems to be attracting the most attention. Stock raising is still a prominent industry, and contributes very largely to the general prosperity of the county. Stock of all kinds is doing well, but the sheep raisers are probably the most prosperous. The sawmills are running at full capacity, and a ready market is found for all the lumber manufactured. The developments in the quartz and placer mines have given the wielders of the pick and shovel great encouragement, and increased activity may be noted among the miners.

**WHEAT.**—*Republican*, July 28: We have not been able to ascertain definitely the wheat product of our county, but those best qualified to judge place the yield at about 500,000 sacks. About 300,000 grain sacks have been sold to farmers by Fresno merchants, and it is estimated that the aggregate of the number supplied from Borden, Madera, Selma, Wildflower, Kingsburg, Centerville, and other local centers, will very nearly equal the number sold in Fresno. Calculating that 100,000 sacks will be used for barley and seed wheat, which will not be shipped, 2,400 cars, carrying 20,000 lbs. each, will be required to move the wheat crop of the county alone—and yet Fresno county does not figure at all in the wheat reports of California. The acreage of grain in the county is considerably greater than ever before, but in some localities the yield per acre is less than last year; the

quality of the grain, however, is as fine as ever raised in the State. It has been thoroughly demonstrated that careful farming, summer-fallowing, etc., makes grain raising profitable in this part of the San Joaquin valley, and the yield hereafter will certainly not be less than that of this year.

#### KERN.

**HARVESTERS.**—*Kern Californian*: Harvesting was going on last week. Three Centennial harvesters, manufactured by D. Young, of Stockton, were at work. They are in charge of Mr. Robert Atchison, a machinist. They cut, thresh and sack about 25 acres a day each. They require to run them, four men, and from 16 to 24 mules each, according to the nature of the ground; and as they move along they present a most extraordinary appearance. They seem to go over inequalities of surface, such as deep ditches, without difficulty. These machines weigh about eight tons each, and when in operation, with their crews aboard, their weight is, of course, considerably increased. One man drives, one steers, one attends to the feeder, and another sews the sacks and dumps them off. The swath cut is about 16 ft. wide. A wagon follows each machine, into which the wheat is loaded and conveyed to the great brick warehouse, 60x240 ft., on a side track at the Poso station.

#### LOS ANGELES.

**BISULPHIDE FOR GROUND PESTS.**—*E. S. Saxton*, in *Anaheim Gazette*: Please let it be known to all who are annoyed by squirrels, that the bisulphide of carbon is a good exterminator. Two weeks since I applied it to 30 squirrel holes in my vineyard, and on examination a day or two since found but one of the whole number had been reopened, while its effect on gophers in my garden and orchard is such as to almost deprive my cats of the ordinary means of livelihood. My mode of application is a little different from the "directions," and I think, an improvement. Instead of pouring the liquid into the holes, I first provide myself with a sufficient number of wads or rolls of rags, about the size of a small hen's egg, on which I put it, as these will roll farther in, and down, than the hand can reach, and be less likely to be covered with earth on closing. I also add a wad of weeds or lump of earth to prevent this.

#### MERCED.

**CROPS NORTH OF THE MERCED.**—*Valley Argus*, July 16: We are informed by John Ruddle, Esq., who resides in this place, and carries on farming upon an extensive scale on the Merced river, that the wheat crop along the Merced river and on the plain between that stream and the Tuolumne, is yielding about half the number of bushels per acre threshed last year, but that the grain is of superior quality.

**THE YIELD OF GRAIN.**—*Valley Argus*, July 30: We took a ride among the farms to the southeastward of this place on Saturday and Sunday last, passing several threshing crews and machines, and the report generally was that the turnout of grain was not up to expectation at the beginning of harvest. The summer fallow promised well up to the time of ripening, but many find that, from some cause or other, the grain has threshed out in the field worse than usual, and though the grains are plump and full and the heads filled apparently well, the waste has been so great as to make the yield much less than was expected.

#### MONTEREY.

**THRESHING.**—*Democrat*, July 30: Most of the threshers of grain in our valley have now on their separators duplicate fans and spouts, succeeding in saving all the grain. We spent an hour watching Duncan McKinnon's thresher (threshing Matt Williams' grain) Wednesday, and admired the thoroughness with which it did its work. It has the "self-feeder," behind which the derrick and its huge fork is constantly piling up the masses of straw to disappear as fast as piled, and the second fan and spout are of Asa Low's patent. For economy and dispatch nothing seems to be lacking to the apparatus, but Williams told us while saving all the grain it was defective in not separating barley and wild oats; and that McKinnon has a contrivance of his own invention, to be attached next week, which will clean the wheat of whatever foreign stuff may be in it.

#### PLUMAS.

**INDIAN VALLEY.**—*Cor. Reno Gazette*: Indian valley contains about 18,000 acres of exceedingly fertile agricultural land, which is held at from \$25 to \$40 per acre. The principal crops consist of wheat and oats and timothy and red-top grasses. Fruit and vegetables do very well when not caught by frost. The valley contains a large and thrifty population, the land being nearly all in a high state of cultivation.

#### SANTA CLARA.

**SCALE INSECT DESTRUCTION.**—*Mercury*: Dr. Chapin and D. C. Vestal have been experimenting for two months past with the various remedies for the insect plague on fruit trees. They will make their report at the next meeting of the Horticultural Society. They find that petroleum, or kerosene and lye, are the two most reliable and in fact the only effective exterminating agencies that can be profitably used, and that while destroying the bug, actually invigorate the trees. In order to give the remedies a fair test, Mr. Townsend turned over to the experimenters an orchard of 2,000 trees, mostly if not all pear trees. The trees were badly bug ridden. The scale bug had possession of the entire orchard, which seemed hope-

lessly moribund. A mixture of whale-oil soap and sulphur had been recommended by some. This was tried and proved entirely ineffective. The orchard was districted and each district treated with a particular remedy. The kerosene and the lye worked splendidly. Mr. Vestal says crude petroleum is all right if put on in the right manner and at the right time, but if put on too late or too early, it is injurious to the tree. It is an extinguisher to the bugs, but it should be put on when the tree is dormant—that is, when the sap is down. But the refined kerosene is better and cheaper, because the fatty matter is taken out of it in refining, and it is that which injures the tree and kills the soil, and besides it can be thrown on in a finer spray, hence it is more diffusive and cheaper, because it takes so much less of it. The finer the spray the better. The refined petroleum can be thrown on in a spray like fog. The lye was also thoroughly effective, the proportion being one pound of lye to a gallon or a gallon and a half of water—weaker than that is not effective. The report of Dr. Chapin and Mr. Vestal will be elaborate and contain much information valuable to orchardists.

**GILROY PROSPECTS.**—*Advocate*, July 30: The abundant harvest of last year with previous accumulations has put our farmers in easy circumstances. The majority are comfortably and independently situated and the present light crop, therefore, gives them but little uneasiness. It is probable that the business of the merchants and the work of the mechanics will not be greatly reduced, although people generally are not so free to spend money on personal comforts or home improvements, when income is curtailed. Some few farmers will not be able to pay their debts, and, in order to live, will have to contract new obligations and run further into debt, hoping that favorable returns will in future give them a credit balance. The dairy and stock interests contribute largely to the prosperity of this place, and we may expect that these sources of pay and profit from which all are directly or indirectly benefited, will continue open, and that the stock of grain held over from last year, added to the present crop, will as disposed of, tend to make trade prosperous. We see nothing discouraging in the outlook.

**SMALLER-BORE WELLS.**—The failure of the seven and nine-inch bore wells on Albert Wilson's dairy farm near San Felipe, principally through the rise of gravel and the powerful force of water to which the thin pipes and loosened soil is subject, has led him to experiment on wells of a smaller bore. In his latest well, two inches in diameter, he has used gas pipe, and obtained a free flow at a depth of 120 ft. A full, clear and strong stream rises 26 inches above the pipe. To test its strength he added 34 ft. of pipe at the surface of the ground and found that the water still flowed freely at that height. He intends to bore several other wells of the same caliber.

#### SAN MATEO.

**THE SQUIRREL'S HARVEST.**—*Times and Gazette*: The damage done to the growing crops by the squirrels can hardly be estimated, but is this year unusually large. On the Brown ranch last week, the Colburns threshed a 50-acre piece of barley, which produced in all only 130 sacks—the rest was eaten up by the squirrels. The matter should be taken in hand by the farmers and others to see if something cannot be done to exterminate the pests.

**HARVESTING.**—During the past week the fogs have prevailed to such an extent that the farmers are put back a little in their harvesting. The farmers will be busily engaged in cutting grain when the weather permits, and then stacking follows. Binding is done with nearly all the wheat, but white men will not bind, and Chinamen are scarce. In about four weeks, threshing will begin in earnest, and this year's harvest will close at least one month earlier than last year.

**THE CROP.**—But little threshing has been done in the central section of the county, and, so far, the turn-out has been below the moderate calculations made on it. With the greatly reduced acreage and light yield it is the opinion of many of our best informed farmers that the yield of the San Ramon, Taylor, Ygnacio and Diablo valley districts will not be one-third that of last year, and the Rodeo and Pinole districts will probably turn out in no better proportion. The yield of the Brentwood and Byron sections is especially good and will average, as is thought by farmers of those neighborhoods of whom we have enquired, from three-quarters to a ton per acre, and would be considerably larger but for the proportion of summer-fallowed grain so badly lodged and tangled that it cannot be gathered.

#### SAN JOAQUIN.

**FIELD FIRE REVIEW.**—*Lodi Review*: There have never been so many destructive fires in this county, in our grain fields, in any one season as there have been in this up to the present time. The burning of Wm. Ashloy's barn, filled with hay, was followed by a fire in the vicinity of Macville, which destroyed 100 acres of wheat. Loss estimated at \$2,000. A fire on the ranch of J. A. Lewis, near Linden, destroyed 132 acres of good grain. A destructive fire on Roberts Island burned over 105 belonging to Jessie Lewis, Samuel Peters and Grattan & Bidwell, estimated loss, \$5,000. A fire on the Lower Sacramento road destroyed 25 acres of cut hay for J. W. Sperry, of Stockton. In our own vicinity the fire on Mrs. Kearney's ranch destroyed 100 sacks of grain. Another fire this



week on Roberts Island destroyed 150 acres for Grattan & Bidwell, three acres of cut grain for Mr. Heart. Mr. Elliott lost a few sacks of wheat, and John Grattan 20 acres of standing grain. Frank Willard lost a stack of 1,800 bushels of unthreshed grain. A very small per cent. of the actual value was covered by insurance. It is strange that farmers, who can ill afford such loss, do not study their own interest by getting out insurance policies.

**POULTRY RAISING.**—Lee Villinger, who has one of the finest ranches of 150 acres on the north bank of the river on Cherokee Lane, is making arrangements to convert it into a chicken park. He has at present 500 laying hens. His houses or henroosts are all built on runners that they may be moved from place to place in the fields at intervals to keep the flocks in small numbers. The pens for laying are arranged near the ground, divided into a series of boxes with trap-doors that can be adjusted to protect the hen from intrusion if she begins to set. There is a perfect system in every department, and we predict that he will find the business very lucrative.

#### SOLANO.

**WINE CELLAR AT CORDELLA.**—Solano Republican, July 30: Judge Hastings is building a wine cellar at Cordella of about 150,000 gallons capacity, of which E. B. Smith, Esq., late of Rutherford, Napa county, will have charge. Two St. Helena coopers—Messrs. S. P. Conne and A. Pidancet—are now at work building a caskage for it. They will make 33,000 gallons of storage tanks, and 24,000 gallons of fermenting tanks. They have been, for some time past, preparing material at Vallejo, and will soon put on force enough to finish the work in about a month.

**MONSTER EGG.**—Mr. Balio Hicklin, of Rio Vista, brought to our office, on Monday last, a hen's egg that resembles in size a four bit watermelon. The egg is 9 $\frac{1}{2}$  by 8 inches in circumference, fair measurement.

#### SONOMA.

**CLOVERDALE.**—EDITORS PRESS: I availed myself of the very cheap 3-day weekly excursion tickets up the country on the North Pacific Coast railroad, through the beautiful Sonoma county to its almost extreme end, to Cloverdale, being the terminus of the road. Cloverdale is at the head of an enchanting valley, one of the loveliest towns of the State, and a lively, thriving place. This is evident from the fact that not a single house is to let, nor is the usual "To Let—For Sale" anywhere to be seen in this town. On inquiry at the real estate office for prices of land, etc., particulars were given by Mr. Ragsdale which showed the life in the place. Country property consists rather in grazing than farming land north of Cloverdale, but there is some good bottom land around and lots of corn grown. Land ranges from \$10 up to, in some instances, \$75 per acre. Some large and promising hop yards are seen, en route to Cloverdale. In conclusion, Cloverdale is one of the most enticing, cool and pleasant towns to reside in, and a visit to it well repays anyone anxious for a look into the country. The traveler rides nearly 200 miles for \$5, and finds good hotel accommodation, as several houses are in brisk competition.—M. J. O. B.

**SHEEP ON ALFALFA.**—Healdsburg Flag, July 27: Murrell & Doane, on Russian river, have for the past three years been experimenting to ascertain the best method of raising sheep on the alfalfa. The first year they permitted the alfalfa to grow all winter, and then cut it as soon as practicable in the spring. They discovered this would not do, as the crop grew too rank. On the richest lands it grew to a height of five ft., and since it grows in bunches, it would lodge, falling in all directions, and when they attempted to cut it with the usual horse-power mower, they would secure only about one-half of the hay. They then abandoned this and tried the experiment of turning the sheep onto it, and let them feed it down. A fair trial of this proved that the sheep would eat the alfalfa and leave the weeds. The result was there was danger of the weeds getting the best of it. They have finally, after much experimenting, adopted the plan of allowing the sheep to feed in the alfalfa fields until about the middle of March. At this time the alfalfa grows the most rapidly, and if permitted to run a race with the weeds, will distance them. The yield, where only one crop is cut is three tons to the acre. It requires only a few weeks' growth to prepare for cutting. As soon as the hay is housed or stacked, the fields are ready for the sheep again. During the growing and haying season, Messrs. Murrell & Doane put their sheep on the 350 acres hill land. They believe after such careful painstaking experiments, their farm will carry at least 1,000 ewes with the yearly increase. They have wintered 1,260. Their bucks are selected for their large frames, fineness and length of wool. Their clip is regarded first quality in this market. They tried a new experiment with their lambs this past year. They first sheared them in June, 1880. The clip averaged 4 lbs. to a lamb. They were sheared again in the latter part of October, and averaged 3 lbs. The third clip from those same lambs was taken off last May, and averaged 4 $\frac{1}{2}$  lbs. per head, a total of 11 $\frac{1}{2}$  lbs. for the year. They propose keeping all their increase, and selling the older sheep each year, by this means being enabled to have young and healthy sheep on hand all the time.

**WHITE ELEPHANT POTATO.**—Santa Rosa Democrat, July 30: On the first of April last, we received from the Department of Agriculture, a package of two pounds of potatoes, called the "White Elephant." We gave the

package to Mr. John M. Laughlin, who resides on Mark West creek. Not having ground properly adapted to them, Mr. Laughlin was about to return them unplanted. But finally they were put in, on April 10th, in some sandy loam from the overflow of the creek. This soil, being new, was not capable of producing as well as it would if more perfectly decomposed. Mr. Laughlin called on us last Saturday and stated that he had watched their growth and had concluded that they would amount to nothing, the vine hardly shading the ground immediately beneath. However, upon digging them, he was surprised to find that he had 68 lbs. of fine, white, plump potatoes. This, too, after the seed had arrived in imperfect condition—after they had been planted too late and under unfavorable circumstances generally. Some of them are from five to seven inches in length, perfectly smooth, the outside a light yellow, and the inner portion a pure white slightly tinged with red.

**PROFITS IN PLUMS.**—A. Caldwell in Petaluma Courier: My experience in plums is of many years. I have tested many varieties, observed the peculiarities of soil necessary for their growth and the kind of stock to be used. The best kinds for pitting are the Columbia, Gross prune and Washington; for prunes, the Petite Prune de Agen, and the Yellow Egg for canning. Almost any of our soils are good for growing plums, but a clay snb-soil is best. But whatever soil you use, it should be under-drained, and well sheltered from the winds by eucalyptus and Monterey cypress trees. I think the plum stock is the best now for the profit. Twenty-five acres in plums will make a man a nice income in a few years. I have in my orchard two acres and a half in plums, and they pay me on an average \$500 a year. If you set out two-year-old trees, they will pay expenses the second year, and the third year you can realize a profit of \$50 an acre. Say, as an illustration, 100 trees to the acre, and 25 lbs. to the tree will yield 2,500 lbs. of green fruit, which will make 500 lbs. of pitted dried fruit, worth, at ten cent per lb., \$50, which is a nice income on the investment. Of course, as the trees grow older the crop will become larger and more profitable. I candidly believe that the above-named quantity of land in plums will one year after another pay a greater profit than the best 300-acre grain farm in the county. With this showing there is a big opening in this county for men of small means to make for themselves a nice little fortune. But in order to do this, a man must be resolute and determined to stick to business, then he will surely succeed. I only wish I had possessed this experience when I commenced growing fruit for market; I would to-day be worth dollars where I am now only worth cents.

**PEACH.**—Isaac Gum brought a yellow Crawford peach to the Flag office Monday that measured 9 $\frac{1}{2}$  inches in circumference one way and 9 $\frac{1}{4}$  another. This specimen was raised on his own ground, and is much the largest we have seen this season.

#### TULARE.

**PEACH.**—Delta, July 30: J. M. Cummins, living three miles east of Hanford, has the largest peaches in the new Mussel Slough orchards yet weighed and measured. He brought a dozen of them into Hanford lately. Three of them weighed 29 $\frac{1}{2}$  ounces. The 12 weighed 11 $\frac{1}{2}$  ounces. One measured a little more than 10 inches around. These peaches are white clings. Mr. Cummins has just sold his place to Mr. Hicks, from Tennessee. He has raised on it this season some of the finest grain produced near Hanford, and that is as much as to say, some of the finest in the State. The locust, poplar and mulberry trees planted around his house five years ago, now form a dense shade and a valuable screen for his premises.

**A MANUFACTURING ENTERPRISE.**—Assemblyman W. W. Camron, an Oakland capitalist, has been in this county for several days examining its agricultural, stock-raising and manufacturing facilities, and is so well pleased that he has decided to invest largely in this county. Believing Tulare City to have the best prospect among the towns (it being on the main trunk line) he has already bought a large and valuable piece of town property in that little city, and will immediately erect thereon complete machine shops and a foundry. This will be welcome news to the people in all that section lying between Stockton and Los Angeles, who at present are compelled to have casting and machine work done at Stockton or San Francisco. It is not Mr. Camron's intention to establish a small business. He will invest heavily in the best and most expensive appliances and material, and secure the best artisans.

**EFFECT OF PRESSURE IN CARBONIZING WOOD.** Herr Gopport has lately exhibited a piece of pine which has been submitted for two years to a pressure of 12 $\frac{1}{2}$  tons in a Silesian mine. It had been compressed to one-fourth and converted into a half carbonized state through the action of pressure alone, as little moisture had access, and the temperature was never above that of the surrounding atmosphere. It had quite the appearance of a dark-brown colored bituminous wood of the tertiary brown coal formation, but it was without the smell observed in burning bituminous wood. The change of volume was at the cost of the water-contents of the wood. A considerable amount of oxygen and hydrogen had come off as water, and the composition approximated to that of peat of the older peat formations.

#### Address of the Anti-Debris Association.

The executive committee of the Anti-Debris association of the Sacramento valley, has issued the following address to the people of California, setting forth their grievances.

The inhabitants of the Sacramento valley, being greatly alarmed at the rapid encroachment upon their homes and property from debris thrown into the rivers and their tributaries, from the hydraulic mines situated in the mountains and foothills through which they flow, and feeling that further forbearance not only ceases to be a virtue, but is a crime against ourselves, our children and the best interests of the State; and, knowing that our cause is the cause of all the people of the State, and that the destruction of this great valley would be a disaster to the State from which she would never recover; we therefore feel it a duty incumbent upon us to make known our grievances, to the end that this question may be fully understood, and the remedy applied before it is too late.

Hydraulic mining has usurped the channels of our rivers and their tributaries, as places of deposit for its waste material, until the channels and the contiguous bottom lands have been raised higher than the surrounding uplands, and such waste material is only prevented, during time of floods, from spreading over the valley, and the rivers running at random, by levees, built at ruinous expense, for temporary relief. Our power in this direction can no longer compete with those terrible engines of destruction (powder and water), employed by the hydraulic miners. Hence, the continuance of such mining, as now conducted, means the utter ruin of this valley, and the desolation of thousands of happy homes situated therein.

It was officially stated before the late floods that 44,000 acres of our very best lands had been covered up and ruined by this detritus, and last winter's floods have added many thousand acres to this number. It is no exaggeration to say that no less than 100,000 acres of the very best land in the State have been ruined or rendered worthless from this cause. Can the continuance of such wholesale destruction be longer tolerated?

These miners claim that they have vested rights in the water courses to rid their mines of debris. We deny such an assertion. We hold that no power in the United States can confer such rights. To do so would be a disregard of all law, the usages of civilization and the fundamental principles which govern mankind, which require that everyone must so use his property as not to injure the property of another. We are willing to be governed by this principle, and will accept no other interpretation of our rights. Usurpation may be tolerated for a time, but such toleration confers no rights. Having faith in the justness of our cause, we have appealed to the courts for redress. We want these terrible engines of destruction stayed, until our rights shall be determined by the highest tribunals in the land. Any delay in determining the rights of the respective parties in this controversy, will work serious injury to the State and nation. In urging the prompt settlement of this question, the residents of the valley cherish no unkind feelings toward the people of the mountains, but claim with them equal rights in the enjoyment of property and home.

We charge hydraulic mining with having injured the agricultural resources of the State, by the destruction of over 100,000 acres of the very best land; with having forced millions of money to be expended in the construction of immense levees to protect the lowlands, that should have been expended in improvements and in otherwise rendering valuable these vast tracts, and thereby largely increasing the agricultural and horticultural products of the State. It has been destruction to the manufacturing interests, by endangering the property of our cities, increasing the tax for city protection to such an extent as to prevent the investment of capital for manufacturing purposes, and in many cases destroying the lands adjacent to such towns and cities, that produced largely the raw material to be manufactured. It has interfered with the internal commerce of the State, by injuring the navigability of our rivers, thereby largely increasing the freight charges on all agricultural and manufactured products seeking a market, and all goods and merchandise used among our people.

It has almost prevented the development of all mining, except that of the precious metals, by increasing the freight charges on all supplies for the mines, and on their products, and has also seriously injured legitimate mining for the precious metals, by diverting the energies of the miners from quartz and drift mining, the true sources from which our gold and silver products are profitably obtained.

It has levied an annual tax of over half a million dollars on all the taxable property of the State, which has been and is to be expended in the fruitless effort to so control the debris from such mines as to prevent further destruction to this valley.

And last, but not least, it has thrown out of profitable employment many thousands of white men (by substituting for them the forces, Chinamen, powder and water) who would have formed happy and flourishing communities, and contributed largely to the prosperity of the mountain counties.

Can the State afford to further foster a business which has produced and is still producing such blighting effects upon all the legitimate industries and vocations of her people? We, of this valley, most emphatically answer, No!

#### News in Brief.

THERE is a strike among butchers in New York.

AMADOR county's assessment role foots up \$2,924,119.

POPULATION of Los Angeles county, 33,379. TAXABLE property of Plumas county foots up \$2,194,210.

Two million sacks of wheat will be harvested in Colusa this season.

THE news is again received that Carl Schurz will succeed White as Minister to Berlin.

THE authorities at Berlin are trying to find the author of the threatening letter addressed to Bismarck.

200—\$82,000 in double eagles, \$2,250,000 in standard dollars, and the remainder in subsidiary coin.

CLARE Sewell Read, the English agricultural author, thinks the outlook for a good harvest is not favorable.

CENSUS returns show that the population of the Dominion is 4,350,933, an increase of 680,498 in the past 10 years.

A TERRIBLE explosion has occurred in a mine at Lourches, Department of Nord, France. Ten persons were killed and 20 badly injured.

THE coinage during July aggregated \$3,896,000. At Boston the Grand Trunk railroad is making time contracts on westward bound freights, at low rates, extending into the winter months.

THE French Chambers of Deputies, in spite of the government only desiring a partial sale, has passed a bill for the sale of all the crown diamonds.

THE Emperor of Germany has conferred upon Prof. William Dwight Whiteley, of Massachusetts, the Order of Merit, made vacant by the death of Thomas Carlyle.

POPULATION of Solano county, 18,475; of Benicia, 2,794; of Rio Vista, 666; of Vallejo, 5,987; of Suisun and Fairfield which are contiguous, 978; of Dixon, 876.

THE R. R. Co's steamer, *Modoc*, ran ashore the other day on the Two Brothers, at the entrance of San Pablo bay. She was so much injured that she had to be docked for repairs.

It is estimated that the bullion and matter output of the Summit Valley district, Montana, for the year 1881 will be at least \$3,000,000, and that for 1882 it will be fully twice that amount.

SAYS the San Diego Union: It is a coincidence worthy of note that the first locomotive and the first steam printing press, ever seen on the Bay of San Diego, were "fired up" on the same day.

#### A Fruit-Drying Success at San Jose.

The Williams evaporator, for the preservation of fruits and vegetables, is now being introduced on this coast by Frank B. Seeley, the general agent, of Oakland. It appears to be meeting with very satisfactory success, as evinced by the following testimonial:

SAN JOSE, CAL., July 30, 1881.  
To whom it may Concern:—Having purchased a Williams evaporator of the general agent, Frank B. Seeley, who put it up under a guarantee that it would dry 150 boxes (of 50 lbs. each) of apples, or 8,000 lbs. of "French prunes" in 24 hours, with one-half cord of hard wood, we take pleasure to state that upon testing it we find that it will do all this and more, and that for convenience in operating and quality of product it is far superior to any evaporator with which we are acquainted. The prunes are very highly polished, yet entirely free from stickiness which is characteristic of the product of other machines, or of those dried in the sun and dipped. We have this day closed a contract for one more of the same kind, to be erected at once.  
W. W. COZZENS & SON.

H. H. H.—We are assured by many of our readers who have used the H. H. H. horse liniment made by H. H. Moore & Son, of Stockton, that they have found it of much value both for man and beast. The advertisement in another column enumerates some of the cases in which it is effective, and the experience which has been described to us commends the preparation for general use.

SMALL FRUITS.—We have received a copy of Ellwanger & Barry's (Rochester, N. Y.,) price list of strawberries and other small fruits for the summer and autumn of 1881. It should be consulted by intending planters.

STILL AT IT.—F. H. Merrill, 516 Noe street, showed us an egg the other day measuring 8 $\frac{1}{2}$  by 6 $\frac{1}{2}$  inches, and weighing 4 $\frac{1}{2}$  ozs. It was laid by the same hen whose eggs were noticed in the RURAL some time ago.

#### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time directed, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

#### Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on, or address H. F. D., this office.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sealions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

MANSION HOUSE.—First-class in every respect.—When you visit Stockton stop at the Mansion House. Free Coach to the house. J. H. CROSS, Proprietor.





### The Golden Wedding.

Wake up, wife!—the black cloak of night begins to fade,  
And far in the east the Morning his kitchen fire has  
made;  
And he is heating red-hot his stove of iron-grav,  
And stars are winking and blinking before the light o'  
day.

Mind you what I was doin', just fifty years ago?—  
Brushin' my Sunday raiment, and puttin' my best looks  
on;  
Clothin' myself in courage, so none my fright would see—  
An' my coward heart within, the while, was pounding to  
get free.

Ten mile wood an' hramole, an' three mile field an' dew,  
In the cold suile of morning I walked to marry you;  
No horse had I but my wishes—no pilot but a star;  
But my boyish heart it fancied it heard you from afar.  
So through the woods I hurried, an' through the grass an'  
dew,

An' little I thought o' tiring, the whole of my journey  
through:  
Things ne'er before nor after do so a man rejoice,  
As on the day he marries the woman of his choice.

And then our country wedding—brimful o' grief an' glee.  
With every one a-pettin' an' jokin' you and me;  
The good cheer went and came, wife, as it sometimes has  
done  
When clouds have chased each other across the summer  
sun.

There was your good old father, dressed up in weddin'  
shape,  
With all the homespun finery that he could rake an'  
scrape;  
And your dear-hearted mother, the sunlight of whose  
smile  
Shone through the showers of tear-drops that stormed her  
face the while.

Also your sisters an' brothers, who hardly seemed to  
know  
How they could muster up courage to let their sister go;  
An' cousins an' schoolhouse comrades, dressed up in  
meetin' trim,  
With one of them a-sulkin' because it wasn't him;

An' there was the good old parson, his neck all dressed  
in white,  
A bunch o' texts in his left eye, a hymn-book in his right;  
An' the parson's virgin daughter, plain an' severely pure,  
Who hoped we should be happy, but wasn't exactly sure;

And there was the victuals, seasoned with kind regards  
and love,  
And holly wreaths with breastpins of rubies, up above;  
An' there was my heart a-wonderin' as how such things  
could be,  
An' there was the world before us, an' there was you and  
me.

Wake up, wife! that gold bird, the Sun, has come in  
sight,  
And on the tree-top perches to take his daily flight.  
He is not old and feeble, an' he will sail away,  
As he has done so often since fifty years to-day.

You know there's company coming—our daughters an' our  
sons;  
There's John, and James, and Lucy, an' all their little  
ones;  
And Jennie, she will be here, who in her grave doth lie  
(Provided company ever can come from out the sky).

And Sam—I am not certain as he will come, or not;  
They say he is a black sheep—the wildest of the lot.  
Before a son's dishonor, a father's love stands dumb;  
But still, somehow or other, I hope that Sam will come.

The tree bends down its branches to its children from  
above.  
The son is lord of the father, and rules him with his love;  
And he will c'er be longed for, though far they be apart,  
For the drop of blood he carries, that came from his  
father's heart.

Wake up, wife! the loud sun has roused the sweet day-  
light,  
And she has dressed herself up in red and yellow and  
white;  
She has dressed herself for us, wife—for our weddin' day  
once more—  
And my soul to-day is younger than ever it was before.

—Will Carleton.

### Nereus's Garden.\*

Written for the PRESS by C. L. ANDERSON, M. D.

One fine morning not long since, at the close  
of our Chautauqua meeting at Pacific grove, I  
enjoyed a scene that few have the pleasure of  
seeing. Five o'clock found me with basket in  
hand, seeking the nearest road to "Mose Beach."  
It was low tide—very low. The rough, angular  
granitic rocks form a shelf of considerable  
area stretching a long distance into the sea,  
gradually descending so as to form a somewhat  
level floor, on which, here and there, were tables  
and intervening pools. For half a mile in length  
and breadth this plateau was covered with sea-  
weeds. At low tide it was a grand garden. No  
gardener for any king or millionaire ever had  
such a novelty of plants, ever such wonderful  
colors and beautiful forms. The sun was shin-  
ing into the pools and on the little cliffs where  
these plants sparkled with the dew of the ocean,  
and with an iridescence charmingly beautiful.  
It is only once in a great while that such a gar-  
den is spread out to our view; perhaps not  
more than one or two mornings each fortnight  
during the summer season. There must be sun-  
light, a low tide, a calm sea and a favorable  
spot where the plants may grow at the right

\*Nereus is a wise old prophet who lives at the bottom  
of the sea. He is supposed to be a gardener, and to have  
known something of the "Golden Apples" which Hercules  
found.

season. A conjunction of all these things usually  
takes place while we are dreamily, unconsciously  
resting in our beds "at five o'clock in the morn-  
ing." There is no law to compel us to get up  
at that hour and walk a mile or two to enjoy  
such a choice bit of nature. I looked in every  
direction to see if any other human being was  
walking in the garden on this particular morn-  
ing, but no one was in sight. I was monarch  
of all I surveyed, and there was no one to dis-  
turb the equanimity of my reflections. I might  
converse with each particular plant, not stand-  
ing on ceremony, and call each by its long sci-  
entific name without having to introduce it to  
anyone who might chance to be with me; for it  
is a fact that but few of these plants have names,  
either common or scientific, known to many  
persons. They are mostly in books and cata-  
logues, so that when we go to visit one of our sea-  
shore gardens, whether at early morn or any  
other time of day, the question comes too often:  
"What is this, or what is that?" We might  
end should be more familiar with the marine  
flora that grows so near and so profusely, es-  
pecially those of us who dwell near the sea-  
shore.

Turning from the merely beautiful and orna-  
mental, let us contemplate for a moment the  
values we let go to waste every year because  
we do not utilize the *Algae* of our coast. Many  
of these plants yield the most healthy and nu-  
tritious food, rich in materials so necessary for  
our sustenance. Thousands of tons just as rich  
in the food elements as that little plant called  
"Irish moss," so highly esteemed, rot upon our  
beaches every year. The *Iridaea porphyra*,  
some of the *Gigartinas*, a *Chondrus*, closely allied  
to the "Irish moss," and many others, are found  
in great abundance. Yet I am not aware that  
any of them are used for food or medicine on this  
Pacific coast, although we import largely the very  
things we might find at home. The introduc-  
tion of sea plant products into our food would  
tend largely to our physical welfare. If we  
look at the northern shores of Europe, where  
marine products, chiefly *Algae*, enter so largely  
into use as food for men, animals, and as fer-  
tilizers for the soil, we shall find the inhabitants  
vastly superior physically to those who do not  
resort to our mother, the sea, for sustenance.  
Where in the world can we find more healthy  
men and women? And where can we find more  
valuable domestic animals than the Ayrshire  
and Jersey breeds? The parent stock of these,  
not many years ago, fed on sea-weed. The  
failure of the potato crop in Ireland, the con-  
sequent famine and agitations leading to op-  
pression and growing discontent, may be traced  
in part to a neglect of fertilization of land with  
sea-weed.

It is the old story of the wrestler, Antæus, the  
son of Neptune, and the Earth, renewing exhaust-  
ed strength by contact with the earth; and as the  
sea existed before the dry land, shall we not  
be renewed also by an occasional touch of old  
Ocean?

### The Needs of Civilization.

Change is the law of nature; variety the  
condition of creation. Every hill, every val-  
ley, every ray of light that glitters, every  
planet in its orbit, every wind that blows,  
everything that lives and breathes, testifies to  
this fact. Go where you will, observe what  
you may, take the countless leaves of a summer  
forest, note their growth and changes, and you  
will find none of to-day what they were yester-  
day. Observe the clouds as they rise above the  
horizon, tinted by the rays of a burning sun,  
displaying in magnificent splendor all the colors  
of the solar spectrum; observe them as pile  
upon pile they lie, extending as it seems far into  
the illimitable, yet no two are alike.

Every nation has had its period of birth,  
growth and decline, which is the result of laws  
as inevitable as time, as immutable as space,  
and as certain as death. But nations, as the  
individuals composing them, look with dread  
and even horror upon the fatal day that is to  
terminate their temporal existence, and it is  
the object of one and all of them to prolong  
such existence as far as possible; but during their  
career questions of no little importance present  
themselves for consideration, and they are the  
questions of demand and supply. Upon these  
depend the welfare and prosperity of nations,  
and whenever the demand exceeds the supply  
the nation must retrograde; but whenever the  
supply equals or exceeds the demand, it will  
flourish and stand as the mighty shores of rock  
against the tidal waves of oceans.

We have here a nation of free united people;  
a country whose resources are almost inexhaus-  
tible. A land whose utmost extremities are con-  
nected by bands of iron, upon which rolls the  
wealth of nations, and wires of intelligence upon  
which flash, with the speed of lightning, the  
messages of civilized man. A country whose  
every hill and valley are productive of untold  
fortunes; whose flag, cleaned by the stars and  
stripes, baptized in patriotic blood and washed  
in patriotic tears, throws its protecting shadow  
around each of us, as we occupy but humble  
positions in life; a country whose people enjoy  
more liberty than all the kings, czars and em-  
perors of the Old World. Yet, we have our  
demands and must have our supplies; our sup-  
plies in the past were bountifully administered,  
and we prospered; fire and sword have often  
been resorted to, yet we are the better and  
further advanced in the scale of humanity. In  
1861 powder and lead, and men to use them,  
were in demand, and bravely were they sup-  
plied. Now we are at peace with all the world

and the wheels of progress are rolling on faster  
than ever before; but what do we need to con-  
tinue to flourish, to maintain our reputa-  
tion, to improve our resources and to sow  
the seeds of liberty for future generations  
to reap? Is it wealth, or pleasure, or power, or  
fame? No! all we need is elevation, this is our  
demand and must be supplied, as change is as  
certain as death. We must either go up or go  
down; we must either elevate ourselves, or we  
will degrade ourselves. The plant by the sea-  
side will never bloom unless nourished by the  
dew-drops, and cheered by the dazzling light of  
the sun. Neither will a nation prosper unless  
aided by its people, and illuminated by its in-  
tellect. We, therefore, need better teachers,  
and a better attendance in our public schools;  
better order, and fewer infants in our colleges;  
more religion, and less hypocrisy in our  
churches; better judgment, and less partiality  
in courts of justice; more brains, and less jaw-  
bone in the heads of our great men.

Brains, pure, unadulterated brains, must rule  
this world and not the teeth and fangs of self-  
ishness. We need men who love liberty and  
hate slavery; men who will tell the truth for  
the sake of the truth; men who will do right  
because it is right; men who will stand up, and  
in the midst of danger fight for the right, with  
fire and sword, and pen and talent. Justice and  
right is more than the almighty dollar. Men  
who love their country, their flag and their fel-  
low men; men who will stand as firm as the  
rock of ages, and as stern as the mighty hills in  
the conflict of opinion in the fields of political  
treachery.

We need more Platos to proclaim to the world  
a higher and purer morality. We need more  
Galileos to demonstrate to the world, not the  
roundness of the earth, but the flatness of its  
heads. We need more Wm. Lloyd Garrison, not  
to free 4,000,000 of slaves doomed to physi-  
cal labor, but to free ten thousand times ten  
thousand mental slaves who never enjoyed the  
emotion of thought nor breathed the air of lib-  
erty; who never had an original idea, and never  
dared to express it if they had. Thought is the  
life-blood of this nation, and can only be puri-  
fied by expression. Its course, therefore, should  
not be impeded by fanatics, nor its purification  
stayed by ignorant silence. It was thought that  
clothed the native savage in his jungle. It was  
thought that brought from the flinty bosom of  
the earth beneath these hills the treasures of  
shining, glittering gold. It was thought that,  
through the instrumentality of a Franklin,  
brought lightning from the clouds and assigned  
it to the use of men. It was thought that built  
the monstrous locomotive to draw its enormous  
burdens from shore to shore. It was thought  
that built the ship to sail in unknown seas, that  
gave her lungs of iron, breath of fire, voice of  
thunder and arms of steel. It is thought that  
guides her as she plows the trackless main. Oh!  
it is thought that carries upon her lofty  
wings the emblem of our liberty and the epi-  
taphs of all our mighty dead.

We need more thought and more truth—  
truth, more sacred than all the world beside,  
to which we should consecrate our acts, our  
honors and our lives. From its fountains we  
should drink, and at its alters we should wor-  
ship. We need men who know that truth is  
divine, that it is eternal, that it is immortal;  
men who know that truthful men only are loyal  
citizens. Every thief, every robber, every  
pirate and every murderer is a liar, and every  
liar is a traitor. It is truth that inspires man  
with the noblest aspirations. It is his knowledge  
of truth that places him above the brute crea-  
tion and crowns him with the scepter of power  
that wields the destiny of nations. We need  
men who know the truth, who love the truth,  
men who will stand by the truth amid the cry  
of war, the din of battle and the roar of conflict  
until every field shall be won, and the whole  
human race shall be but one great, grand cathe-  
dral, whose spire of truth shall kiss the starry  
heavens, and whose walls of peace, penetrated  
by every morning sun, shall but reflect the  
image of a yet brighter and a better day.—H.  
W. Hand.

A VETERAN HOMESTEADER.—The Colusa Sun  
says: Major Cooper returned from Modoc  
county last Tuesday. The Major is in ecstasies  
over that country, and although verging well  
on to four score and ten, he has taken him up a  
quarter section of land, under the Homestead  
Act. He has spent the greater part of his life  
on the frontier, and frontier scenes revive him  
and make him feel like commencing life over  
again. When he arrived on the stage he ap-  
peared much less fatigued than many a young  
man would have been after so long a trip; in  
fact he did not seem any more worn out than  
if he had been taking a pleasure ride of a mile  
or so. The *Susanville Advocate* mentions the  
Major's visit to that place as follows: "Uncle  
Stephen Cooper, of Colusa county, is here at-  
tending to business in the Land Office. Mr.  
Cooper is in his 85th year. He crossed the  
plains in 1846, and settled in California. He  
served in the war of 1812, and started with Fre-  
mont on his exploring expedition to this coast.  
He is a native of Kentucky, but removed to  
Missouri at an early day, and aided in the set-  
tlement of that country. In 1880 he carried the  
electoral vote of California to Washington. He  
has filed a homestead upon lands near Aden,  
but his home is in Colusa county. His step is  
remarkably firm and his frame erect, and he re-  
mains a type of the hardy race of pioneers who  
have always been first in the wilds of our con-  
tinent and made room for those who sought  
homes on the frontier."

### Shadowy Days.

[Written for the RURAL PRESS by MRS. W. D. ASHLEY.]

"God, I thank thee that the night  
In peace and rest hath passed away;  
And that I see, in this fair light,  
My Father's smiles which make the day."

Happily, during a great part of our lives  
most of us can rise to our daily tasks with this  
prayer on our lips, this sentiment in our hearts;  
yet days come to us when the "Father's smile"  
seems far off and dim, when the light of the  
glad young day is saddened by thoughts of the  
little we accomplish and the brevity of our time  
on earth; when the wrecks of our careful plans  
and the foam of our broken hopes and yearning  
resolves floats away on Time's resistless stream  
—all sweep onward like the waters of the un-  
returning river.

Days when Care marshals her host of ir-  
ritations to reap our nerves and tempers, when  
the tasks that we have done thousands of times  
and must do countless times more, seem so  
wearisome, so short of the good we might  
achieve. Especially do these days come to the  
wife and mother on the farm, confronted by all  
of the work that constitutes good house-  
keeping, often with poor help or only the aid  
of the children out of school hours. Foresight  
and determination to rule and guide this in-  
tricate machinery lends strength, while the  
effort to find a satisfying delight in doing  
little things tends to peace.

In snatching a few minutes' reading each day  
to freshen up our minds, and make the work  
pleasant for helpful little hands, we find cheer-  
fulness. Is coffee to be brewed, the boy will  
stir it willingly while he is told that Mocha, in  
Arabia, furnishes the best coffee. The berry is  
small and round, the flavor delicate. Java  
coffee, with its large, pale yellow berry, is next.  
Ask him what city exports the most? He will  
recollect his lesson on South America, and an-  
swer Rio Janeiro. Then we can tell him that  
Rio coffee is of medium size, greenish color  
mottled with brownish spots, and cheapest of  
all. We can interest the girl while she makes  
yeast, by telling her what we know of it.  
That chemistry calls it a plant of fuguus  
growth, that this rapid growth in the "sponge"  
causes it to ferment; that this fermentation or  
generation of carbonic acid gas in the dough is  
what makes the bread light; that half a pint of  
yeast, three pints of water, a little salt and a  
gallon (7 lbs.) of flour will make four loaves  
of 2½ lbs. each.

To make each part of our work as excellent  
as time and strength will admit, will refine and  
elevate our grosser natures, while being satisfied  
with indifferent things is demoralizing. Let  
our homes be bright, our flowers choice and  
vigorous, our vegetable garden thrifty. In a  
lonesome mood, I planted two rows of red-eyed  
beans. Soon they pushed sturdily up, holding  
their leaf shields on each stalk. It rested me  
to leave my work indoors a moment to look at  
them. Blossoms appeared, and in six weeks I  
had the pleasure of picking snaps for the table.  
I once knew a black "auntie," who went  
grandly about the coarsest work, singing, "My  
soul in peace shall rise." Her good nature was  
impervious to fault-finding or fretfulness, as she  
looked to a better home.

These shadowy days that hide the "Father's  
smile," are but the discipline to fit us for a  
higher, purer life. Looking to Him, we shall  
have strength to set our faces as steel against  
repining, and humbly do the work that comes  
to our hands while we conquer the meanness  
and selfishness of our natures. In homely use-  
ful work, we find profit and can find pleasure  
and inward content if we look at it aright.

"So in our daily paths 'twere well  
To call each gift a treasure,  
However slight, where love can dwell  
With life-renewing pleasure!"

Stockton, Cal.

### A French Agricultural School for Girls.

Albert Rhodes, U. S. Consul at Ronen, writes  
to the New York *Tribune* an account of a girls'  
agricultural school at that place, from which we  
take the following:

One of the young women, accustomed to the  
duty, harnesses a horse, hitches him to a light  
wagon and drives across the country and to  
where we stand like a professional whip, jumps  
down and passes the reins to the Abbe, and I  
take my seat alongside of him. He calls my at-  
tention to the fact that the road over which we  
travel is a private one, made by the girls in 17  
days. In the distance we see a score of them  
on a gently sloping hill, in picturesque straw  
hats, harvesting the grain.

Arriving in the court-yard of the farm, one  
side of which is lined with barn and stables, and  
the other with a long two-story dwelling, we  
are met by Sister Jeanne, who shows us through  
the dwelling house of the five sisters and the  
farm girls, each part of which is kept with scrup-  
ulous cleanliness, simple and austere in the  
way of furniture. There is no sign of carpet  
anywhere, the floors are carefully waxed, and  
the great bedroom is similar every way to the  
one at the works.

We leave the house and go into the garden  
and the orchard, which contain a few plaster of  
Paris statues, thence into a field which is being  
plowed by a comely young woman of 16. She  
holds the plow with a firm hand, and drives  
three horses abreast. With a stern, full and



deep voice she pronounces the horse vocabulary, which is usually composed of the following words: To start the animals and urge them on, *hue, haidue*, and a singular sound like *gr-r-r*, which indicates that the plowwoman is from Lower Normandy; to stop, the simple *ho*; to direct to the right, *hu-ho*, and to the left, *diarque*.

She has not the time to look at us, if she be so inclined, for her eye is fixed on the furrow, which she plows to the end, we following. Arriving at the end, she swings the plow neatly, and shouts *hu-ho*, with authority. Then, for the first time, she salutes "Monsieur the Superior," who is pleased with her work.

"When you get near the hrush, Marie," observes he, "you will take off one of the horses and put him in the lead, in order to plow close to the hrush."

"Yes, Monsieur the Superior. *Hue gr-r-r*," and she starts on a new furrow. It is clear that she takes pride in her work. As she goes off bearing down on one of the plow handles, the Abbe observes: "A man could not do it better."

We pass through a little forest and a meadow where over 100 cows are grazing, whence in the distance we see harvesters cutting and stacking the grain that shines with a golden tint under the declining sun. In a few minutes we are standing among about 35 of the harvesters, in sabots, blue stockings, a skirt reaching to the middle of the calf, a chemise, a light tunic and a broad-brimmed straw hat. Their hair is tied behind with a black ribbon, and their bare arms are as ruddy as their faces. Four of them are swinging the cradle, and the rest are following and stacking. The Abbe marks his entry on the scene by admonishing one of the young women not to follow too close to the cradle.

### Chaff.

JONES thinks a man is fortunatwho has his will contested after death only. He says his will has been contested ever since he wedded Mrs. J.

A NEW YORKER is named Stealing, and he hates the name; but he took the curse off it for his daughter by making her Christian name "Worth."

WHEN the shopman seizes you warmly by the hand when you enter his establishment, you readily understand what is meant by a pressure of business.

MRS. MOUNTJOY, who was reproached for her lack of sentiment, replied, "Bless me, how can a woman have any sentiment whose husband goes to bed six nights out of the seven with his hoots on?"

DR. WM. L. BRECKINRIDGE once said to his mother: "Ma, I think you ruled us with too rigid a rod in our boyhood. It would have been better had you used gentler methods." She took a pinch of snuff, and said, "Well, William, when you have raised up three as good preachers as I have, then you can talk."

ONE hour after an "old master" had painted the name of a patent medicine on a big rock, a cow came along, licked it off, and died before sundown. When the simple name of a medicine kills a cow, human beings want to beware of the stuff itself. A cow was never killed by licking the name off a patent medicine in a newspaper, and no other kind can be recommended.

A MAN bought an estate in Ireland the other day. He was of small stature, we are told, and very thin and wiry looking. When he went down to see the place, the tenants turned out to inspect the new landlord, and, after his departure, began to discuss him "Well, Pat, what do you think of the new landlord?" "Oh, begorrah, not much! Why, that little gossoon would be as hard to shoot as a jack-snipe!"

### A Good Mother's Plan.

A lady gave us a rule, not long since, by which she succeeded in interesting her lively, fun-loving boys, so that they preferred to remain at home evenings, instead of seeking amusement elsewhere. She said:

"I remember that children are children, and must have amusements. I fear that the abhorrence with which some good parents regard any play for children is the reason why children go away for pleasure. Husband and I used to read history, and at the end of each chapter ask some questions, requiring the answer to be looked up if not given correctly. We follow a similar plan with the children; sometimes we play one game and sometimes another, always planning with books, stories, plays, or treats of some kind, to make the evenings at home more attractive than they can be made abroad. I should dislike to think that any one could make my children happier than I can, so I always try to be at leisure in the evening, and to arrange something entertaining."

"When there is a good concert, lecture or entertainment, we all go together to enjoy it; for whatever is worth the price of admission to older people is equally valuable to the children; and we let them see that we spare no expense where it is their advantage to be out of an evening."

"But the greater number of our evenings are spent quietly at home. Sometimes it requires quite an effort to sit quietly talking and playing with them, when my work basket is filled with unfinished work, and books and papers lie unread on the table; but as the years go by, and I see my boys and girls growing into home-loving, modest young men and maidens, I am glad that I made it my rule to give the best of myself to my family."

## Young Folks' Column.

### Our Puzzle Box.

#### Numerical Enigma.

I am composed of 22 letters.  
My 4, 14, 19, 9, 16, 22 is to adhere.  
My 13, 18, 16, 15, 10, 8, 5, 3, 19 is an enterprise in which something is at hazard.  
My 6, 17, 20, 5, 11, 15 is very small.  
My 21, 3, 2, 11, 12, 1 is an examiner.  
My 7, 13, 15 is melancholy.  
My whole often causes the conviction of innocent persons.

#### Geographical Names.

1. A feminine nickname and a masculine nickname.  
2. A pillar, an industrious insect and an exclamation.  
3. Fine mineral particles and to enchant.  
4. Gay and a nickname.  
5. A personal pronoun and an entanglement.  
6. A measure, a human being and a division of territory.  
7. A harbor and the earth.  
8. A personal pronoun and a large cord.  
9. Anger and real estate.

#### Charade.

My first and second, read aright,  
The being of a God allow;  
But, if too closely they unite,  
That truth will madly disavow.

#### Decapitations.

1. Behold not at all and leave always.  
2. Behold a halting walk and leave a puny devil.  
3. Behold a market and leave the application of knowledge to effect a desired purpose.  
4. Behold a wild animal and leave a part of the head.

#### Cross-word Enigma.

My first is in knit, but not in sew;  
My second is in man, but not in foe;  
My third is in woe, but not in will;  
My fourth is in wound, but not in kill;  
My fifth is in bite, but not in bay;  
My sixth is in hate, but not in slay;  
My seventh is in ray, but not in light;  
My eighth is in shun, but not in fight;  
My ninth is in beak, but not in bird;  
My tenth is in flock, but not in herd;  
My eleventh is in fold, but not in hind;  
My whole is a saying, you will find.

#### Answers to Last Puzzles.

NUMERICAL ENIGMA.—"Cast thy bread upon the waters, for thou shalt find it after many days."  
CROSS-WORD ENIGMA.—William Shakespeare.  
DECAPITATIONS.—1. Shed, she. 2. Barn, bar. 3. Wet, we. 4. Seek, sec. 5. Kind, kin.  
CHARADE.—Connecticut (I-cut-connect).  
PROBLEM.—Twelve.

### A Story of Two Little Cloaks.

There was a little Blue Cloak, and a little boy whom I used to know very well was often inside of it.

There was a little Brown Cloak, and inside of that there was often another little boy whom I used to know.

And there was a great, beautiful chestnut forest across the brook that these two little Cloaks had watched week after week; had watched and waited for the burrs to open and the nuts to fall. And now a nipping frost had opened the burrs, the nuts had fallen and were to be had for the gathering, and so the two Cloaks, with the two boys and two baskets, were seen one bright morning going toward the forest.

The little Cloaks fluttered in expectation, the baskets also swung in anticipation, while the boys ran and laughed and shouted in very fullness of hope and joy.

Now, this is all very agreeable and pleasant, and we all wish the little fellows their baskets full and a safe return, and much enjoyment as they sit by the fire and eat their nuts in the succeeding winter evenings; and doubtless it would all have turned out just so, and there would have been nothing remarkable about it, except for a thread of a brook—a very muddy and dirty thread it was, about so wide, and that's a little wider than you can reach with both arms extended, that ran across their way.

I say this little brook ran right across the way of the two little Cloaks, and it was about as muddy a brook as mud could make it. Right across the muddiest part some one bridged it with a slender rail, so slender that it trembled and shook fearfully with one's weight.

Now, as to jumping across, that was out of the question, for it was a good jump for a grown man, and a big jump for a large boy, and it was about as much as our two small Cloaks could have done to jump across if they could have put two jumps into one, which, of course, they couldn't do. So what was left for them but to turn back and give up the nutting and go home, or to go across on this slender, trembling rail?

Now, who, with the pleasure of nutting before, was ever known to think for a moment of going back and giving up for any obstacle so trifling as a brook, even a very muddy one?

My little adventurers certainly had no such thought.

And now I think I see them just as they looked then, for it was many years ago. The little Blue Cloak flutters, the little feet waver and slip and stagger, the steps are uncertain and faltering, but they carry the little boy inside the cloak over, and with a laugh he steps on the other side.

And now, little Brown Cloak! it is your turn! The little feet step tremblingly on the tottering rail, another insecure step, and another, and another, and then—arms are stretched wildly out, but there is too much drapery for successful balancing; the Blue Cloak on shore is laughing uncontrollably; the Brown Cloak not on shore is floundering helplessly, wretchedly, not at all laughingly, at full length, and flat as

any other flounder, in mud and water; and then, after infinite floundering and struggling, I see two little Cloaks, one of them still brown, but a very muddy brown,—a very dirty and wet and drizzling and uncomfortable brown, trudging in a ludicrously melancholy way homeward, and two empty baskets that mean more than well-filled baskets could possibly mean.

The witch in the play must have put the words into my mouth which I have since often had occasion to verify. They are weird or ludicrous, as we apply them, and quite true whether applied to nutting expeditions or to the weightier affairs of life; and they are these:

"It's one to go, but another to come."

—Charles T. Jerome in *Wide-Awake*

## GOOD HEALTH.

### Finger Nails.

Our finger nails grow out about three times a year; they should be trimmed with scissors once a week, not so close as to leave no room for the dirt to gather, for then they do not protect the ends of the fingers, as was designed by nature; besides, if trimmed too close at the corners, there is danger of their growing into the flesh, causing inconvenience, and sometimes great pain. The collections under the ends of the nails should not be removed by anything harder than a hrush or a soft piece of wood; nor should the nails be scraped with a penknife or other metallic substance, as it destroys the delicacy of their structure and will at length give them an unnatural thickness. We are not favorably impressed as to the cleanliness of a person who keeps his nails trimmed to the quick, as it is often done to prevent dirt gathering there; whereas, if a margin were allowed, it would be an index to the cleanliness of the hands, from which the collections under the finger nails are made. Leave a margin, then, and the moment you observe that these collections need removal, you may know that the hands need washing, when they and the nails are both cleaned together.

Most persons are familiar with those troublesome bits of skin which loosen at the root of the finger nails; it is caused by the skin adhering to the nail, which, growing outward, drags the skin along with it, stretching it until one end gives way. To prevent this, the skin should be loosened from the nail once a week, not with a knife or scissors, but with something blunt, such as the end of an ivory paper cutter; this is best done after soaking the fingers in warm water, then pushing the skin back gently and slowly; the white specks on the nails are made by scraping the nail with a knife at a point where it emerges from the skin.

Biting off the finger nails is an uncleanly practice, for thus the unsightly collections at the ends are kept eaten clean! Children may be broken of such a filthy habit by causing them to dip the ends of their fingers several times a day in wormwood bitters, without letting them know the object; if this is not sufficient, cause them to wear caps on each finger until the practice is discontinued.—*Hall's Journal of Health.*

SOME NEW FACTS ABOUT RABIES.—It is known that M. Pasteur is directing his attention to the subject of rabies. The virus of that disorder, of course, exists in the saliva, but M. Pasteur has now proved that it does not exist there only. The brain substance also contains it, and, used to inoculate healthy animals, will reproduce the disease as effectively as the saliva. Matter from the medulla oblongata and the frontal portion of one of the brain hemispheres and the liquid of the brain have been thus employed with success. Again, one of the greatest difficulties in researches on rabies arises from the uncertainty of development of the evil after inoculation or a bite, and the long time of incubation. M. Pasteur is now able to communicate the disease surely, and to shorten considerably the time of incubation. His method is to inoculate directly the surface of the brain, having recourse to trepanation, and using as inoculating matter the cerebral substance of a mad dog as pure as possible. In that case the first symptoms of rabies appear infallibly in a week or two, and death ensues in less than three weeks. In these researches, of which we may expect to hear more shortly, M. Pasteur has the co-operation of MM. Chamberland, Roux and Thuillier.

RELATION OF THE NOSE TO THE FACE.—A somewhat singular fact has been observed with reference to the shape of the nose, or rather the setting of it in the face, so to speak. To be strictly correct, from the artist's point of view, the nose should be accurately in the middle of the face, and at right angles with a line from the pupil of one eye to that of the other. As a matter of fact, it is rarely or never thus placed; it is almost invariably a little out of the "square," and the fact of its being so is often that which lends a peculiar expression and piquancy to the face. A medical writer points out that there are anatomical reasons why a slight deviation from the true central line may be expected, and that the nose which is thus accurately straight between the two eyes may after all be considered an abnormal one; the only absolutely true and correct organ being, in fact, that which deviates a little to the right or left,

## DOMESTIC ECONOMY.

### Miss Corson's Methods with Cucumbers.

To begin, let us consider cucumbers stewed with onions. To prepare them slice both vegetables after removing their outer rind, using them in equal quantities, and fry them brown in sufficient hot butter to prevent burning; when they are brown stir among them a little flour, season them palatably with salt and pepper, cover them with hot water, and stew them for five minutes, when they will be ready to serve. Another excellent method of dressing cucumbers is to peel and slice them, sprinkle them with salt and vinegar, and let them remain for about two hours; they then will be ready to simmer for half an hour, with salt and pepper, sufficient butter to prevent burning, and a very little sugar. This method, which somewhat resembles the Jewish one of preparing cucumbers for the table, has the advantage of removing from them the juice that they hold in abundance, and that so often proves injurious from the peculiar medicinal effect upon the alimentary canal. The Jewish method is to pare and slice the vegetable, sprinkle it with salt, and press it between two dishes under a heavy weight for two hours, until much of the juice is expelled; it is then ready for cooking or for use in salads. Cucumbers, stuffed Turkish style, present an unusual and palatable dish; they are first peeled, then cut in two pieces crosswise, and boiled five minutes in salted water; they are next scooped out and half filled with a highly seasoned force-meat, made of cold lamb or chicken and onion or parsley, all of these ingredients finely chopped, and the remaining half fully filled with boiled rice; thus prepared the cucumbers are simmered until tender, with sufficient broth or gravy to cover them; sometimes a few tablespoonfuls of tomatoes, peeled and sliced, are stewed with them; the broth or gravy in which they are cooked is served with them. A delicious fish sauce is made by mixing finely-grated cucumbers or their expressed juice with mayonnaise, using just enough of the cucumbers to impart its flavor to the mayonnaise; this sauce is excellent with boiled salmon or trout.

PEACH MARMALADE.—Pare, stone and weigh the fruit; heat slowly to draw out the juice, stirring up often with a wooden spoon. After it is hot, boil quickly, still stirring, three-fourths of an hour; add the sugar, allowing three-fourths of a pound to each pound of fruit. Boil up well for five minutes, taking off every particle of scum; add the juice of one lemon to every three pounds of fruit, and the water in which one-fourth of the peach kernels have been boiled and steeped. Stew all together for 10 minutes more, stirring to a smooth paste. Put it up hot in air-tight cans, or, if you prefer to put it in glass jars, put it in them when nearly cold, and put white paper on the top of each jar.

MUTTON COLLOPS.—Cut some very thin slices from an underdone leg of cold roast or boiled mutton. Sprinkle over them a little pepper and salt, and roll in beaten egg, then in bread or cracker crumbs, and fry quickly in melted butter. Take out and stir in a dessertspoonful of flour mixed thoroughly with cold water; add to the butter; stir in the remains of the gravy of the meat; simmer gently for 10 minutes, and turn over the colllops. Serve at once. An excellent lunch or tea dish.

FRICASSEE OF ONIONS.—Peel two or three dozen of the very small, round, white onions; sprinkle them with salt, let them remain for half an hour, then roll them upon a cloth to dry them slightly, and dredge with flour; throw them into a stewpan in which you have melted two ounces of fresh butter, toss them over a gentle fire for five minutes, drain the fat from them, add a pint of rich milk, minced lemon peel, white pepper, salt and butter. Simmer for 10 minutes and serve in the sauce.

TO PREVENT COLORS RUNNING.—It is said that a teaspoonful of black pepper will prevent gray or buff linen from spotting if stirred into the first water in which they are washed. It will also prevent the colors running, when washing black or colored cambrics or muslins, and the water is not injured by it, but just as soft as it was before the pepper was put in.

FRIAR'S CHICKEN.—Quarter two or three chickens, clean them thoroughly, and place in a stew pan with a pint and a half of boiling water. Add a few sprigs of parsley, or half a chopped onion, some pepper and salt, and simmer slowly until the meat is very tender. Just before serving beat up three eggs to a froth and stir into the gravy. Serve very hot.

TO DETECT SOAPSTONE ADULTERATION.—Detection of adulteration with soapstone in candies, sugar, flour or butter is not at all difficult. Dissolve the suspected candy or sugar; the insoluble mineral will remain. Burn a sample of suspected flour; an excess of ash will betray the cheat. Melting and filtering will do the same for suspected lard or butter.

GERMAN CUSTARD SAUCE.—Four yolks of eggs, two ounces powdered sugar, grated rind of lemon, a glass of sherry and a little salt. Beat it sharply over a slow fire until it assumes the appearance of a light, frothy custard. It is a good sauce.





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SAN FRANCISCO:

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## The Week.

The summer birds are returning. The first of August in California answers to the first of September at the East. We have no deadly dog days which make August the heart of dullness at the East, and those favored ones whom the first of July calls to a vacation, generally grow weary of recreation and are ready for a return to activity in August. The schools have already gathered their broods together, and the fiscal year of work has begun again. The merchants are figuring on the fall trade, and expectations are quite bright, and reasonably so, for merchandise dances when production sounds the pipe, and it is plain that this year of plenty and good values in produce generally will call for good amounts of covering, filling and adorning for the producers. The grain dealers, too, are assuming a more interested air, and the large fleet which arrived during the week, was freely chartered at high rates. The disposition to acquire wheat is naturally increased, and large quantities have been secured in the country by shippers' agents. Thus far a price has been paid in the interior which is the equivalent of \$1.50 per cental here, which is low enough, but a considerable improvement on the rates which discouraged growers during the last half year. The fruit harvest is progressing actively and prices are still well maintained. The grape is going to do all that has been expected of it this year, and in contracts already made in Sonoma, we hear figures considerably in excess of last year's prices. There will be plenty of money among vineyard owners this year, and the improvement of homes and surroundings, the building of new cellars and the extension of plantations will be a marked result of the season's work. Prosperity is a glad word; we are glad indeed that so many now can speak it.

The Mechanics' fair opened auspiciously at the great pavilion on Tuesday evening. There promises to be a display of various productions and manufactures, which will be worth a journey to see. The fair will be in progress four weeks, and we shall have more to say of it hereafter.

## Proofs of Progress.

The progress and prospect of our division of the national domain is now receiving much attention at the pens of writers, and justly, too. There is every reason to expect notable development of Pacific coast resources and growth in production, commerce, population, in short in all things which go to make up a condition of prosperity. There is nothing of a public character which delights a man more than to live in a country or in a section which is going forward, and when the region commands affection as the most delightful he has ever known for residence and inspires pride in its manifest destiny industrially, it is little wonder that the fortunate dwellers in California count their lots cast in pleasant places.

But the writers who are now painting the future of the Pacific coast in such glowing colors are prone to throw all their art into the portrayal of a few leading figures, and to overlook the details which are often the strength of creation. It is pleasant to think of the thousands of miles of railway which are bringing us nearer and nearer to the great Eastern country, and of the great aggregates of wealth which will be produced when 10,000,000 people are working in mine and field where now less than 2,000,000 are employed, but to trust alone to the railways to produce the people and the wealth is to overlook tendencies which are now strongly at work and which are the important connecting links between the great transportation enterprises and the great industrial advancement which is predicted. These minor signs of growth are the details which most word-painters overlook, and they are to our mind the surest evidences that the new facilities for travel and transportation will all find their opportunities for successful operation.

We have alluded so frequently to the growth of several of our agricultural specialties that they need but be mentioned in this connection, though they are eloquent witnesses of present success foreshadowing future greatness. Take our horticulture and the industries which arise from it, now commanding a world's markets. Note the disposition toward investment in these lines of production. See the great orchard owners now looking up and down the State for ground for new orchards and new vineyards. Mark the hosts of city and town-bred people who are carrying their great and little savings for investment in similar undertakings; the great capitalist planting his hundreds of acres in trees and vines; the little capitalists searching out the cozy nooks on hillsides and in canyons for a few acres of rich land, where there may be planted a few hundreds or thousands of trees—and a home, when the conditions seem favorable. Notice the disposition to escape from the narrow margin in cereal growing—the many acres in our great valleys which will soon be yielding dried fruit and wine, escaping transportation burdens by concentration of value in little bulk or weight. All these tendencies will result in the advancement of the State, and when one considers them carefully, it will appear that a forecast of our future becomes more definite and convincing than if one argues our future greatness from geographical position or the march of the railway, or simply indulges in multiplying millions of population without thinking definitely of what they are to do for their livelihood.

We must let this allusion to horticulture stand for her sister agricultural arts, for though she now seems the favorite, there are other strong creatures in the race. The wool interest and the live stock interest, both of them reduced now to branches of husbandry and no longer wild industries, are showing gratifying growth and have futures full of promise. The increase of mixed farming with its economies of self support and its safety in diversified products, is itself a strong proof of true advancement, and the success on the new plan opens another vista of profitable effort for long ranks of prosperous producers. When one discerns the results which will follow this group of tendencies now in operation, he will see another wide field opening for the support of population. Many have been held back from the pleasures of California life because they thought our conditions unkind to these arts. The contrary is being more clearly demonstrated each year.

Passing from the field to the workshop and the factory there are new details of progress found. It is true that our manufactures of fabrics from jute to wool and cotton, linen and the like, to silk, are just begun or as yet in prospect. They will come in due time no doubt, and while the painters of the leading figures are indulging their prophetic eyes with views of the coming forests of factory chimneys, we find a very gratifying theme for contemplation in the growth of the minor manufactures. There has been a notable tendency toward increase in the home manufacture of implements during the last 12-month. The large enterprise at Benicia, the new movement at San Leandro, the strengthening of manufacturing firms in San Francisco and the increase of their efforts—these and other enterprises like them near the shores of San Francisco bay, show that the word is onward in this important branch of progress. Nor is the life in manufacturing confined to the bay shore. The interior establishments are increasing their facilities. Stockton, for example, is a busy hive, with new swarms continually in the manufacture of industrial

appliances. Workshops are being projected in new localities and the enlistment of capital in these enterprises is evident. Our "Agricultural Notes" on another page show the beginnings of two establishments, one in Contra Costa, the other in Tulare county. These local concerns are faithful ministers to producers' needs, and their uprising is a sure indication of the productive force of the section in which they are erected. They aid in the growth of towns, which create home markets for perishable products, and their ultimate effect is to make the different sections of the State independent and self-reliant, which is a condition necessary to the most rapid growth and accumulation of wealth.

But space fails us to more than throw out a hint of the theme we would suggest. The idea is to look more closely for the signs of growth, and when we are called upon to declare the faith we have in the future of the Pacific coast, let it not alone be a catalogue of projected railways and a prophetic reference to the census of 1900. Let it be shown that we are working aright and moving strongly forward, and then our friends abroad will perceive that our future does not rest alone on engineering and imagination.

## California Fruit at the East.

One of our leading fruit growers, who lately returned from an extended tour through the Eastern States, assures us that the call for California fruit is general through the Eastern country. Much more interest and disposition to purchase is manifested than he had anticipated. Not only in the large towns, where the wealthy congregate and are disposed to gratify their gustatory tastes, is the favor for California fruit manifested, but in the smaller places the local merchants find that a few boxes of California fruit is disposed of readily even at the comparatively high price which they are compelled to charge. The coming of our orchard fruit at a time when they have nothing at the East but the early strawberries, finds a people with their appetite for fresh fruit at its keenest edge, and the result is a general sale. There is reason to believe that this trade, large as it is this year, is but at its beginning, and as shipping expenses and facilities may be expected each year to still more favor the business, it is plain that our eastward outlet is to be one of the great opportunities before our orchard interests. This year, as we stated in a recent issue, the shipments have been far greater than any preceding year; and the Sacramento merchants, who have worked up this business with much enterprise and with free investment and risk of their capital, have been busy as bees for weeks. The grape season is now upon them, and the shipment of our fine traveling varieties will be immense.

Some notes on the reception of our fruit in New York city and across the Atlantic, from the *Evening Post*, of that city, are of interest in this connection. The *Post* says: It was announced last week that the first lot of peaches ever brought from California in sound condition had appeared upon the market and were selling at satisfactory rates. It is thought by the New York dealers that the season may also have something to do with this present success, it being well known that fruit will keep longer in one year than in another. It is too soon yet to say whether the importation of peaches will assume the importance of the California pear and plum business, but the trade has proved sufficiently profitable this year to encourage a larger purchase next year. The net profits upon a car of peaches, holding 400 crates, is \$600, when they arrive here in good condition. The cost of the fruit is, for 600 cubic ft., \$1,100, allowing \$100 for spoiled fruit. Peaches sell readily here for \$6 per crate. All the plums now in market are from California, and nine-tenths of the pears. The business of sending California plums and pears to London is growing rapidly, there being but little danger of spoiling in the transit, while boxes of pears are worth \$6 in London, though the freight is only 50 cents a box. Our merchants do not send the fruit to England, but sell to English shippers in need of freight for the other side. All the California fruit which arrives here and is unfit for sale on the market, is bought by the canneries, to whom the importer goes when all other customers fail.

**THE NATIONAL BALANCE SHEET.**—The commercial position of the United States among the nations of the world is most gratifying to our people. It is shown by the Bureau of Statistics, at Washington, that the excess of exports of merchandise over imports during the year ending June 30, 1881, was \$259,726,254, against \$167,683,912 during the previous fiscal year. The excess of imports of gold during the past fiscal year was \$91,168,650; during the previous year, \$75,841,391. During the past fiscal year, the value of exports of merchandise amounted to \$902,319,473, being larger than ever before in the history of the country. The value of imports of merchandise, \$642,593,219, was larger than any previous year, with the exception of the year immediately preceding. The total value of foreign commerce of the United States, including imports and exports of merchandise, during the last fiscal year, was \$1,544,912,692, exceeding any previous fiscal year.

## The Butter Business.

We had a pleasant visit last week from our old neighbor, John Gallagher, formerly of this place, but for the past decade a farmer and dairymen on the old Smith ranch, at Bodega. He reports the butter-making business more satisfactory the present season than for the past four years, notwithstanding the sharp and unfair competition with Eastern and Western butter of many grades. A considerable portion of the butter sold in San Francisco could properly be called "Western grease" when it first arrives there. It is purchased below the market price because it is mottled, and not of a uniform character, poorly put up, and from its outward appearance would be marked in "bad order" in the Eastern markets, but after being worked over, colored to order, and put up in rolls, California style, finds ready sale as Pacific coast butter. Some buyers will reject sweet, fresh butter, if a little pale in color, and select that of a deep yellow hue, not knowing that it has been made so by the use of annatto. What our dairymen mostly complain of is having to compete with an Eastern article known as "oleobut-yocallit," but positively designated as "bull butter," much of which is worked off on the confiding inhabitants of the metropolis as the product of the dairy. Mr. Gallagher insists that this article should be branded and sold for just what it is. For the protection of the people generally, and particularly one of our leading interests, a stringent law should be enacted to compel dealers in this artificial article to sell it under its proper name. He is of the opinion that the dairymen will combine and make themselves heard at Sacramento during the next session of the Legislature upon this subject.—*Petaluma Argus*.

The above extract from a journal in one of the great dairy counties contains many truths. The evils complained of exist and will no doubt continue unless something is done on the part of the legitimate dairy interest to check them. The true way to secure reforms and to search out improvements in the butter business is by the combination of producers with that end in view. The great advance of dairying at the East and the opening of the immense foreign trade was the work of the dairymen's association, which investigated, discussed, determined and then threw the full force of the organization into securing and carrying out the measures and policies which were determined upon. Each producer working alone and shipping his butter to the market with little idea of the evils in the business and content thus to remain, will never right wrongs nor remove hardships which should be swept away.

Take, for example, this resurrection business, which is done with poor imported butter. It is no doubt indulged in by some firms who would not be suspected of such operations, and the result is that probably the firm which is taking a commission from the butter producer for selling his legitimate goods, is at the same time making what money he can out of the revived butter, which he sells in direct opposition to the interests of the local producer who favors him with his product. Even firms which do not believe in vivifying imported grease, do not hesitate to import Eastern butter when it is cheap, and thus acting both as dealers in their own interest and commission merchants for California producers, they make money at every turn of the market, sometimes even lining their pockets when the imported goods force the price down, so that the home maker gets nothing for his labor. It is not very different with cheese, though not to the extent it was a few years ago. We do not think it is at all right nor fair to the California producer of dairy goods, that his commission merchants should have their eyes always on the chances of running in Eastern dairy goods when they can make a profit out of them, seemingly careless of the fact that they are thus doing everything they can to injure the California producer by arranging a brisk competition, as it were, between the two sides of their own stores.

The repacking and coloring up of low-grade butter is a nefarious business, which should be stopped. The importation of outside dairy products should not be done by men whom the California makers trust with their property and enrich by the commissions they pay. Both of these practices can to a certain extent be checked by united effort on the part of the dairymen if they would put it forth. If the dairymen should organize a society, appoint their committee to investigate the alleged abuses in the trade, and when they found out that any merchant was disposed to endanger their interests by resurrection of grease or by trade on his own account in imported goods, they should at once take their consignments away from him, we should soon see a change of habit in these matters. So long as nothing is done these evils will continue.

There was a dairymen's society started in this State in 1876, and several interesting meetings were held, but the attendance was so small and dwindled so rapidly away that the society adjourned indefinitely. It is certainly desirable that an organization should be had. There is abundant opportunity for vigorous work on the part of its members, for the whole range of dairy experience, from the cow to the market, has hosts of subjects which should be discussed and action taken in the light of the greatest wisdom attainable. It is easy to organize and go to work if there is but interest enough among the dairymen.

**COLossal RADISHES.**—We have seen samples of the long red radish grown on R. J. Trumhull's ranch, near Elmira, Solano county, which surpass anything of the kind we have ever seen before. One was 18 inches long and 15 inches in circumference at the largest part. These roots were grown without irrigation. The casual observer takes them for beets.

**THE Visalia Delta** says the time is coming when wooden railways will be laid all through the county for transporting grain to the railroads from 3 to 12 miles distant.



## Frog Farming.

The Lenni Fish Co., whose ponds are in the upper Sonoma valley, have it in mind to embark in frog farming and expect soon to stock a pond for this culture. It may not be known to all our readers that frog farming is an established branch of production at the East and found profitable to those who engage in it near the large cities. It is quite certain that San Francisco with its large population of foreigners will be able to use many more frogs than are now brought in by the catchers, and when the natives learn the delicacy of a frog's thigh, they too will become zealous consumers.

The Boston *Commercial Bulletin* says that the frog trade has much improved and there is now demand in that city for all the frogs that can be secured. Many restaurants and most of the hotels have the delicacy, though not on the regular bill of fare, only served to order. A large part of the frogs sold there are native, but there is a serious competition on the part of the Canadian article. In Canada the business is conducted on a large scale, and the industry, which lately received considerable encouragement by the increased demand, is at present very promising. Numbers of boys, who have become quite expert, spear the frogs in the country ponds and streams, and sell them in the city to the commission dealers, from whom they receive five or ten cents a dozen. The commission men skin, pack in ice, and ship them to the northern and western cities, where the delicious tidbits bring them a handsome profit. In Boston frogs are sold generally by the dozen, and bring from 20 or 50 cents, according to the quality. As the demand increases, the business will furnish quite a source of rural income, and thrifty Cape Codders might consider this suggestion, as from personal observation it is known that vast numbers of frogs are there which now live to a respected, serene, and honored old age. The subject of canning frogs is now being talked of, and efforts are being made to discover a good process for this purpose.

The subject of best varieties of frogs has already arisen for discussion, and it is possible that future frog breeders will be advocating their breeds as the adherents of the cattle or fowl interests now claim their own as best. It is a fact, however, that at Elgin, Ill., there is a man who found it so profitable that he went into the business, a few years since, of raising a peculiar kind of frog for the western markets.

## A Reminiscence.

Now that the railroads are racing westward, and the whole expanse of the central regions bids fair to be gridironed with the tracks, it is worth while to remember for a moment the method of crossing the plains, which brought many of our old readers to this coast. The prairie schooner, as a pioneer of civilization, is a theme which will engage the attention of the historian, for its service in the development of the country is well defined. It will be hard for those who crossed the plains in the early days, and have not since retraced their steps, to realize the change which has come over many of the solitary scenes through which they passed. The herds of buffaloes have given place to the herds of cattle which supply the Eastern markets; the timid antelope has been superseded by great flocks of sheep; trees, farm-houses and cultivated fields are changing the lonely wastes into agricultural regions, whose aggregate products are reaching high figures, and are yet but at the beginning. It is wonderful, passing the belief almost, of those who saw the plains in their recent wildness, that so great progress should have been achieved in so short a time. And the end is not yet. It is probable that the next quarter of a century will far outstrip the last in the peopling and subjugation of the wild west.

**PERSONAL.**—We are grieved to learn of the misfortune over which our esteemed contributor, Mrs. Carr, is sorrowful. We cannot express the loss and the distress it has occasioned, half so well as she, who feels it, describes them, and we take the liberty of transcribing a few sentences from a private note to one of our publishers. We do this because we know her many friends in the *RURAL* circle will deem it a privilege to extend heart-felt sympathy. Mrs. Carr writes:

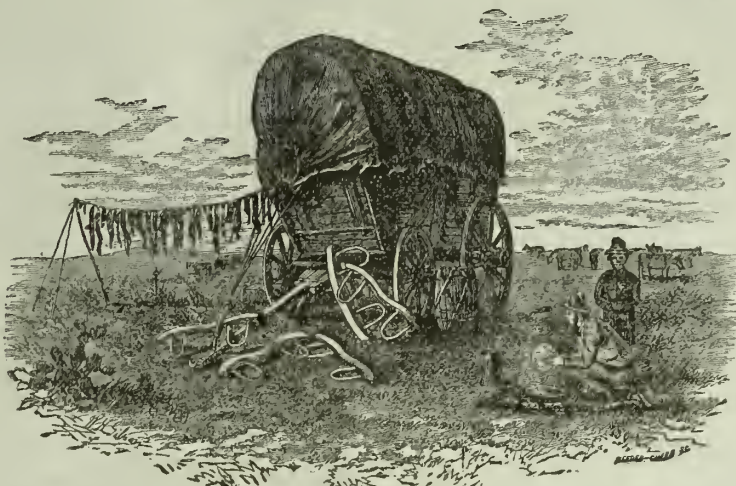
My old home, the birthplace of my three elder boys, filled with the Lares and Penates of four generations, was destroyed by fire; and my mother at 84 years made homeless, barely escaping with life. It was my first married home. I had never moved the family pictures, piano and old heirlooms. It was full of treasures, the loss of which is more to me than any other.

The old home was in New England.

**SODA BAY HOTEL.**—This popular resort, on Clear lake, Lake county, has been more than usually well patronized this season, and visitors have been enthusiastic in their praise of the place and management.

## The Fair Season.

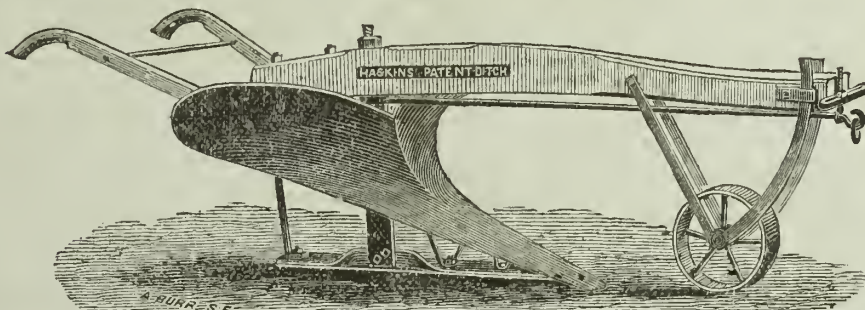
The opening of the Mechanics' fair ushers in the season of fairs. For nearly three months there will be industrial expositions in progress at different points in the State. These exhibitions are in fact industrial academies, where all may gain information of the general progress of our industries, or the achievements of individual workers. It is a fortunate thing that the fairs embody also the spirit of entertainment, and visitors are pleased and instructed at the same time. There are some features of the fairs of to-day which we do not approve, and it is to be hoped that coming years may see improvements in the policies of those who manage them. In their present state, they do much good, and if more of our best citizens and legitimate producers would manifest an interest in the work of the fair societies, the evils which attend them might be reduced or done away.



THE OLD OVERLAND ROUTE—IN CAMP UPON THE PLAINS.

For the information of our readers, we give below a list of the coming exhibitions on this coast in the order of their occurrence, and the leading officers of the societies holding them:

Mechanics' Institute fair at the pavilion, corner Eighth and Mission streets, San Francisco, August 2d to September 3d. Secretary, J. H. Culver.  
Southern California Horticultural fair at Los Angeles, September 5th to September —. Secretary, Geo. Rice.



HASKINS' PATENT DITCHING AND EXCAVATING PLOW.

Sonoma and Marin District fair at Petaluma, September 5th to September 10th. Secretary, W. E. Cox, Petaluma.  
Third District Agricultural fair at Chico, September 6th to September 10th. Secretary, W. J. Blackwell, Chico.  
El Dorado District fair at Placerville, September 7th to September 10th. Secretary, C. H. Wetherwax, Placerville.  
Golden Gate District fair at Oakland, September 12th to September 17th. Secretary, L. Walker, Oakland.  
Mendocino County fair at Willits, September 12th to September 17th. Secretary, B. F. Coates, Willits.  
Lake County fair at Lakeport, September 13th to September 15th.  
State fair at Sacramento, September 19th to September 24th. Secretary, E. F. Smith, Sacramento.  
San Joaquin Valley fair at Stockton, September 27th to October 1st. Secretary, J. M. Larue, Stockton, Cal.  
San Mateo and Santa Clara District fair at San Jose, October 3d to October 8th. Secretary, T. S. Montgomery, San Jose.  
Monterey District fair at Salinas city, October 11th to October 15th. Secretary, S. J. Westlake, Salinas city.  
Nevada State fair at Reno, October 10th to October —.  
Bay District races in San Francisco, October 12th to October 15th. Secretary, T. W. Hinchman, San Francisco.  
Sonoma Agricultural Park Association races at Santa Rosa, August 30th to September 3d. Secretary, Chas. Hoffer, Santa Rosa.

Our list is not complete. The dates of the Humboldt, Siskiyou and Plumas District fairs have not reached us. We are not informed of the date of the Sixth District Exhibition in Los Angeles. Several county fairs are also unannounced. We shall be pleased to hear from all these societies that our list may be complete in some future issue of our paper.

**INTER-STATE HORTICULTURAL FAIR.**—We have received a premium list of the fair of the Illinois State Horticultural Society at the Inter-State exposition in Chicago, commencing September 7th and to close October 22d, 1881. Competition is open to the United States and Canada. Quite liberal premiums are offered for temperate zone fruits and vegetables, and for greenhouse plants. Full particulars may be had by addressing the Secretary, O. B. Galusha, Morris, Ill.

**PASSENGER** rates from St. Louis to Boston have been reduced from \$20 to \$19, and to Buffalo from \$18.25 to \$13.50.

## New Ditching Plow.

Alphonso Haskins, of Davisville, Yolo county, has recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, an improved ditching and excavating plow, which is illustrated on this page. The improvement consists of a shoe which is fitted to run upon the bottom of the trench or excavation, and has a suitable point for digging or loosening up the soil. Peculiarly shaped shares, having a narrow, flat front portion, extend upward and backward at an incline so as to carry the earth above the level of the ground, and from this point the shares curve outward so as to throw it away from the trench on each side.

The plow has a coulter-wheel as shown, arranged to raise or lower by hinged or pivoted standards. The plow standard is suitably secured to the beam, and the shoe is bolted or fixed to its foot. This shoe is of considerable length, narrow and flat upon its bottom, so as to run upon the bottom of the trench and smooth

and level it similar to the action of a plane. The point is formed or secured upon the front of a bar or plate, which has its upper end secured to the standard, and extends down to the front of the shoe, thus forming a support for the shares, which may be bolted to it.

The shoes conform to the outline of this har, and are made narrow and flat at their lower

front end so as to receive the earth from the point, having about the same width. This flat surface extends upward and backward, widening slightly up to the point where the shares begin to curve outward. The surface of this portion is nearly in a straight line from the point, and brings the earth up to the flaring portion of the shares, which then take it and throw it outward upon each side, and entirely clear of the trench.

By this means Mr. Haskins is enabled to form trenches of any desired depth, having a perfectly smooth, flat bottom, suitable for laying cement or other pipes. This plow is especially adapted for the formation of trenches in which irrigating pipe is laid, when said pipe is formed and laid at one operation, from the plastic material. It can also be used in making mining ditches, etc.

**PERSONAL.**—We have had the pleasure of meeting George Hussman, the well-known horticulturist of Missouri, and Professor in the Missouri State University, also author of works on grape culture, etc. Prof. Hussman assures us that he is gratified by what he has seen of our vineyards, and is also taken with the delights of our climate and the great variety of products on our soils. We trust that he may have abundant opportunity for observation.

**ERRATA.**—In Mr. Eaas' letter on beekeeping, in last week's *PRESS*, under the heading, "Tin Rabbits," sixth line, it should read "oak strip 1/2 inch thick," "not 3/4 inch." Under the heading, "Use of the Queen Cage," near the close of the fourth paragraph, it should read "in natural swarming," not "unnatural swarming."

The New southern railroads are exhausting the energies of all the timber regions on the coast in getting out ties, from Santa Cruz to Washington Territory. In Mendocino county it is difficult to obtain a sufficient number of hewers to fill the orders.

## The Golden Gate Park.

(CONTINUED FROM PAGE 81.)

similar in size and shape to the Orchid house, in which may be found some of the choicer varieties of roses, such as Mareschal Neil, Cloth of Gold, etc., together with azaleas, lilies and a multitude of beautiful foliage plants. The Californian, having grown tired of exotics here, recognizes an old friend in our beautiful Mariposa tulip, cultivated and brought to perfection, and it is at once placed in the front rank of flowers.

The greenhouse adjoining, which corresponds in general features with the aquatic department, is intended for the growth of hard-wooded plants, such as japonicas, azaleas, etc. Here, apparently with a desire to show what may be done, the gardener has taken several heliotropes and trained them to standards, until they have attained a height of from 8 to 10 ft., without a sign of vegetation on the stem, until the top is suddenly terminated in a magnificent umbel of flowers, as delightfully fragrant as only heliotrope can be. There is also an old-fashioned rose geranium trained in the same manner, to a height of 18 ft. The lover of camellias will here have no cause for complaint. This room probably presents the greatest diversity of color to be found in the building, for here are stored the calceolarias. This collection (calceolaria) does not command attention so much for its beauty as for its abundance of flowers and variety of hues; among scores of plants, no two being found of the same shade. The border plant, the *Alternanthera amabilis* (?), being easy of cultivation, pleases everybody, and is one of the finest edging plants that can be grown.

In the rear of the building are two propagating pits, 50 ft. long by 12 ft. wide; a growing house, 75 ft. long by 25 ft. wide; and a potting-room, 30 by 30 ft.

A heating apparatus supplies the requisite warmth to all the chambers, and an admirable system of ventilation enables the keeper in charge to preserve at all times an equable temperature.

Thirty-five tons of glass and over three tons of putty were used in the construction of the conservatory.

The Commissioners have lately received from Sir Joseph Hooker some 65 varieties of Sikhim and Bootan rhododendrons, the finest and choicest of the family, many of which will have to be grown in the conservatory to be protected from the prevailing winds.

## The Market For Horses.

The chance for fair rewards from the breeding of useful and handsome horses was recently emphasized in our columns. There is hardly any specialty which deserves the attention of the farmer and the beauty of it is that without the appurtenances of a regular breeding establishment almost every farmer may increase his revenue by a little wise investment in blood to improve the animals which he already has, providing they are a fair basis to start upon. The *Ukiah Press* of last week has a good paragraph of experience and injunction in this connection. It says:

There is money to be made breeding horses. Marketable animals are scarce. There is a demand for a fair quality of roadsters and work horses. A few weeks since an agent was in this section purchasing animals for a San Francisco street car line. After great exertion he secured 15 head, averaging over \$100 apiece for animals weighing from 1,100 to 1,200 lbs. Last week J. W. Lay, of Santa Rosa, was here looking for a nice pair of matched roadsters, for which he was willing to pay as much as \$800. He had to content himself with something short of his ideal, at a less figure. These are two late examples of the continuous demand of the better grades of horseflesh, and they show the poverty of Mendocino in that class of stock. Breeders will find horses profitable stock. Farmers needing two animals might keep a pair of good brood mares, whose matured increase would cost nothing and would shortly be worth hundreds of dollars. There are numbers of good sires making the season in this county, and proper breeding and care would give profitable returns. San Francisco is a never failing market for good horses.

**SMOOTHING THE ROAD TO MARKET.**—Every thing which facilitates the approach of the product to the market is worthy the earnest attention of producers. We read with interest in the *Visalia Delta* that the time is not far distant when there will be wooden railroads all through the country around Visalia for transporting grain to the railroad from ranches 3 to 12 miles distant. The climate is such that the stringers would never decay, and the rails could be replaced as fast as they are worn out, lumber being easily accessible. The country is level, rendering grading unnecessary. The cost is merely nominal, and nothing would have to be paid for rolling stock or employees. Each farmer could have his own car and horses; or, if it could be preferred, a less number would be required if secured by subscription. There could be convenient turn-outs, for passing. Very little lumber is necessary. The cars would be cheap. One horse could pull as much grain as four or five could on a dirt road, and could travel faster. Such enterprise would save enormously to farmers. There would be no outlay for a right-of-way—none of the costly expenses attending a railroad. They would save hauling of other kinds, as well as grain. They would be pleasant and quick methods of traveling to the railroad. The *Delta* says such tramways are a necessity in Tulare county where hauling is one of the most important items of expense in the production of grain.



## The High Sierra and its Royal Robe.

(CONTINUED FROM PAGE 83.)

They are principally found in the northern temperate zone, and the largest continuous forest of them is in the Southern States, southeast of the Alleghenies, and extending from Mississippi to North Carolina. But the noblest, largest, most valuable trees on earth form the chief warp and woof of the royal robe of Prince Sierra.

We cannot, in this paper, enter into statistics of the immense lumber business prosecuted in the Sierra—notably at Truckee—from which so large a part of California and Nevada, as also the greater part of the basin eastward and the desert southward are supplied. Two months ago, we rode into the town of Franklin, opposite the old town of El Paso, on the Rio Grande, with the first construction train that entered the city. Several of the cars were loaded with lumber, compactly piled and bearing a placard marked, "From the Truckee Lumber Co." Two weeks ago, we visited Salt Lake City, and there in the depot of that thriving town workmen were unloading cars laden with lumber bearing the same legend. And last week, I saw, in contracts for building mills in Sonora, it is stipulated by the Mexicans that the timber shall be of Truckee lumber.

The pine family proper is a large one, comprising, in all the globe, about 68 species. There are, in California, 20 species, 9 of which are found in the Sierra. A pine may readily be recognized by its leaves being aciculate or pointed, and persistent; and they are always in bundles or fascicles, which are sheathed at base, each fascicle containing from one to five leaves each, always alike in the same species. The difference in the number of leaves in a fascicle serves to divide the family into four groups.

The Sierra contains one species with single leaves—*Pinus monophylla*—the "nut pine" of the Nevada slope; one species with leaves in pairs—*P. contorta*—the so-called "California tamarack"; three species with leaves in threes—*P. ponderosa*, the "yellow pine"; *P. sapiana*, the "fothill" or "gray-leaved pine"; and the *P. tuberculata*, or little "scrub pine." Lastly, there are four species in the Sierra which have their leaves in fives, and they are also very short. These are *Pinus Lambertiana*, the famous "sugar pine"; *P. monticola*, the "mountain" or "white pine"; *P. Balfouriana*, "Balfour's pine"; and a variety of *P. flexilis*, the "dwarf alpine pine."

Largest of these species is the splendid sugar pine, a noble tree, specimens of which are found often 12 to 14 ft. in diameter and over 200 ft. high. It is a peculiarity of this tree and of the nearly related "mountain pine," that the largest limbs are at the top, from the ends of which the large cones depend, like Chinese lanterns.

The most abundant pine is the yellow or pitch pine, a polymorphous species, which is distributed well over the mountains of all the coast and eastward as far as the Rocky mountains. So diverse and apparently distinct are its varieties that half a dozen names are given it by lumbermen, and also scientists have made three species out of it. A great deal of examination has been given to the forms of this species lately, and the variety, *Jeffreyi*, found on the high slopes, especially of the eastern side of the Sierra, has lately been declared by Dr. Engelman to be distinct.

This tree normally has but three leaves in a fascicle, but in '75 I found a tree in the Sierra that bore its leaves in fascicles of fives, and it was sent to the Centennial. And this leads to an important statement I am about to make.

## The Alleged New Pine.

The so-called new species, *Pinus Arizona*, of Engelman, we believe is but a sport of *P. ponderosa*, or "yellow pine." The species is founded on specimens collected and observations made by Dr. Rothrock, in 1874. He found growing on the Santa Rita mountains of Arizona a tree called by the lumber dealers "yellow pine," and which resembled strongly in its cone, *P. ponderosa*, but which had its leaves in fascicles of fives. Other slight differences were noted also by Dr. Engelman, to whom the specimens were submitted, and he writes: "This seems to be a meager account to found a species upon in a genus so difficult as *Pinus*, but I find it impossible to unite it with either of the allied species."

Last September, while the Census Commission of Forestry, including Dr. Engelman and Prof. Sargent, visited this coast, they went down to Arizona and paid a visit to the Santa Rita mountains. From abundant specimens and examination at leisure, they come to conclusions confirming the new species.

Now, we have just returned from a botanical tour through Arizona and New Mexico, and fortunately we were enabled to explore quite thoroughly a neighboring range to the Santa Ritas; that is, the Santa Catalina mountains, about 50 miles north of the former range. Botanically speaking, the Catalinas are most interesting, for their steep, splintered peaks, arranged in two series, which include a large park of dense forest between them, affords, perhaps, more species and varieties of flora than any region of the south. Here, in this beautiful, high deer park, we found, secluded from the scorching desert winds, a dozen species of robust trees, including the *Pinus ponderosa* in every variety of growth and appearance. Some trees bore only their leaves in threes; some in fives, and some bore fascicles varying from two to seven. The cones also presented a wide diversity.

To be sure, this forest is not the one in which the original *Arizona* was found, but five-leaved specimens which I lately sent to Dr. Engelman, he reports as certainly the new species, and I am just as sure that connecting forms unite it with unmistakable *ponderosa*.

The Doctor separates the species by very abstract distinctions based upon a careful microscopical examination of the leaves. Thus: "*Ponderosa* (with other species), leaves in threes, sometimes in fours and fives; their sheaths persistent; strengthening cells under the epidermis around the resin ducts. *Arizona* (with other species), leaves in fives. Ducts usually free of strengthening cells."

Of course, any character, if it is even microscopic, which is permanent, is therefore distinctive; but it will be seen that in *Arizona* the ducts are only "usually" free from strengthening cells. To most botanists, other characters based upon differences of fruit, growth, timber, as well as appearance, would be necessary for establishing a separable form—a distinct species.

## The Sierra Pines Again.

Returning from this discussion, let us look again at the pines of the high Sierra in detail, as they engage the eye of the lover of nature. Some of the most beautiful effects are produced at several places in the high Sierra by belts of trees of different shades succeeding each other like circular capes, on the slope of high peaks, like the Lyell group, near Yosemite; Mt. Tellac, near Lake Tahoe; Lassen's peak and the peerless Mt. Shasta, at the head of the Sierra. When, added to these in the autumn season, groves of deciduous trees, as oak, maple, poplar and willow, line the canyons which cut across these belts vertically, and thus, by their rainbow tints, deck the circular capes with dashes of yellow, crimson and brown, the effect is exquisite beyond description.

For keen perception of distinctive characters and artistic descriptions, with a certain lovely, unique mode of expression, no one exceeds John Ruskin. Happily, he has turned his attention toward the very objects mostly treated of in this essay—the pines. Hence, I cannot better close than by quoting a few of his paragraphs, in which I have taken the liberty of changing a few sentences.

It should be understood that until lately all the cone-bearing trees, including the firs and spruces, were called pines, and some of the trees treated of by Ruskin were no doubt spruce.

"The pine, placed nearly always among scenes disordered and desolate, brings into them all possible elements of order and precision. Lowland trees (as oak, ash, poplar, and the like) lean to this side and that, though it is but a meadow breeze that bends them, or a bank of cowslips from which their trunks lean aslope. But let storm and avalanche do their worst, and let the pine only find a bit of vertical ledge of rock, or even a cleft in the face of an almost perpendicular rock, it will nevertheless grow straight toward the zenith. Suspend a plumb-line along its trunk, the plummet shall point to the center of the earth as long as the tree lives.

I wish the reader to fix his attention for a moment on these two great characters of the pine—its straightness and its rounded perfectness—both wonderful and in their issue lovely, though they have hitherto prevented the tree from being drawn. I say, first, its straightness; because we constantly see it in the wildest scenery, and we are apt to remember only as characteristic, examples of it those which have been disturbed by violent action or disease. Of course such accidents are frequent. The soil of the mountain is subject to continual change; perhaps the rock in which the tree is rooted splits in frost and falls forward, throwing the young stems aslope. But eventually the pine rises heavenward in serene resistance, self-contained and triumphant."

"I can never," Ruskin continues, "without awe stay long under a great Alpine cliff far from all dwelling or work of man, looking up to its companies of pine as they stand on the inaccessible juts and perilous ledges of the enormous wall, in quiet multitudes, each like the shadow of the one beside it, upright, fixed, spectral, as troops of ghosts standing sentinel on the walls of Hades, not knowing each other and dumb forever. You cannot reach them, you cannot cry to them to warn them against falling. Those trees never heard human voice; they are far above all sound save that of the winds. No foot of sympathetic mortal ever stirred fallen leaf of theirs. All comfortless they stand between the two cold eternities of the vacancy and the rock, yet with such iron will that the rock itself looks riven and shattered by them—fragile, weak, inconsistent compared with their dark energy of delicate life, the uniformity of their unconquerable aim to point straight from earth to heaven."

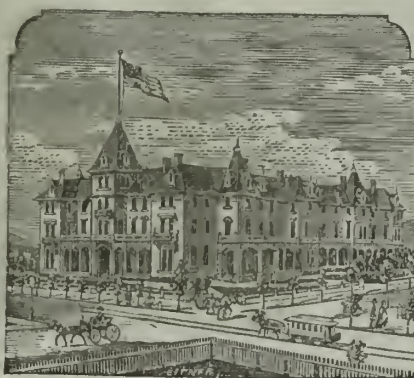
With regard to its other chief character, the perfection of its rounded spire, Ruskin says: "The impression on most people's minds must have been received more from pictures than from real inspection of the tree—so ragged and unsightly they think the pine; whereas, its chief character in health is rich greenish and full roundness. It stands compact like one of its cones, slightly curved on its sides, finished and quaint like a shorn tree in a nobleman's park, and instead of being wild in expression, forms the softest of all forest scenery, for other trees show their twisting stems and boughs; but the pine, growing either in luxuriant mass or in happy isolation, allows no wood to be seen. Summit behind summit rise its pyramidal ranges, or down to the very grass sweep its circle of boughs. So there is nothing but

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green cone and green grass. Nor," he adds, "is the pine softer, but in one sense more cheerful than other foliage. The trees of lowland forests, as the oak, ash, maple, etc., interlace their branches overhead and checker the earth with darkness, but the pine, growing in scattered groups, leaves the glades between emerald bright. Its gloom is all its own; narrowing into the sky it lets the sunshine strike down to the dew between its long-pointed shadows."

## Scarlet Snow.

All who have visited the polar regions are familiar with the appearance of red or scarlet snow, in those high latitudes. The broad fields of everlasting snow that flank the northern coast of Greenland are flanked with the strange blood red, and farther toward the poles miles of it stretch as far as the eye can reach. The phenomenon is due to the presence of a minute red animalcule in the snow. A microscope detects its presence, but how it gets there is a difficult question and one that has never been quite satisfactorily answered.

Until recently the only place in the United States where this phenomenon has been observed is upward near the summit of Mount Shasta. But the *Leadville Chronicle* of a recent date states that this peculiar phenomenon has made its appearance in the Holy Cross county, in Colorado, a very elevated region in that Territory. That paper says:

"The red snow in this region is first seen at the head of Cross creek, where it may be observed in patches of intense carmine, varying in area from as large as a man's hat to 20 ft. in diameter. Taken in the hand and closely examined, nothing can be detected that gives it color, and it melts into clear red water, leaving no stain. Farther on, in some of the steep gulches, with which the country abounds, the bottoms are entirely covered with the strange substance. In some places the color is vivid in the extreme, while in others it fades to a faint pink, producing an effect not readily described in words. Old prospectors who penetrated the regions two years ago, say that there was no snow of this description there, and its fall can scarcely have antedated this year. Still higher, and at the very foot of the mountain, the red snow disappears, and nothing save the pure white coverlet greets the eye. How the same tiny insects that appear in the polar regions can find their way to the inaccessible Holy Cross, is a thing beyond human ken, and will be a problem for the scientists of the future to ponder over."

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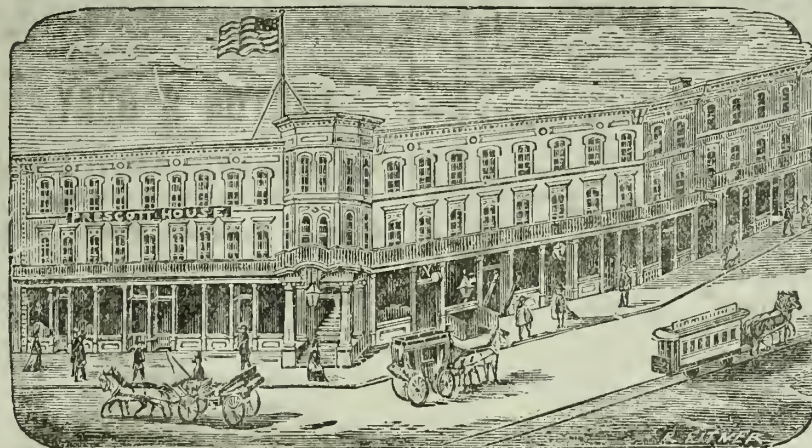
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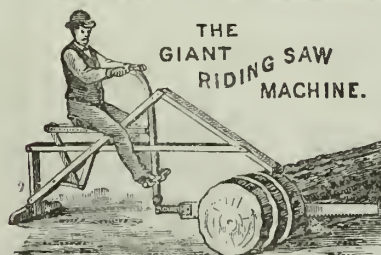
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## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 3, 1881.

Trade is rather more interesting, and wheat transactions, especially in the interior, are reported quite large. There are now many ships under charter, and loading will be brisk this month. The latest from abroad is as follows:

LIVERPOOL, August 2.—Good to choice California Wheat, 9s 8d@9s 9d. The markets are steady. Receipts for the past three days, 123,000 cts, including 71,000 American.

## The Foreign Review.

LONDON, Aug. 1.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The temperature of the past week has been, on an average, 30 degrees lower than during the spell of heat. There have been general rains and local thunder storms, but wheats are not thick enough to take serious damage. The nights have been cold in England. The severe night frosts in Scotland will retard the harvest there. Mildew is reported in wheat in various parts of England. The decline in temperature will not be of advantage to wheats, except in the north of England. The barley crop will be very good in some localities, but in the remainder of very irregular growth, and has ripened prematurely. Oats are good in Ireland and parts of Scotland, but variable and generally indifferent in England. The grain trade is unchanged, and sales are made with greater difficulty than last week, but where they were made prices are maintained, although on spot prices for foreign were nominally unchanged. It was difficult to make sales Friday without some concessions. Business is very restricted, but the supply is not excessive, and a growing belief that the European harvest will not equal the estimates makes holders disinclined to force sales. Foreign trade is completely suspended, owing to the different ideas of buyers and sellers. The off coast market is fairly supplied, but only about a dozen out of 25 cargoes were sold during the week. Buyers have done nothing since Wednesday. The quantity of wheat and flour in passage to the United Kingdom shows a reduction of 36,900 quarters from that of the previous week. The sales of English wheat during the week were 14,327 quarters, at 47s 1d per quarter, against 13,752 quarters, at 44s 2d per quarter, for the corresponding week last year.

## Eastern Wool Markets.

Boston, July 30.—There is a quiet tone to the market, but at the same time holders are firm and not disposed to press sales at any concession. The present prices scarcely pay cost, and there is a fair prospect that later in the season fairly remunerative prices will be realized. The sales of the week add up 1,800,000 lbs of all kinds, and a quiet market is looked for during August. Sales of Ohio and Pennsylvania fleeces have been made at from 41¢@42¢ for X, 42¢@43¢ for XX, 43¢ for choice XX and above. Michigan X has been sold at 39¢@40¢. For X, 38¢ is freely offered for large lots. Medium and No. 1 fleeces have been sold at 44¢@47¢. Combings and decline fleeces are in steady demand at from 43¢@45¢ for fine Michigan and Ohio decline, and 46¢@48¢ for medium and No. 1 combing. Unwashed fleeces are steady and in fair demand at from 18¢@24¢ for common and coarse, 25¢@31¢ for fine, 27¢@34¢ for medium. Pulled fleeces are steady at 34¢@35¢ for super and choice lots as high as 47¢ have been given. In California wool the business has been the smallest noted for a long time. Australia is quiet, with sales at from 42¢@44¢. Montevideo is quoted at 44¢. Eighty thousand lbs of Cape were sold on private terms.

## Eastern Grain and Provision Markets.

New York, July 30.—Wheat is irregular, closing steady; Pork is unchanged, and Lard in better demand and 5¢@10¢ higher. Rio Coffee is rather quiet but firm and a quarter higher. Refined Sugars are in limited demand and lower. Hides hold firm, which checks transportation.

BAGS—Bags are dull and prices are at the reduction made last week. Dealers say the demand this week is rather better, but prices are unchanged.

BARLEY—Barley has had better days, but the inquiry now seems to have slackened a little. Barley is firmly held at full prices. We note sales: 900 sks good at 96¢, 1,000 sks fair at 95¢, and 400 sks poor dark at 92¢ per cwt. The price asked for the best feed is 97¢ per cwt.

## BEANS—Unchanged.

CORN—Corn is stationary; 200 sks Large Yellow sold at \$1.05.

DAIRY PRODUCE—Fresh Butter has not gone off so fast this week, but the price for the best has not changed. Cheese has advanced to 14¢ for the best, and is held up strongly.

EGGS—Eggs have weakened from their highest points but are to-day the same as one week ago.

FEED—Choice Wheat Hay has risen to \$13 3/4 ton. Other sorts are a shade higher.

FRESH MEATS—More Mutton and Pork has led to a slight decline in these meats. Other flesh is unchanged.

FRUIT—The canners are letting up on Peaches, and rates are sliding a little. Grapes are more abundant, and have fallen about 25¢ on the box. Canteloupes are still lower. Citrus Fruits are unchanged.

HOPS—The rate is nominally raised to 20¢@25¢. There is nothing done but small trade to local brewers.

OATS—Oats have strengthened and have sold at full rates: 100 sks Ifumholdt sold at \$1.65; 450 sks at \$1.82, and 100 sks at \$1.57 1/2 cwt.

ONIONS—Both Red and White are 10¢ cheaper per cwt than at our last report.

POTATOES—Choice White Potatoes have slightly improved, the best, in sacks, now going at 87¢. Sweet potatoes have dropped off 25¢ per cwt.

PROVISIONS—There is a fair trade, and no change in prices.

POULTRY AND GAME—Poultry is still farther reduced all around, and the market is reported weak. Venison has advanced to 10¢@12¢ per lb.

VEGETABLES—String Beans and Green Corn are lower again. Green Peppers are very low, 25¢@30¢ per sk. Tomatoes are also in great supply, and very low. Eggplant has advanced a little.

WHEAT—The city is not doing much, but many sales are reported in the country, for delivery at Port Costa, at \$1.47. Many are holding for \$1.50. We note sales: 2,000 tons fair to good shipping, \$1.40@1.41; 60 tons Sonora, \$1.46; 100 and 30 tons shipping, \$1.46; 30 tons and 1,800 and 1,700 sks No. 1 do, \$1.45; 50 tons do and 650 sks No. 2, \$1.42; 2,500 and 500 sks No. 2, \$1.37, and 1,000 sks coast, \$1.35.

WOOL—Sales are few, except in eastern Oregon Wools, of which 150,000 lbs sold at 25¢@26¢. There is a slight shading off on California Wools this week.

## Domestic Produce.

WHOLESALE.

WEDNESDAY M., August 3, 1881.

BEANS & PEAS.		ONIONS.	
Hayo, cti.....	90 @ 05	Peanuts.....	13 @ 16
Butter.....	1 10 @ 30	Filberts.....	15 @ 16
Castor.....	3 00 @ 30	Red.....	50 @ 65
Pea.....	2 00 @ 30	Silver Skin.....	75 @ 80
Red.....	85 @ 87	Oregon.....	60 @ 87 1/2
Pink.....	82 @ 85	New.....	60 @ 87 1/2
Small White.....	2 00 @ 20	Petaluma, cti.....	— @ —
Lima.....	2 25 @ 20	Tomatoes.....	— @ —
Field Peas, blk eye.....	40 @ 15	Humboldt.....	— @ —
do, green.....	1 35 @ 10	Kidney.....	— @ —
BROOM CORN.		POTATOES.	
Southern.....	3 @ 31	Idaho.....	— @ —
Northern.....	3 @ 31	Jersey Blue.....	— @ —
CHICKEN.		Cuffey Cove.....	— @ —
California.....	4 @ 41	River, red.....	— @ —
German.....	61 @ 7	Sweet.....	— @ 75
DAIRY PRODUCE, ETC.		POULTRY & GAME.	
Cal. Fresh Roll, lb.....	32 1/2 @ 33	Hen, doz.....	5 00 @ 5 50
do Fancy Branda.....	— @ 35	Roosters.....	4 00 @ 5 00
Pickle Roll.....	28 @ 30	Broilers.....	2 50 @ 3 50
Firkin, new.....	27 1/2 @ 30	Ducks, tame, doz.....	4 00 @ 8 00
Western.....	18 @ 22	Mallard.....	— @ —
New York.....	— @ —	Sprig.....	— @ —
CHEESE.		Teal.....	— @ —
Cheddar, Cal., lb.....	13 @ 14	Wildgeon.....	— @ —
EGGS.		Geese, pair.....	1 25 @ 2 00
Cal. Fresh, doz.....	28 @ 30	Wild Gair, doz.....	— @ —
Ducks.....	— @ 25	White do.....	— @ —
Oregon.....	— @ 25	Turkeys.....	15 @ 17
Eastern by express.....	21 @ 25	do, Dressed.....	— @ —
Pickled here.....	— @ —	Sulph, Eng.....	2 50 @ 3 00
Utah.....	24 @ 25	do, Common.....	1 00 @ 2 25
FEED.		Quail, doz.....	— @ —
Brant, ton.....	— @ 14 00	Rabbits.....	1 25 @ 1 50
Corn Meal.....	24 00 @ 25 00	Hare.....	2 00 @ 2 50
Hay.....	7 00 @ 10 00	Venison.....	10 @ 12
Middling.....	— @ 19 00	EDIBLE OILS.	
Oil Cake Meal.....	24 50 @ 25 00	Cal. Bacon, extra.....	13 1/2 @ 14
Straw, bale.....	40 @ 45	clear, lb.....	13 @ 13 1/2
FLOUR.		Medium.....	13 @ 13 1/2
Extra, City Mills.....	87 1/2 @ 90 00	Light.....	14 @ 14 1/2
do, Country Mills.....	25 @ 75	Lard.....	13 @ 15
do, Oregon.....	3 75 @ 3 74	Cal. Suet Beef.....	10 @ 10 1/2
do, Walls Walla.....	4 00 @ 4 25	Shoulders.....	8 1/2 @ 9 1/2
Superfine.....	2 50 @ 2 55	Hams, Cal.....	11 @ 12
FRESH MEAT.		Dupe's.....	— @ 16 1/2
Beef, 1st quality, lb.....	6 @ 6 1/2	Whittaker.....	— @ 16
Second.....	5 1/2 @ 6	Royal.....	— @ 16 1/2
Third.....	4 1/2 @ 5	Golden Gate.....	15 1/2 @ 16
Mutton.....	3 1/2 @ 3 5	SEEDS.	
Spring Lamb.....	5 @ 5 1/2	Alfalfa.....	15 @ 17
Pork, undressed.....	5 1/2 @ 6	do Chile.....	— @ —
Dressed.....	8 @ 8 1/2	Canary.....	4 @ 5
Veal.....	7 @ 7 1/2	Clover, Red.....	14 @ 15
Milk Calves.....	7 1/2 @ 9	White.....	— @ 20
do, choice.....	— @ 9	Cotton.....	— @ 20
GRAIN, ETC.		Flaxseed.....	2 1/2 @ 3
Barley, feed, cti.....	32 1/2 @ 37 1/2	Hemp.....	7 @ 8
do, Brewing.....	1 10 @ 1 20	Italian Rye Grass.....	25 @ —
Chevalier.....	1 15 @ 1 30	Perennial.....	25 @ —
do, Coast.....	85 @ 85	Mill, German.....	10 @ 12
Ruckwheat.....	— @ 15	do, Common.....	7 @ 10
Corn, White.....	1 12 1/2 @ 15	Mustard, White.....	3 @ 4
Yellow.....	1 02 1/2 @ 15	Brown.....	1 1/2 @ 2
Small Round.....	1 05 @ 1 07 1/2	Rape.....	3 @ 8
Oats.....	1 40 @ 1 47 1/2	Ky Blue Grass.....	20 @ 25
Milling.....	1 50 @ 1 55	do, quality.....	16 @ 18
Rye.....	1 37 1/2 @ 40	Sweet V Grass.....	— @ 75
Wheat, No. 1.....	1 45 @ 1 47 1/2	Orchard.....	20 @ 25
do, No. 2.....	1 37 1/2 @ 42	Red Top.....	— @ 15
do, No. 3.....	1 10 @ 20	Hungarian.....	3 @ 10
Choice Milling.....	1 45 @ 1 50	Lawn.....	30 @ 40
HIDES.		Mesquit.....	10 @ 12
Hides, dry.....	19 @ 19 1/2	Timothy.....	10 @ 11
Wet salted.....	9 @ 10 1/2	TALLOW.	
HONEY, ETC.		Crude, lb.....	6 1/2 @ 6 1/2
Beeswax, lb.....	20 @ 24	Refined.....	7 1/2 @ 8
Honey in comb.....	13 @ 16	WOOL, ETC.	
do, No. 2.....	8 @ 10	Spring 1880.....	24 @ 26
do, No. 1.....	8 @ 10	Oregon, heavy.....	21 @ 24
Extracted.....	7 @ 11	SPRING 1881.	
HOPS.		San Joaquin, choice.....	18 @ 19
Oregon.....	— @ —	do fair.....	16 @ 17
California, new.....	20 @ 25	Southern Coast.....	20 @ 21
Wash. Ter.....	— @ —	Silchity Bury.....	17 @ 18
Old Hops.....	— @ —	Burry and Seedy.....	17 @ 18
NUTS & FRUIT.		Northern choice.....	25 @ 30
Walnuts, Cal.....	8 @ 9	Burry or Seedy.....	22 @ 25
do, Chile.....	7 1/2 @ 8	Sonoma, Mendocino, Humboldt, fancy.....	30 @ 31
Almonds, hd sh lb.....	8 @ 10	FRUITS AND VEGETABLES.	
Soft shell.....	14 @ 15	WHOLESALE.	
Brazil.....	10 @ 12	WEDNESDAY M., August 3, 1881.	

## Fruits and Vegetables.

WHOLESALE.

WEDNESDAY M., August 3, 1881.

FRUIT MARKET.		VEGETABLES.	
Apples, blk.....	20 @ 25	Asparagus, bx.....	— @ —
do, Astracan, bx.....	40 @ 1 00	Artichokes, doz.....	10 @ 12 1/2
Apricots, lb.....	3 @ 4	Beets, cti.....	— @ 75
Bananas, bnch.....	2 50 @ 5 00	Beans, Lima, lb.....	— @ 5
Canteloupes, cti.....	50 @ 75	do, String.....	1 @ 1 1/2
Cocoanuts, 100.....	60 @ 7 00	do, Wax.....	— @ —
Crab Apples.....	50 @ 1 00	do, Fountain.....	— @ —
Cranberries, hbl.....	— @ —	Cabbage, 100 lb.....	75 @ 1 00
Figs, bx.....	75 @ 1 00	Carrots, lb.....	40 @ 50
Grapes.....	50 @ 85	Cauliflower, doz.....	60 @ 65
do, Malaga.....	75 @ 1 00	Cucumbers, bx.....	40 @ 50
do, Rose Peru.....	75 @ 1 00	Egg Plant, bx.....	1 25 @ 1 50
do, Hamburg.....	75 @ 1 00	Garlic, lb.....	6 @ 12 1/2
do, Muscat.....	75 @ 1 00	Green Corn, doz.....	— @ —
Limes, Mex.....	8 00 @ 9 00	Green Peas, lb.....	— @ —
do, Cal, box.....	5 00 @ 6 00	do Sweet.....	1 1/2 @ 2 1/2
Lemons, Cal, bx.....	4 50 @ 5 00	Gr'n Pepp'r, sk.....	25 @ 35
Sicily, box.....	12 00 @ 14 00	do, Chile, h.....	25 @ 50
Australian.....	— @ —	Lettuce, doz.....	10 @ —
Nectarines.....	1 00 @ 1 25	Mushrooms, lb.....	— @ —
Oranges, Cal, bx.....	1 75 @ 2 50	Okra, lb.....	8 @ 10
do, Tahiti M.....	20 00 @ 25 00	Parasips, lb.....	— @ —
do, Mexican.....	— @ —	Horseradish.....	— @ —
do, Loreto.....	— @ —	Rhubarb, box.....	25 @ 50
Peaches, blk.....	50 @ 85	do, chest.....	— @ —
do, Crawford.....	50 @ 85	Squash, Marrow.....	— @ —
Pears, bx.....	50 @ 1 00	fat, ton.....	10 00 @ 15 00
do, Bartlett, h.....	1 50 @ 2 50	do Summer, bx.....	50 @ 65
Pineapples, doz.....	6 00 @ 8 00	Spouts, lb.....	— @ —
Plums, h.....	50 @ 1 00	Tomatoes.....	25 @ 35
Prunes, German.....	75 @ 1 00	Turkey, cti.....	60 @ 75
Quinces, bx.....	— @ —	Rutabaca.....	— @ 75
Blackberries, cti.....	4 00 @ 5 00	DRIED FRUIT.	
Raspberries, cti.....	7 00 @ 8 00	Apples, sliced, lb.....	6 @ 6 1/2
strawberries, cti.....	3 50 @ 5 00	do, quartered.....	5 @ 6
Sugar Cane, hbl.....	— @ —	Apricots.....	18 @ 20
Watermelon, 100.....	5 00 @ 11 00	Blackberries.....	12 1/2 @ 15
do, loose.....	5 1/2 @ 6	Citron.....	25 @ 30
do, loose.....	5 1/2 @ 6	Dates.....	9 @ 10
do, loose.....	5 1/2 @ 6	Figs, pressed.....	7 @ 8
do, loose.....	5 1/2 @ 6	do, loose.....	5 1/2 @ 6

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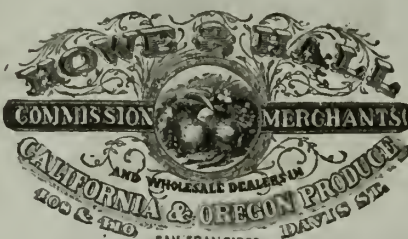
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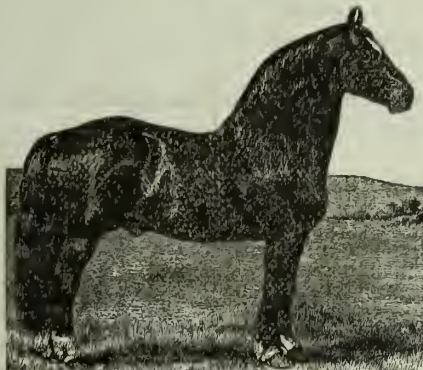
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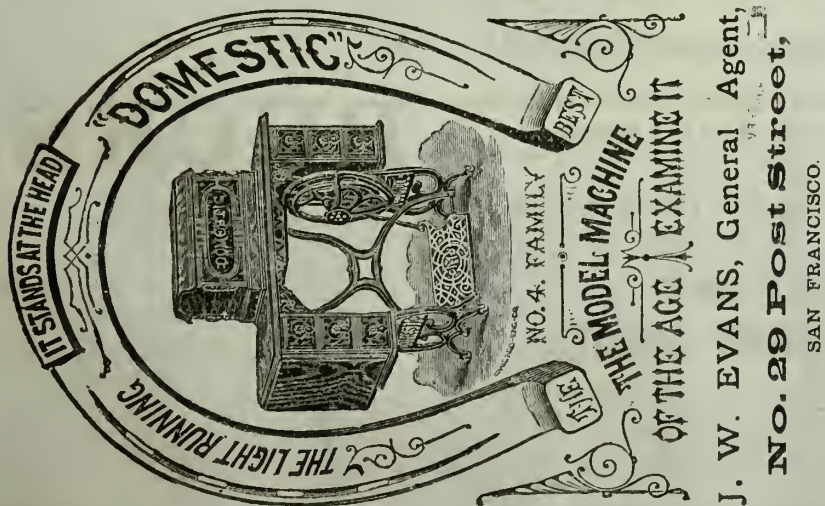


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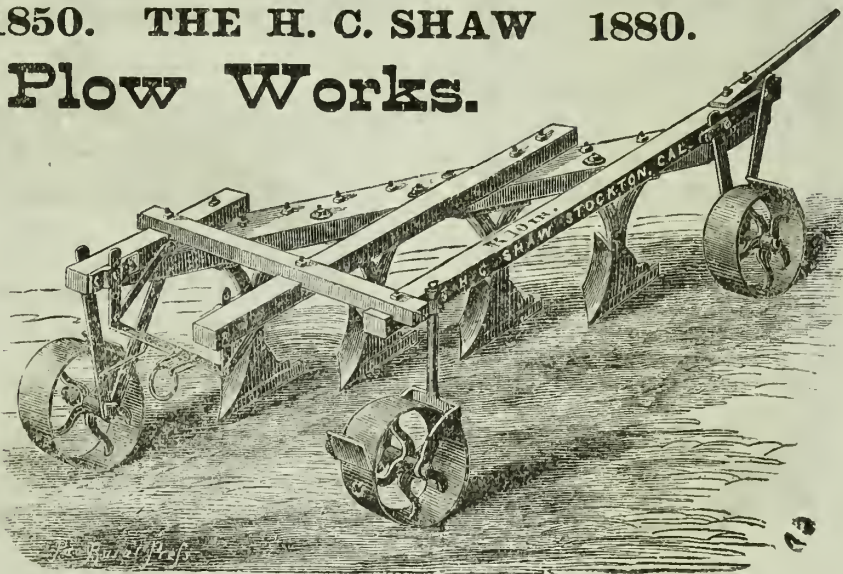
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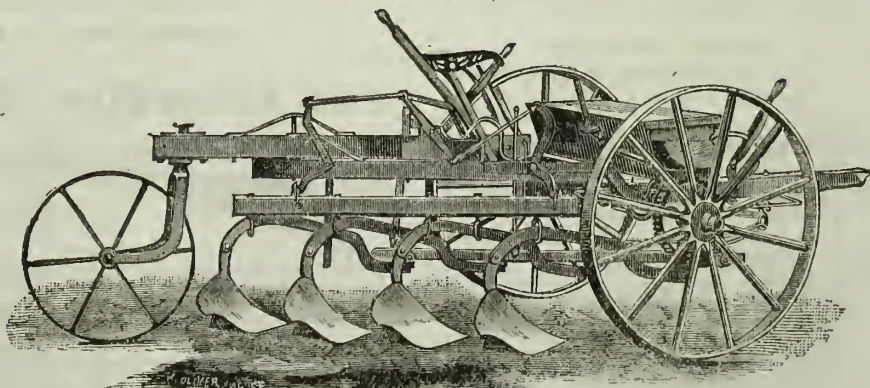
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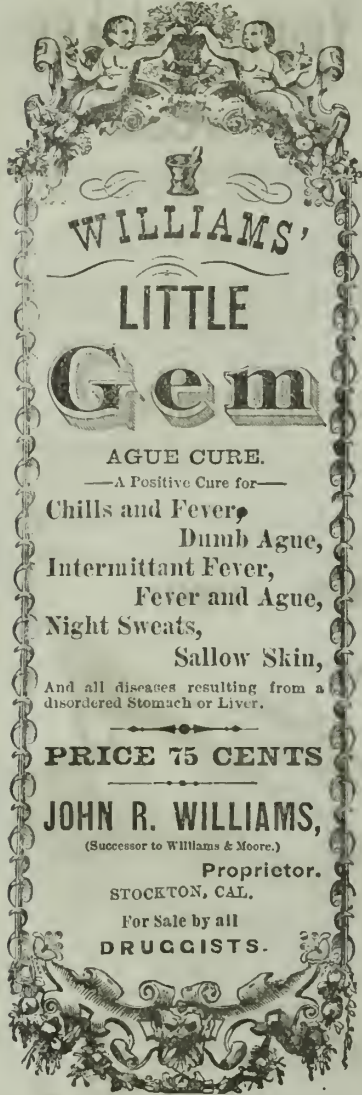
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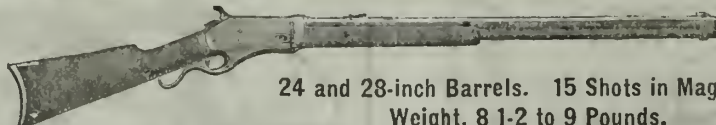


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Which adjoins the Town of Fresno, being one of the finest locations in the County for Colony purposes is now being  
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We assert without any fear of contradictory proof, that the grapevines on irrigated land in Fresno County, pro-  
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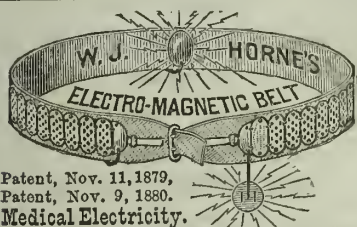
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Price reduced to \$1.60 per gallon. For directions and tes-  
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WE WOULD LIKE TO SAY A FEW WORDS TO THOSE  
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FIRST—ALL DRIERS, EVERYTHING BEING EQUAL,  
WILL PRODUCE DRIED GOODS OF EQUAL VALUE.

Now the question arises, what kind of a machine is the most  
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Can a Drier do as much work whose whole side is thrown open  
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The Drier that opens its sides every ten minutes to raise the  
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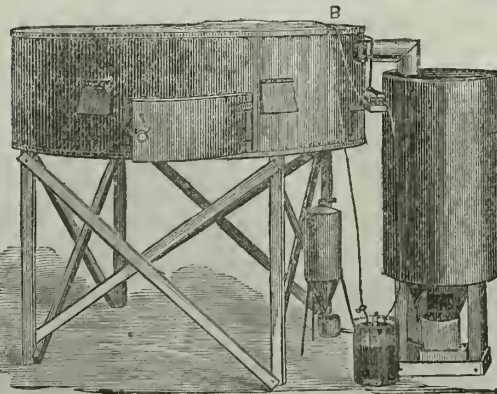
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FOR 1881.

Sacramento, Cal.

SEPTEMBER.

The Twenty-Eighth Annual Fair  
of the State of California will be  
held at Sacramento, from **MON-  
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**Sept. 24th, 1881.**

Over \$30,000 in Premiums!

The attention of Exhibitors is called to the liberal  
Premium List. Every accommodation will be provided  
for all exhibitors. Motive power furnished for Machinery  
exhibited in motion. The Farmers, Business men and  
Mechanics of this State are respectfully invited to make  
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making the exhibit of 1881 surpass all previous efforts,  
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that has been of so much benefit to the State. The **C. P.**  
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**FREE OF CHARGE.** Fruit need not be returned to  
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For further particulars address the Secretary at Sacra-  
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These Mills and Pumps are  
reliable and always give sat-  
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durable in all parts. Solid  
wrought iron crank shaft with  
double bearings for the crank  
to work in, all turned  
run in habitted boxes.

Positively self regulating  
with no coil spring or springs  
of any kind. No little rods,  
joints, levers or balls to get  
out of order, as such things  
do. Mills in use six to nine years in good order now, that  
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All sizes of Pumping and Power Mills. Thousands in  
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A charming country residence, three-quarters of a mile  
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vines; a lovely flower garden, with shrubs, foreign varie-  
ties of grapes, berries of various kinds, fruit trees, and  
an abundant supply of excellent water, windmill, tank-  
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everything pertaining to a desirable country residence.  
Terms easy, apply to **C. H. HALL, Soquel, or Howe &**  
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# 1881. THE PLOWING SEASON. 1882.

## Geo. A. Davis Manufacturers' Agency.

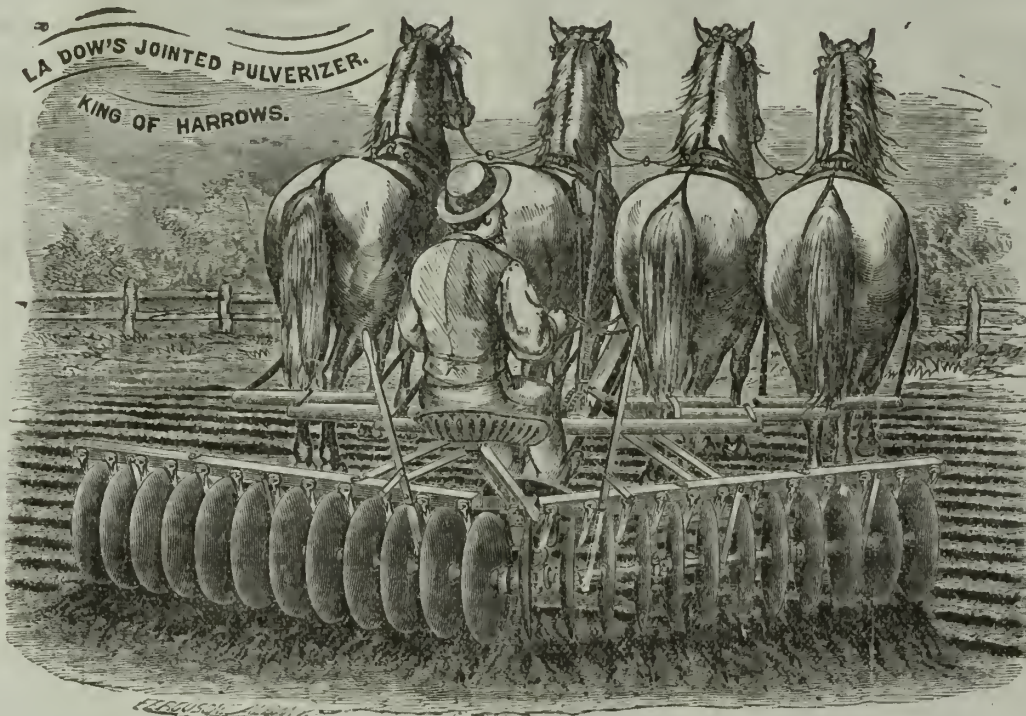
### La Dow's Jointed Pulverizing Harrow.

The Most Successful Cultivator Ever Introduced on the Pacific Coast! Over 200 Sold in California in 1880.

This Cut represents our Four-Horse Pulverizer, made especially for the Pacific Coast. Cuts 15 ft. drawn by four horses; weight of pole equal on each horse. Each Gang independent, with Patent Scraper Bars Attached. Each Gang drawn by three journals. Cuts uniformly deep the entire length of each Gang. Ground thoroughly pulverized by once going over.

CAPACITY:

35 Acres Per Day.



LOOK OUT FOR

#### NOVELTIES!

The La Dow "Adobe" Disc Harrows.

They have extra heavy disc, shafts and bearings for pulverizing stiff Adobe soil.

The La Dow "Orchard" Disc Harrows.

They have Reversible Discs to throw the soil to or from the trees.

The Seed Sower Attachment.

A force Seed Sower to be attached to the La Dow Harrow, making it the most complete and successful implement of its kind ever introduced.

#### TESTIMONIALS:

EDWARDS & BOESEKE, Gentlemen:—The three ten-foot La Dow Harrows I purchased of you last fall work like a charm. I use them not only as a Harrow, but in pliable ground for breaking. For pulverizing, I use four mustangs abreast. For breaking, I add two small horses on the lead, and fill the weight boxes until the disks penetrate to the required depth. In this way, six mustangs will break up more pliable ground in a day than a dozen big horses can with ordinary gang plows. It excels the plow for the same reason that the wagon excels the sled—the wagon transfers the friction to a greased axle. A large proportion of the draft of a plow is caused by friction. In the La Dow Harrow nearly all of that friction is transferred to a greasy socket. Yours truly,

RANCHO EL CONEJO, VENTURA CO., CAL.

O. S. ABBOTT.

VISALIA, CAL., FEBRUARY 13, 1881.

GEO. A. DAVIS, Esq., San Francisco—Dear Sir: From personal observation made in the use of the La Dow and

Randall Harrows, and also being actuated by a sense of justice towards farmers who doubtless desire candid opinions in reference to implements, I am induced to say, concerning the La Dow Harrow, that in point of economy and its thorough preparation of the soil, no implement can excel it. My foreman is delighted with the change I made by disposing of the Randall, which Harrow is good, but the La Dow is decidedly better, and substituting two of your largest size. I shall in all probability require several more next season. Yours truly,

E. JACOB.

RED BLUFF, CAL., October 21, 1880.

MESSRS. CONE & KIMBALL—Gentlemen: We, the undersigned, hereby certify that we have used the La Dow Harrows this season on our ranches, and after giving them a thorough trial, we do not hesitate in saying that they are better harrows, and do more work per day, than any others we have ever used. They are light draft, easily handled, and leave the ground thoroughly pulverized. We consider them a decided success and a great benefit to the farmer.—J. S. CONE, F. C. CRUMHAUGH, JAMES WILSON, H. C. COPELAND.

### The La Dow Spring Tooth SULKY Cultivator.

Combining all the advantages of the Common Spring Tooth Harrow, while the draft is transferred to wheels and the weight of the driver keeps the implement in the ground. The Cultivator is adjustable, so that the teeth can be made to penetrate to any required depth.

Who Would Walk in the Dust When They Can Ride on a Spring Seat.

### THE GARDEN CITY GANG PLOW.

The only successful Imported Gang Plow ever brought to the Pacific Coast.

Over 300 sold in California in 1880.

We will put this plow in the field against any Gang Plow made.

No extra charge for leveling Lever or Tongue Shifter.

Send for our New Illustrated Price List.



OUR LIST COMPRISES:

- The Garden City, 10 inch and 12 inch, Two Gang Plows.
- The Garden City, 14 inch and 16 inch, Single Sulky Plow.
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Volume XXII.]

SAN FRANCISCO, SATURDAY, AUGUST 13, 1881.

Number 7

### The Pocklington Grape.

Our engraving shows the most famous of the newer grapes of the Eastern States. It is named the Pocklington from its originator, who lived in Washington county, New York. We knew this county as one of the coldest corners of a cold State, and as the grape is hardy there, it will endure anything which the coldest districts of this coast can bring upon it. We introduce this grape to our readers who live in the colder regions of the Pacific coast as likely to please them. It must be an aggravation to them to hear so much of the European grapes which thrive in our great wine and raisin counties, but which will not survive their winters. Hence we give them tidings of something they can use, and we presume there is no law against testing the grape in the warmer districts, if vineyardists are so disposed.

The Pocklington is the result of a cross between the Concord and some other Eastern grape. It has large, leathery foliage like the Concord, and at the East thus far has proved itself proof against mildew. The vine is a strong grower, and, as we have said, perfectly hardy. The clusters are large and showy, weighing as much as one pound each (Eastern grown). There is abundant testimony of Eastern experts concerning the quality of the fruit. Marshall P. Wilder, President of the American Pomological Society, says: It is a remarkable variety, rich, sweet and luscious. The *American Agriculturist* says of it: "Of much better quality than Concord, intensely sweet and less of the *Lahrusca* quality in the taste than in the smell. The berry adheres well to the stalks, and has every appearance of being a good keeper. The great size and copious bloom makes this grape most attractive to the eye."

The fruit of the Pocklington is of a light golden yellow, covered with fine bloom; bunches very large, sometimes shouldered; berries round, very large, and thickly set on the bunch; quality better than the Concord in its best state. When fully ripe, it is clear, juicy and sweet to the center, with very little or no pulp; slightly musky, but not unpleasant.

The engraving on this page is an exact reproduction of a photograph of a cluster weighing one pound, picked from a four-year-old vine, bearing 22 bunches, weighing in the aggregate 14 lbs. The Pocklington is being introduced by George A. Stone, of Rochester, N. Y., who, we understand, controls all the stock now in the market. If the grape finally realizes all that is foreshadowed by its growth and fruitage thus far, it will do much toward supplying the colder regions of our country a substitute for the fine white grapes which grow in the open air only in our favored State, for it is announced that certain Californians who have tested the fruit at the East, say that it is acceptable beside our famous varieties.

In answer to our application for an engraving of this grape, of which we heard so much, Mr. Stone replied: "While we claim that the Pocklington is a great acquisition for this section of our country, we had hardly flattered ourselves that it would attract much attention in California, where all kinds of foreign grapes do well, but in any section where vines are liable to mildew, this would prove valuable, and we have no doubt it will compare very favorably in quality with many California grapes. The wood is very hard and heavy." Whether the Pocklington will thrive under California conditions can, of course, only be determined by trial.

**THE NAME.**—We have received a communication from Hollister signed "Plow boy" with no real name attached. We must have the name of the writer always, not necessarily for publication but for other obvious reasons.

### Increase of Small Farms.

The Assessor's report in Santa Clara county shows an increase during the past year of 800 new farms, containing from 10 to 60 acres each.—*Santa Clara Journal*.

Here is a hint of progress. Santa Clara county has enjoyed a good part of the present disposition, on the part of small capitalists, to secure small country places, and the splendid fruit land, the accessibility and general desirability of the region and its surroundings will make many investors glad that they put their little surpluses into the soil. But Santa Clara is only

the history of our State when the outlook for small farmers was so good as now, and those who have moderate capital to secure the land, can be assured a livelihood in a land of gentle air and sunlit years.

**A RAILROAD IN THE TREE TOPS.**—The *Petaluma Argus* mentions a piece of peculiar railway construction in the upper part of Sonoma county near the coast, an actual road bed in the tree tops. Between the Clipper mills and Stuart's point, where the road crosses a deep

### The Wool Interest.

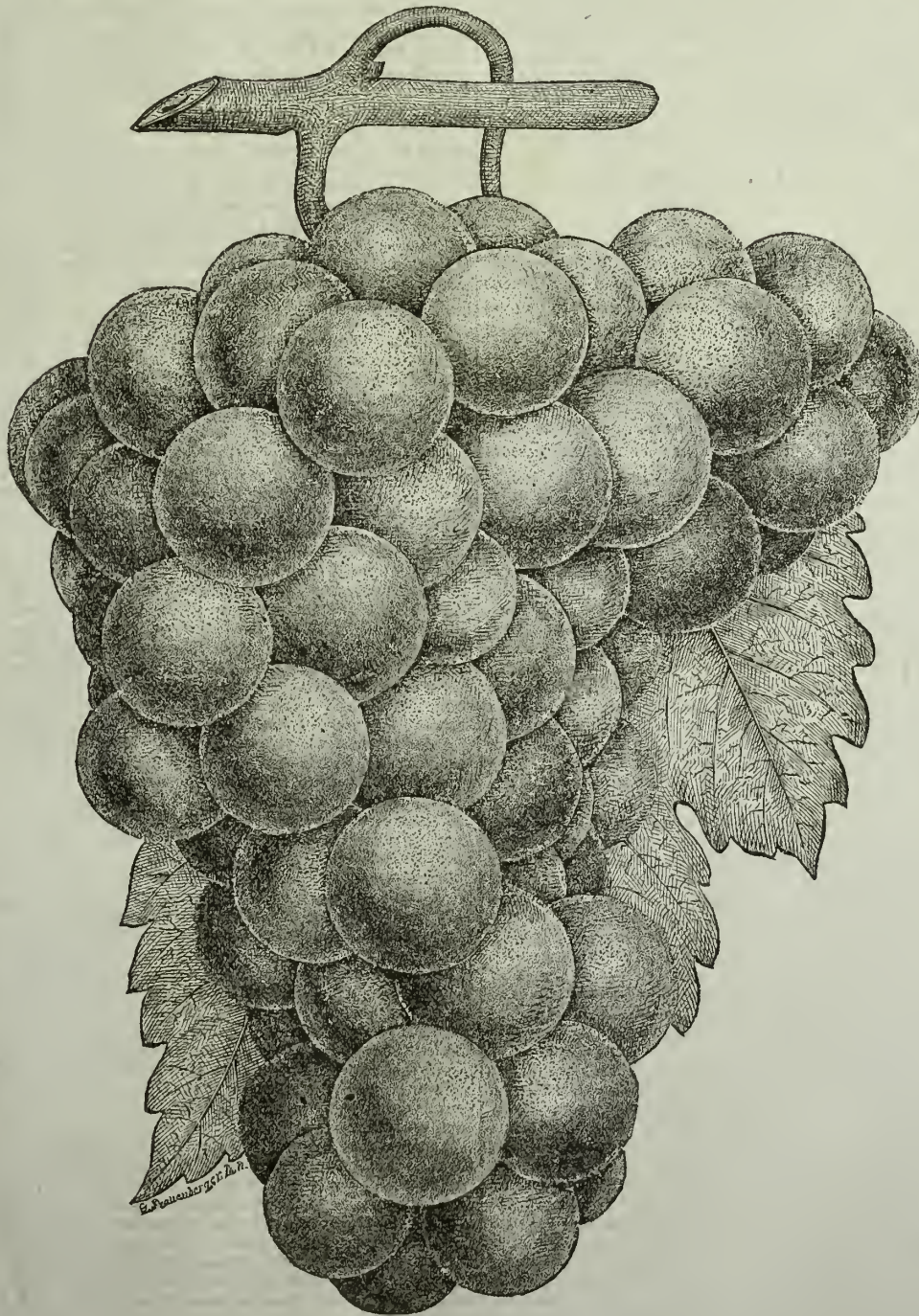
Wool growing is now one of the flourishing industries both in this State and the country at large. It is true that we have not nearly so many sheep in the State as we had a few years ago, for the encroachment of cultivated areas has made inroads upon the ranges, and tens of thousands of California sheep have gone to people the new wool regions of the Rocky Mountain country. But the sheep are now on the increase again, and the disposition to keep them upon the agricultural rather than the pastoral plan is leading to the introduction of sheep upon the smaller farms. This is especially the case at present in the northern counties where the highest priced wool is produced, and where the pasture season is longest, but the same may be expected in the alfalfa districts all over the State, for sheep upon alfalfa fields anywhere have a clean wool, which yields a considerable margin over the value of wool from wild feed. We do not mean to say that any considerable portion of the sheep of the State are yet upon this regime, but mention it as one of the methods of wool production which has been tried enough to warrant its extension, and this increase in the interest on the part of hundreds of farmers will ultimately swell the aggregate wool product of the State, if prices are continued as they have been during the last two years. This change from the improvident to the provident method of flock maintenance, coupled with the improvement of the animals by the use of well-bred bucks, comprises one of the most interesting questions in California husbandry, and we shall be glad to give our readers all available points of information concerning it.

The disposition to increase flocks in the northern counties is leading to the occupation of every range that can be reached, and the "golden tread" of the sheep is not a pleasant sound to the cattle men. Still the product is bringing much gold into the counties now beyond the reach of the railways, as well as some nearer at hand, and the result will be the development of the country, the improvement of homes, and the extension of transportation facilities to some districts as good as there are in the State, and now but little known because inaccessible.

The growth of the wool product of the United States is an interesting theme, and shows the value of the protective system, for without it our flocks would long ago have been swept away before the tide of cheap imported wools. The total wool clip of the United States in 1877 amounted to 208,250,000 lbs., in 1878 to 211,000,000 lbs., in 1879 to 232,500,000 lbs., and in 1880 to 264,000,000 lbs. The imports of raw wool during the years named were as follows: In 1877, 48,000,000 lbs.; in 1878, 34,250,000 lbs.; in 1879, 66,000,000 lbs.; and in 1880, 107,500,000 lbs.

These figures show the prosperous condition of the country generally, for though the home product has increased, the importation has also increased. Truly, the Americans are enjoying good clothes, warm blankets and bright carpets. The amount of imported wool shows also the opportunity to increase the home product before there is need to look beyond our own borders for a market, and this is the best possible warrant for the extension of the wool interest which is now in progress. Verily, the subject is a pleasant one to contemplate.

**FLOUR PRODUCTION.**—The *Vallejo Chronicle* of last week has an article describing the well-known Star mills, at that place. It is shown that the product of 1880 was 259,406 barrels. The lowest month's grinding was July, with 16,851 barrels, and the highest, January, with 23,069 barrels. The mills constantly employ 75 men on the average, through the whole year.



THE POCKLINGTON GRAPE—A NEW AND FAMOUS EASTERN VARIETY.

one of many counties now being peopled and developed by the searchers for small farms. Some counties can show as great a number of new establishments, and some perhaps a greater number. The tendency is a good one, and will go far to remove the impression that California is all gone to large estates. It is a great mistake. There is plenty of good land everywhere, and plenty more which will come into the market when the demand calls for it. On every hand, there are reports of division of lands for sale in small tracts. There never was a time in

ravine, the trees are sawed off on a level, and the timber and ties laid on the stumps. In the center of the ravine mentioned, two huge redwood trees standing side by side form a substantial support, and they are cut off 75 ft. above the ground, and cars loaded with heavy saw logs pass over them with as much security as if it were framed in the most scientific manner.

**SYRUP** from watermelons is being manufactured in Phoenix, A. T. Six gallons of juice make one gallon of very rich syrup.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Evs.

### Alameda County Notes.

EDITORS PRESS:—In a late trip through a portion of Alameda county, I picked up a few items that may possibly be of interest to your readers. The country around San Lorenzo and Haywards is essentially a fruit country. Some crops of hay and grain are raised and considerable attention is devoted to vegetables, but the leading industry is fruit culture. Apples, pears and peaches are raised to some extent, but cherries and currants are deemed the most profitable. Blackberries are also profitable and thrive well. At one place, near Haywards, a farmer had experimented with strawberries with success, and was preparing to go into the raising of that fruit more largely. Almond trees flourish, but they are liable to be injured by frost, so that the crop is uncertain. This year, however, they seem to be doing well. Apricots thrive well, but until recently, their culture has not been very extensive. But the apricot is growing rapidly in favor, and many people are very sanguine in expectation of large profits from its culture, and are going into it extensively. An agent for the San Jose nurseries says it will be impossible to supply the demand for apricot trees next spring. The market for this fruit is said to be large, being canned and dried, and sent to all parts of the world. It is much needed at sea to prevent scurvy, its acid quality being well adapted as an antidote to that disease. People, however, should beware of going crazy on the subject, as, in all probability, the increased production will be enormous, greatly reducing present prices. Mr. Homme, near San Leandro, is going to set out 20 acres next spring. He has contracted for the work to be done, and the trees to be taken care of for three years, and gets \$10 per acre rent for his land per annum besides.

People in this section are somewhat alarmed by scale insects, which have made their appearance upon apple trees brought from the nurseries of San Jose, and which, so far, appear to be confined to trees brought from that locality. They also appear on the fruit, and boxes containing the fruit are infected with it, carrying the disease to other trees with which they may come in contact.

Several orchards near Alvarado have been troubled this year with a worm about an inch long, with feet and legs at each end, called by some the inch worm and by others the army worm. It appears suddenly, remains a little while and then disappears, not until, however, it has nearly denuded the trees of their foliage. It confines itself chiefly to the apple trees, and nearly ruins the crop for the season.

The fruit orchards around San Lorenzo are the most extensive that I have seen. The whole country for several miles seems to be one continuous orchard. Those of Mr. Lewelling and of the late Wm. Meek are the largest. The latter is said to contain several hundred acres, and embraces not only every variety of fruit but also a great variety of choice forest trees from different parts of the world. The roads through the orchard are nicely graveled and rolled smooth, and kept watered, making fine drives of considerable length. A creek runs through the place, with banks some 25 ft. high or more, lined with natural trees and shrubs from the water's edge, along which winds a graveled road, underneath the over-shadowing branches of native forest trees on one side, and the highly cultivated fruit orchard on the other. Water is brought from a reservoir in the hills near Haywards, for various uses for the house and barn, watering the roads, and for irrigation.

All the appointments about this place are first-class. The elegant mansion, the beautiful grounds in front adorned with flowers, choice shrubs and orange trees, the well-arranged barn and stock yards, and the fruit houses all exhibit a good taste, combined with system and good business judgment for which the late owner was distinguished, and which his son, the present manager, seems to have inherited.

Mr. Lewelling's place is also quite extensive and kept in fine order, notwithstanding he is a confirmed old bachelor. What a pity that some one of our fair and intelligent farmers' daughters should not be invited to this beautiful home, sharing his joys and his cares and making it more bright and beautiful by her presence!

Near Haywards, in Castro valley, is the famous gum-tree forest, set out about two years ago by Mr. Stratton. Mr. Chapman has bought 58 acres, a part of which, or about 22 acres, is included in this forest. He is having trees cut down and the stumps pulled up, preparatory to setting out an orchard. He has contracted for the clearing of the forest on 22 acres, pulling up the stumps and digging the holes for the fruit trees. The contractor takes the wood (about 1,200 cords) and does all the work and pays Mr. Chapman, the owner, \$1,100. A few trees here and there are left for ornament, as well as a maple grove back of the new and tasty cottage which he is now building, and which will make a pleasant and elegant home.

C. E. W.

Oakland, Cal.

### California and the Immigrants.

EDITORS PRESS:—Statistics show that 24,000 immigrants arrived at Castle Garden, in New York, during the six months ending July 1, 1881. But we are not to suppose that all immigrants land at that place. Those who are able to shift for themselves generally do so. How few of this vast army of men and women will ever be permitted to see the Golden State of California? They are sent to Florida, Texas, Kansas and Missouri to wear themselves out working for small wages in factories, etc. Could these same people by any means find their way to this coast, with carefulness and economy their wages would soon enable them to settle on a homestead of Government land, of which there is still thousands of acres in different parts of this State, as well as in Oregon and Washington Territory, and very soon they could at least be comfortably living under their own "vine and fig tree." A dispatch from Berlin says: One authority reckons the amount of capital lost to the Father-land by emigration to America to be 12,300,000,000 marks. A mark is equal to \$2.66. How much of this amount will ever reach this coast?

Are the people of California using their best endeavors to scatter honest information regarding our salubrious climate and the many other advantages we enjoy? or, are they folding their arms in indolence, caring only that they have won the golden prize? We fear that too many of our farmers are following the latter course. It is not an uncommon occurrence to see farmers who, having reached the summit of their anticipations, sell out and move to the cities near the bay. They forget the hands that helped to make them rich, neither is their voice heard calling to the stranger to come and do likewise. This looks selfish. If we have struck a good thing ourselves I think it is our duty to scatter the news broadcast that others who may wish to do so may come and enjoy a share of heaven's richest blessings.

L. D. J.

Olimpo, Cal.

## THE APIARY.

### Beekeeping Notes.

EDITORS PRESS:—I am reminded by different ones that it is time for another letter to you on "Beginnings in Beekeeping," but I have put off writing lately for two reasons: First, did not feel like writing anything; second, there was a call for a description of our "community bee stool," and I hardly feel capable of giving it so any body could make one. Your description of the stool used by Mr. J. D. Enas, with illustration (the same as invented by one of the boys of A. J. Root, Medina, Ohio, who has been making them for sale at \$1.00 each), will help me. If you will put a cushion on that and have two straps to carry by, one across the middle from one side of the box to the other for ordinary use; and the other across the top same way, near the front, to use when you have two or three frames hanging on the frame rack, which is made by extending the sides of the side boxes or strips nailed thereon for the purpose, six inches forward, so that when sitting on the stool with your legs spread a little it comes just right to lift frames out of the hive and hang them on the strips just in front of you. The drawer is made to pull out behind, lest you should want to get at it when frames would be in the way in front. This way of having the strips to hold the frames so handy in front I consider the best feature about the stool. The top, also is fastened on by hinges at the back and a hook in front, with a bottom to separate it from the drawer, and I find it the best place to keep fuel. A cleat under the right hand box is fixed so the smoker can be slid in and be out of the way when not in use. Straps for knives, etc., each one can arrange to suit himself.

We have been very busy with the bees this season; have had to go over them once or twice each week to keep the moth-worm out, for, as there was no honey coming in, the bees seemed discouraged and would not fight them. Thus far, with some 85 swarms, we have only taken about 30 gallons of honey, and that was all gathered the last of May. Bees die off very fast and breed up very slowly. The queens do not seem inclined to lay, so if things do not change soon we will have to work this year for the exercise rather than the pay we get.

We furnish all our bees with full sheets of comb foundation to work on, and have heretofore paid to have it made, but are now experimenting with rubber plates making right into the wired frames. I will leave the result for my next letter. We have also been learning this year enough of the tinner's trade to make all our own honey cans, as it will not do for bee-men, more than farmers, to expect to get ahead if they buy what they might raise or make at odd times. We made a sun wax-extractor in the spring by having a little room 4x6 and 5 ft. high, with glass roof. We put the wax or comb in a tin-lined box, expecting the hot sun through the glass would soon melt it, but after standing there some three months we concluded the principle was wrong and made a new sun extractor by having a box only six inches deep

lined with tin. It was just so a sack would cover it about air tight, and that was a success. It will hold 15 gallons of capping or old comb, and all be melted down in a day or so. In making sun extractors have the glass close down to the wax and all very tight so the hot air cannot be diffused. For winter, or where there is no warm sun, we have used the following with complete success: Take a good coal oil can for steam boiler, fill half full of water, put on the fire; take off screw top; attach two or three ft. of rubber hose, put the other end into the bung-hole of a 40-gallon cask. Now suspend in the cask a large tin boiler of any kind or shape, punched full of holes (1-inch holes an inch apart). Put your comb in it, cover all up tight, and set the fire going under the oil can. When steam gets up, you will soon hear the wax dripping, and can draw it out of a hole near the bottom of the cask into cans to cool. My boy soon ran out 50 lbs. of old wax in this way, leaving the refuse in the tin boiler to be thrown away.

ISAAC B. RUMFORD.

Bakersfield, Cal.

## FLORICULTURE.

### A Chat about the Eastern Florists.

EDITORS PRESS:—To obtain satisfactory results in horticulture one must anticipate the planting season. This is especially true in California, where the spring hursts upon us so suddenly after the first soaking rain, that, in case we send out of the State for our supplies, we lose one season of growth and bloom, not to speak of risk of freezing. Two valuable packages of plants sent to me from the Department at Washington have been frosted as late as March 16th, and I think it is much safer to import Eastern stock in the fall, while I am satisfied that the earlier we can move that furnished by our own nurserymen, the better.

There is a pile of catalogues on my table, which are "poetry books" to me. I remember a gifted friend who heguiled the tedious hours of convalescence by having sheets of music pinned up where her eyes could follow the score. The characters breathed harmony to her spiritual senses, as the dry pages of the florists' catalogues sometimes fill me with an ardor of enthusiasm, and glow with the colors which nature supplies.

First, let me speak of E. T. Sturtevant's catalogue of rare water lilies and aquatic plants. In my childhood I had an aquatic garden, and the culture of the many interesting native species gave me the greatest satisfaction.

Now, one may have a dozen or more rare foreign kinds in a large tub or cement tank at a very trifling expense, while those of larger means can indulge in a "Victoria Regia" pond under glass, and grow *Nymphaea rubra* and *deutata* in its company. *N. rubra* is a native of India, of a brilliant rosy red, with scarlet stamens. The leaves are of a rich brown, and when they fade, turn to gold and crimson like autumn leaves. *N. cerulea* comes from Egypt, with bright green leaves and fragrant, light blue flowers. *N. scutifolia* has flowers of a still deeper blue. *N. flava* is a yellow water lily from Florida, originally discovered and described by Audubon, then lost, its existence denied, until quite lately rediscovered, thus vindicating the fame of that gifted naturalist.

Some of these new lilies bloom at night, and last year Mr. Sturtevant's collection made the principal attraction of the semi-centennial exhibit of the Pennsylvania Horticultural Society. All these richly colored, exotic water lilies were growing and blooming side by side with the humbler natives.

Mr. Sturtevant's nursery is at Bordentown, N. J. He has, besides his specialty of lilies, a very fine collection of orchids, or air-plants, of ferns and selaginellas, and a good list of climbers, carnations, roses, etc. Some of his fine water lilies are successfully grown at San Jose and Santa Barbara. Mr. R. B. Woodward once told me that the next feature of interest which he desired to perfect for the gardens, was an extensive aquarium for water plants; and it is to be hoped that additions covering all the possibilities of their culture may be made at the Golden Gate park, where the Queen of Lilies is grown to such perfection.

Another very interesting collection is that of Edward Gillett, of Southwick, Mass., of the native plants of the Northern States. He can furnish 100 species of North American ferns, including our California pellaea, golden fern, etc. Here is a chance for an outdoor fernery, which, if not a joy forever, will last one's lifetime without much care. That is, with sufficient painstaking at the start, the after care required is inconsiderable.

Mr. Gillett has aquatics and bog plants, cranberries, sweet flag, the wild climbers, moonseed, clomatis, woodbine, kalmias and rhododendron, and full suites of native orchids. His prices for roots and seeds are exceedingly reasonable; indeed, with a vivid recollection of tramps taken in the company of John Muir and other student friends in the bogs and fells of those regions, I wonder how they can be furnished so cheaply.

From these dear and familiar plant forms of the old home, we turn to those costly and magnificent collections of George Such, of Perth Amboy, N. J.

All climates and zones have contributed to enhance the interest experienced in visiting his green and hot-houses; and probably no other cultivator grows so many plants *de luxe*. Only the Wall street speculators can afford to decorate with such "jewelry," as eucharis, which sells at wholesale at \$50 per 100 flowers, with vandas, which cost \$20, and upwards for single plants, or the curious "pitchers," or nepenthes, costing, for the rarest, from \$40 to \$100 for the single plant. Mr. Such's exhibits were a great attraction at the Centennial in '76, and are never to be forgotten by those who visited the exhibition of the New York Horticultural Society during that year.

Those who have seen the palm house of the late B. S. Fox, will have an idea of the superb specimen palms which Mr. Such is prepared to furnish. It would require a small fortune either to obtain or maintain the whole set; but at Fox's one may select one; either a *Kentia* or *Seafortia elegans* will furnish a small greenhouse, without companions. I must not omit to say that Mr. Such issues both spring and autumn catalogues.

For 30 years the name of John Saul, Washington, D. C., has been familiar to horticulturists. He now carries on an enormous business, covering all the specialties of the other dealers which I have mentioned, except in aquatic plants. There is no better place to obtain camellias, while the lovers of geraniums and pelargoniums may revel in endless eccentricities of size, form and color, from Lilliput zonales to the scarlet Rianzi, Princess Mand, or the not misnamed "purity," the whitest of the whites. All the geraniums of Saul's general collection will climb to the cottage eaves in this climate, and make a dazzling winter show.

If you want clematis, Mr. Saul has the most extensive list, and as most of his varieties have been shown in the colored plates of the *Garden* and other horticultural magazines, you can know what you are ordering. Twelve of the finest sorts cost \$4.50.

Tuesonia is one of the passion flowers, of which Mr. Saul has many new and desirable varieties. I think no dealer offers such temptations to lovers of climbing plants. Mr. Saul publishes separate catalogues, to those who have small gardens that of rare and beautiful flower seeds will prove an excellent guide.

The most complete collection of American trees, shrubs, hedge plants, etc., is to be found at Thos. Meehan's Germantown nurseries in Philadelphia. I have lost no plants from there, though there is a marked difference in the climatic conditions. The price of young trees suitable for mailing is very low—a dollar will give you quite a collection.

For rare foreign Coniferae, apply to the well-known Parsons' nursery at Flushing, L. I. There are plenty of other rare and beautiful trees—the double flowering cherry, Japanese Hydrangea, the new magnolias; but if one wishes to plant a tree for an heirloom, let it be a weeping silver fir from Parsons'.

The extensive dealers in coniferous and other forest trees, Robert Douglas & Sons of Waukegan, Illinois, ought to have honorable mention in this list. They are reliable and reasonable; no one will be disappointed in the stock obtained from them. I. C. Pinney of Sturgeon Bay, Wisconsin, furnishes the American hemlock for hedges at such low rates that it is almost cheaper than Monterey cypress, and it makes a much cleaner hedge for our dusty country.

I have not spoken of James Vick or the Briggs brothers, only because they are so universally known and appreciated on this side of the mountains. Mr. Vick has hosts of personal friends in California, and our ladies would as soon go without their tea as their annual packages of Vick's seeds or plants.

It is pleasant to think what "added beauty to the earth," all these and their co-laborers have given.

The consumption of flowers in our cities is becoming enormous, and increases in exact proportion to the wealth and culture of the people. So, of trees and ornamental plants in the country, I reserve another page of gossip concerning the home sources of supply for our horticultural wants for another paper.

JEANNE C. CARR.

Pasadena, Aug. 1, 1881.

## SHEEP AND WOOL.

### A Sonoma Flock Master's Methods.

The *Healdsburg Flag* gives an account of the methods of Ransom Powell, one of the earliest settlers and most successful citizens of Healdsburg, who owns and conducts a ranch of 1,100 acres within two miles of town. One thousand and fifty acres are hill land and used exclusively for grazing purposes. Fifty acres are low land and devoted to hay raising.

Mr. Powell is decidedly of the opinion that sheep, even here in the mild climate of Sonoma county, ought to be corralled and fed at least two months in a year, December and January. His reasons are, that by the first of December the early rains have soaked the old dry feed so it is no longer nutritious, and on the first appearance of new feed, if it is no more than an inch high, the sheep will hunt for that and disregard all other food. As this early grass contains little nourishment the sheep lose flesh fast, and this loss is accelerated by the sheep running over the range hunting for what little



feed there may be. During the few weeks intervening between the decay of the old and growth of the new and nourishing grass, the sheep have a hard struggle for existence, and Mr. Powell thinks Chas. Darwin's theory of the "survival of the fittest" comes into play here. The bad condition of the sheep is aggravated if they have lambs during these trying months, and when a severe winter occurs such as we experienced this last season, most of the older and poorer sheep are almost sure to die. By this treatment he believes the favorable effect of good summer and fall feed is largely lost, and then again the wool stops growing, and the result is a short spring clip.

He says, further, those who follow this practice are obliged to leave a greater quantity of old feed on their ranges at the beginning of the heavy rains, and must carry less stock. If the winter storms come upon them with the old dry grass short, the loss in sheep is sure to be very heavy.

His own method of treating his own sheep is quite the opposite of what has just been described. The hay cut on the 50 acres of low land is carefully housed in three large barns, and room and roof enough left to shelter 2,000 head of sheep. From the 1st of February to the 1st of December he permits his sheep to run on the 1,050 acres of hill land. On the 1st of December or a little earlier, if the heavy rains should come earlier, he incloses his sheep in ample corrals surrounding the barns, and feeds them on the well-cured hay that is placed in racks to prevent waste. When his sheep are driven into winter quarters they are in good condition, and remain so until the first of February, when they are turned onto the hills again, where not a blade of grass has been fed off in two months, and has by this time attained a considerable growth, and is quite nutritious. No more feeding is necessary after this. He believes by this close confinement stock sheep will not require more than 1½ to 2 lbs. of hay each, daily. The result of this humane and sensible treatment is, the sheep remain in good condition all the year round, the wool never stops growing, and a long and heavy spring fleece is the consequence. Last winter Mr. Powell carried through about 1,500 head of sheep; this year he will keep his increase, and says by his method this range will easily carry 2,000 sheep. He will this winter try a new experiment of having his ewes lamb in December and early part of January, claiming that one good early lamb is for all purposes worth two late ones. He says when the lambs come along in the latter part of February and March, and the green feed lasts only about three months, the lambs eat less grass as it dries, and rely more upon the mother's milk, and this falling short, with change in the feed the offspring is apt to become stunted.

He has at present a well graded band of sheep, and will improve them every year, until they become as fine as it is found profitable to keep. He is testing the quality of his land and its adaptability to raising alfalfa. If it can be raised successfully, he will root all he can of this excellent stock feed, and so make his experiment a greater success.

## HORTICULTURE.

### Fruit Tree Planting.

EDITORS PRESS:—The mania for planting fruit trees is even greater than last year. Orders come to the nurserymen which make them sad, because they have not more to sell. Last year all wanted apricots; this year plum, peach and pear are added. This is well; variety is good.

If you go into fruit, arrange to have a long continued harvest. But, as an old orchardist, let me give a word of caution to beginners. 1st. Be sure that you have the best land for the varieties you plant. Get a man who knows to examine your land and tell you if it is fruit land or not. Many men are planting trees so as to have an income when they grow old. If the trees dry up and die about the time they need the income they hoped for, it will be a calamity. A few days ago a man showed me an adobe flat, strong with alkali, which he had chosen for a fruit farm. He would not believe when I told him it was worthless for trees. To prove his choice a good one, he took me to a deserted orchard to see the pinched and dead trees, and assured me that, with good culture, they would have flourished. Yet the man who planted them grew discouraged, sold out and left. Another friend said he would plant 100 orange trees where orange trees will never grow. I advised him to try one or two.

Every man, at his home, should make a few trees grow, if possible; but if you wish to sell fruit, get the best land without regard to cost. The time is coming soon when nothing except good fruit will sell; even now poor fruit does not pay the expense of handling. The cost of land is a small item when compared with the value of a good fruit orchard.

For peaches, select deep, well-drained, alluvial soil, extending down to permanent water, which should not vary much from 12 ft. below the surface. Even then summer irrigation is needed. Trees may grow a few years in other places, but they will fail when failure goes hard. Yet there are many places in the foothills where peaches may be produced with the aid of irrigation.

Pears, plums and apricots flourish in harder land, but not in "adobe." Many localities will not produce apricots; almost any land will plums and pears. For the last mountain valleys are best. Avoid places where the wind blows hard or much of the time in summer. It will surely evaporate the life of the tree and bruise and mar the fruit. More at another time.

W. W. BRIER.

Centerville, Cal.

### Meeting of the State Horticultural Society.

The last meeting of the State Horticultural Society was held at the Academy of Sciences, S. F., July 28th. There was a large attendance, and a free discussion of matters relating to fruit growing. In the absence of the President, Vice-President J. V. Webster occupied the chair. F. Kelsey, of Berkeley, E. T. Earl and J. M. Hixson were elected regular members. A number of names were proposed for corresponding and regular membership which will be voted upon next month.

#### Seedling Peaches.

Leonard Coates, of Yonntville, exhibited a collection of seedling peaches, which he had taken from the old Trubody orchard in Napa county, which is now on the point of destruction. The trees were grown in 1854 from seed brought from the East. Mr. Coates had fruit from 12, some of which he thought of propagating, and he had taken buds from the old trees for that purpose. He asked that a committee be appointed to examine the fruit and report if any were worth growing. The Chair appointed W. H. Jessup, J. Lowelling and W. W. Smith committee, and they withdrew to examine the fruit. They reported as follows, the letters each referring to one of the seedlings exhibited by Mr. Coates:

A—Perfectly free; fine flavor. No. 1 for canning or drying. B—Large, cling; pit very large; flesh tart. Not worthy of cultivation. C—Worthless. D—Fine dessert peach; flesh whitish-red next to pit. E—Cling; red next to pit; fine sub-acid; worthy of trial. F—Good for brandy. G—Not worthy of cultivation. H—Cling; white flesh, slightly red at pit. Good for market or canning. I—Identical with letter H. J—Good second-class peach. K—Cling; white to pit, but too green to give a fair test, but worthy of trial. L—Cling; rather green for fair test, but worthy of trial. Upon the whole we consider them a very fair collection of seedling peaches.—Wm. H. JESSUP, J. LOWELLING, W. W. SMITH, Committee.

Mr. Coates stated that he would obtain scions of any of the peaches which members of the society desired to buy.

#### Insect Laws.

On invitation Matthew Cooke, State Horticultural Officer, made some remarks describing the results of his visitations of the different counties to incite efforts to destroy injurious insects. He found a general disposition to begin active efforts against the pests. Los Angeles Supervisors had refused to appoint commissioners, and if they persisted in that course he would have to appoint a fruit inspector and quarantine the county, permitting the shipment of fruit only on the certificate of the inspector. He said he found San Bernardino county remarkably free from insects, but there were two almond trees in Riverside literally alive with red spider. [These have since been burned, root and branch.—EDS. PRESS.] At Santa Barbara he found grievous pests, and some orchards in a shocking condition from the presence of the large white scale (*Dortheia*), which was first reported from San Rafael, where it destroyed the acacia trees. Mr. Cooke announced that he was about to publish a report on insect pests, and had secured money from the State Printing fund to have engravings made. He asked the preference of the society whether he should use wood cuts inserted in the text or lithographs on pages by themselves. After full discussion the society, on motion, recommended the use of wood cuts.

The Secretary announced the death of B. S. Fox, of San Jose, the first member of the society to die. Remarks were made by Jas. Shinn and I. A. Wilcox, testifying to the worth of the deceased and his valuable horticultural work. On motion, Messrs. Shinn, Wilcox and Rock were appointed to draft suitable expression of the regret of the society at the death of Mr. Fox.

#### Apricot Growing.

The discussion on apricot growing was opened by the reading of the essay by Dr. Strentzel which was printed in last week's PRESS.

Mr. Shinn remarked that as it was the budding season it was important to know which variety of the apricot will be in greatest demand. According to the testimony he had gained, the Royal would be best if its size should be regarded sufficient. The Shipley or Blenheim bears well, but it adheres partially to the pit and the canners say it costs too much to pit the fruit. The question of best apricot is governed somewhat by locality. The Moorpark, which is universally regarded as large and fine, is a shy bearer in some parts. In San Bernardino and elsewhere, perhaps this objection is not urged. At Santa Barbara they think the Large Early apricot is best of all. As for stock for the apricot, the plum is the best for heavy, wet soils; the peach or apricot roots are best for dry soil.

Mr. Hatch asked if there was any difference in the varieties as to being injured by frosts. Mr. Smith mentioned a case in his observation where the Moorpark, Brida, Pringle were injured and the Royal not harmed. Mr. Smith

also remarked that the claim that the Royal was small sized resulted from the disposition of the tree to overbear, and the fruit must be small unless the fruit is thinned out as it should be. If thinned out, the Royal will be large enough. A neighbor of his thinned the fruit on part of his trees, and sold for four cents per pound. The fruit which was not thinned was hardly larger than the ball of his thumb, and it brought only two cents per pound. There is just as much aggregate weight from a tree when the fruit is thinned, and it is worth twice as much per pound. He would plant the trees farther apart than is common practice; 25 ft. is better than 20 ft.

Mr. Hatch thought 30 ft. apart none too far. As for thinning out fruit, Mr. Hatch said he might have had \$500 worth of peaches this year if he had thinned out the fruit, whereas it was now not worth marketing.

W. C. Blackwood, of Haywards, was invited to speak about apricots. He said he had sold 152 tons of apricots last year from 11 acres; this year he had 88 tons. He prefers the Royal. His soil is peculiar. There is a strata of clay loam two ft. deep, and beneath this was sandy loam; thus the orchard was thoroughly underdrained. He had apricots worked on peach stock planted in 1857, which were still in good bearing. White peach trees planted at the same time had disappeared long ago. He believed the apricot gave longevity to the peach root upon which it was worked. He would not have the apricot on apricot roots because the gophers had such a taste for them.

Joel Russell, of Haywards, was sorry to hear the Moorpark spoken against. With him it bears as well as the Royal, and he thinks the flavor better. Canners have told him the Moorpark was good. He spoke of the importance of putting as good factory canned apricots in the market as can be canned at home. If this could be done the demand would be greatly increased. He had apricot trees on apricot roots which died in heavy soil.

Mr. Blackwood spoke of the Royal as having a tendency to cure on the tree. He had found apricots hanging perfectly dried and not rotten. The Moorpark has a tendency to rot rather than dry. One of the leading fruit canneries of the city told him that the Moorpark was not good, because it ripens and melts on one side, while the other is firm. The Royal holds its form perfectly, being uniformly ripened.

Mr. Jessup exhibited a branch of Bulgarian prunes, to show the heavy bearing quality of this excellent variety.

#### Insect Ravages.

After the discussion on apricots had closed, C. H. Dwinelle, of the College of Agriculture, gave the following account of some specimens of insects which he had with him:

Some time since, several gentlemen interested in horticulture subscribed to a small fund to enable me to collect specimens of our more prominent insect pests in all of their stages, with notes on their habits, the damage done and the best remedies. These are to be preserved at the University of California. From time to time, as material collects, illustrated pamphlets are to be published, giving the information needed by our fruit raisers. As most of the subscribers are members of this society, it seems proper that I should give them the benefit of some preliminary notes on two insects that have done immense mischief in some localities this year.

About seven years ago, a caterpillar appeared in considerable numbers on a few apple trees in the orchard of Sweetzer & De Long, at Novato, Marin county. Since then, although considerable effort has been made to keep it within bounds, it has gradually spread and increased until its presence has become an evil of gigantic proportions. This spring it had possession of many thousands of trees, stripping them partially or entirely of their leaves and young fruit, and in many cases eating the buds which should have produced fruit spurs for next year. When I visited the orchard in June, a new growth of leaves had started, but I was told that for weeks they had looked as though stripped by fire. The lasting nature of the damage done by them is shown by the fact that large numbers of trees are this year barren in consequence of their attacks two years ago. The present proprietor of the orchard, Mr. De Long, has this year spent about \$1,500 in fighting the pest, and has undoubtedly suffered damage to the extent of some thousands of dollars more.

#### Life History of the Pest.

In June, vast numbers of dun-colored moths, about an inch across, with two brown bars across their fore-wings, appear in the orchard, and at night the females deposit the eggs which are to produce next year's crop of caterpillars. The egg clusters are placed near the tips of the twigs, giving the appearance of a small bandage. Each cluster contains several hundred eggs, which are protected by a thick coating of cement. These remain dormant until about the time the leaves start in the spring.

When first hatched, the caterpillars are very minute, but they grow rapidly, attaining a length of nearly one inch and a half. Those from the same egg cluster keep together until well grown.

They molt their skins several times during growth, and when about to do so, gather in a compact body, and are very sluggish for several days, and may then be easily destroyed, as they usually descend within reach. When full grown, the caterpillars scatter and seek some suitable place in which to spin their yellow cocoons. Commonly, the edges of a leaf, or of several ad-

jacent leaves, are drawn together, and in this shelter from one to a half a dozen cocoons are found. In these they take the form of brown chrysalids, and in a few weeks emerge as moths to start a new generation.

The caterpillar is of a general blue color, varied with black and yellowish markings, and having short tufts of black, brown and white hairs. The species seems to be *Clisiocampa constricta* of Stretch, a native of California, feeding usually on the black or Sonoma oak, *Quercus Sonomensis*.

We have here a marked illustration of an insect adapting itself to civilization, deserting the tough leaves of the oak for the more delicate ones of the apple.

#### Remedies Advised.

The insect is a close relative of the common orchard caterpillar of the Atlantic States and of the tawny brown species which lives on the oaks about Berkeley, and at times invades orchards. As it does not spin a tent-like nest it cannot be exterminated by the use of the torch as is done with the above.

It will not cross a line of rancid tallow. This year Mr. De Long tacked bands of butter-cloth, three folds thick, about the trunks of his trees, a foot or so from the ground, and smeared these with old tallow. He had learned by experience that if the grease were applied directly to the bark it would kill the trees. The limbs were then jarred with poles, causing the caterpillars to drop to the ground, as they will do when well grown. They soon started for the trees again and collected in masses just below the bands, where they were crushed by means of paddles about two inches wide and two ft. long. Immense quantities of them were thus destroyed, but enough remained to keep up the stock and ensure a renewal of the contest next season.

In an orchard thus infested the limbs should be carefully examined after the fall of the leaves, and all egg clusters crushed, or cut off and burned. Every cluster counts for several hundred caterpillars. At the starting of the leaves, strict watch should be kept for young colonies hatched from eggs which are overlooked.

When they gather on the under side of the limbs to molt, still others can be reached perhaps best with a kerosene torch. A fence one board high should be put around the orchard. Let the bottom of the board touch the ground, and smear it with rancid grease. This will keep the caterpillars in the orchard, where they can be more easily dealt with than if allowed to wander to tall oak trees, as was the case this year at Novato. When, on the disappearance of the caterpillars, the trees are left covered with cocoons, as was the case in the instance mentioned, they should be gathered by hand and burned.

Finally, I would commend the trial of spraying the trees with those washes which prove so fatal to some of our other pests. Cheap soap may be the best, or perhaps it will be hot tobacco solution applied with a force pump. An eye should also be kept on the oak trees, to be sure that the supply of the caterpillars is not kept up from them. All of these remedies will involve expense, but probably far less than the loss of the fruit of a fine orchard.

W. W. Smith, of the Horticultural Society, here suggested a severe shortening-in of the trees, and the burning of the trimmings, as the first step which should be taken with the infested orchard. The extent of the branches to be searched for egg clusters would thus be much lessened.

Mr. Jessup said that closely allied, if not identical, insects infested the orchards of Alameda county, and that the egg clusters were so hard as to be difficult to remove with the fingers.

Mr. Hatch suggested using metallic pincers.

#### The Vine Caterpillar.

Mr. Dwinelle further said: The vine caterpillar, *Philampelus achemon*, is doing an immense amount of mischief in some parts of the State, and is likely to become a serious pest in other places, unless great care is taken to keep it within bounds.

It has long been known in the Atlantic States, and to some extent on this coast, but usually as an entomological curiosity, rather than as a dangerous foe to the vine. We have abundant evidence that favoring circumstances only are needed to make it assume the aspect of a veritable plague.

Last year, in September, it appeared in Mr. Briggs' large raisin vineyard at Davisville, and in spite of a vigorous fight, striped great numbers of the vines of their leaves. From 80 to 100 men were employed for about a week. From a dozen to 300 caterpillars were taken from a vine. The estimated weight of those gathered in a day, "at the height of the season," when they were collected in buckets, was over 3,000 lbs. This year the moths appeared in April and May, and laid their eggs, producing a crop of caterpillars. From 90 to 140 men were employed for several weeks killing moths and removing eggs and caterpillars from the vines. The fight cost about \$1,500 for labor, and the damages in sun-burned grapes, etc., will amount to thousands more.

It has been supposed that the sudden increase in the pest was due to chrysalids floated in during the overflows which have occurred for two winters past. I think it more probable that the interference with thorough winter cultivation, which destroys most of those in the ground, is the true explanation.

#### Life History of this Moth.

The large moth is known as the *Philampelus* (CONTINUED ON PAGE 106).



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges respectfully requested for this department.

### Questions for August Meetings.

To the Lecturers of Subordinate Granges:—These documents are intended to assist you in your duties as Lecturer of your Grange. The educational advancement in the subordinate Granges depends largely upon the efforts of the Lecturers. Name the question at the previous meeting, to be considered at the next. Give thought and study to each question, so as to become familiar with the subject. In presenting your views solicit general discussion.

#### Subject for August.

How to adjust equitably the question of inter-State commerce.

Suggestions.—This question is of such magnitude that it should attract the serious attention of the American people. It should be adjusted upon the principle of exact justice to all men. This can be done only after it is thoroughly understood. Hence, the necessity of studying it well, and discussing it in every subordinate Grange in the land that it may be fully understood by all members. This is of the utmost importance, in order to co-operate in applying remedies in adjustments. Government must control these monster monopolies, or in their greed for wealth and power they will control the government, which means suffering, want and ruin. Speedy legislation by State and nation must be made. But legislation in the past has been largely in the interest of monopolies, and made so by the use of ill-gotten gains filched from the farmers. No change can be hoped for as long as corporations are permitted to control conventions, elections and legislation. Just legislation requires honest legislators, men of undoubted integrity, men whose fidelity can withstand the temptations of demagogues, men who would spurn with contempt the idea of being bought and sold.—H. Eshbaugh, Lecturer of National Grange.

THE GRANGE FIELD.—In these days of corruption and general decay of public morals, I know of no organization better calculated to hold in check the damage which is threatening the whole country, than the Patrons of Husbandry. Representing an interest that is the foundation upon which all other interests rest, and is the basis of all material as well as State and individual prosperity, we must regard it as the chief bulwark of defense against the encroachments of monopolies. The day is not far distant when the issue will be sharply presented to the people of this country, whether they shall be permitted to rule the persons who manipulate the bonds and stocks, or be ruled by them. The agricultural interests properly organized and disciplined is the only one that can be relied upon in such a contest. Success attend it.—J. C. Flagg.

CIVIL SERVICE REFORM.—A contemporary writer says: "It is the deliberate judgment of the people of this country that the most serious danger to which we are now subject is due to partisan civil service. Corruption of the ballot, disgraceful campaigns, all come from the 'spoils' theory which distributes offices as rewards for services done for an individual or for a party. It was this that fired the pistol of Guiteau. If this does not arouse public sentiment sufficiently to secure a reform of civil service, the danger must be greater than most of us have believed. If assassination does not bring a change, it will only come through bloody revolution. This is a matter that cannot be trilled with any longer; corruption must be made odious, for it is treason of the worst kind."

SUIT AGAINST THE INSURANCE COMPANY.—We are informed that an action has been brought in the name of the people, with the sanction of the Attorney-General, against the stockholders of the California Farmers' Mutual Insurance Co., with the purpose of forfeiting the franchise and dissolving the corporation. Fox & Kellogg, of this city, are counsel on the part of the people. An order to show cause has been made by Judge Wilson, returnable August 19th, at which time the case will be heard on its merits.

A MID-OCEAN SHEEP RANCH.—The Los Angeles Express says that L. Harris, of that city, has a "plant" on Socorro island which he considers valuable. Four years ago he sent from Santa Catalina island, 400 sheep, which were landed on the first mentioned island, and there left to take care of themselves. Later, he sent 400 more and a lot of lumber with which to build a house. Harris thinks the animals must have multiplied into the thousands by this time and he proposes shortly to organize an expedition to the island to shear them, and will afterward ship the wool around the horn.

BIG catches of salmon were made on Monterey bay the other day. The close season does not interfere with fishing in Monterey bay.

## Grangers' Business Association of California.

—Principal place of business, No. 38 California Street, San Francisco, State of California.

Notice.—There are delinquent upon the following described stock on account of an assessment levied on the Twenty-seventh (27) day of June, 1881, the several amounts set opposite the names of the respective shareholders, as follows:

No. of Cert.	Name.	No. of shares.	Amt. of Assess.
437...	Adams, D. Q.	4	\$ 10 00
1481...	Allen, James.	2	5 00
1220...	Allen, H. M.	25	62 50
1189...	Alexander, Chas.	5	12 50
1440...	Barber, M. R.	4	10 00
1441...	Barber, Orpha.	2	5 00
1442...	Barber, Elam.	2	5 00
313...	Barnes, E. H.	10	25 00
1444...	Bangs, J. L.	3	12 50
671...	Bennett, Albert.	4	10 00
580...	Blyther, Amanda.	1	2 50
1187...	Booth, A.	2	5 00
64...	Boytner, F. Z.	5	12 50
1431...	Boss, Alex.	20	50 00
1432...	Boss, Mrs. Alex.	10	25 00
1029...	Bosworth, C. M.	2	5 00
1027...	Bosworth, Mrs. C. M.	3	7 50
1019...	Bodfish, Olando.	3	7 50
1465...	Brown, O. H.	2	5 00
530...	Brown, Sherman.	4	10 00
919...	Barnes, Nathan.	8	20 00
379...	Butterfield, G. H.	4	10 00
522...	Enford, S. H.	2	5 00
250...	Campbell, Basil.	4	10 00
1254...	Chapman, A. L.	10	25 00
1621...	Clock, Sarah D.	4	10 00
1481...	Oleghorn, J. A.	2	5 00
782...	Colburn, B.	2	5 00
750...	Constein, J. P.	1	5 00
1082...	Coulter, Rachel M.	4	10 00
1603...	Coutigan, J. M.	2	5 00
507...	Cox, E. J.	5	12 50
4...	Cook, Mary E.	6	12 50
1639...	Coulter, S. T.	6	12 50
363...	Crook, James.	1	2 50
595...	Crook, John.	5	12 50
509...	Crook, Chris.	2	5 00
544...	Cunningham, T. A.	10	25 00
980...	Davis, G. W.	25	62 50
1456...	Dewey, Mr. A. T.	10	25 00
173...	Dewey, Mrs. A. T.	1	2 50
174...	Downey, Patrick.	1	2 50
412...	Ebl, J. H.	1	2 50
475...	Emert, M. F.	5	12 50
189...	Faber, G. R.	2	5 00
598...	Finley, Miss Mollie.	1	2 50
271...	Frost, T. G.	1	2 50
470...	Gallup, E. E.	1	2 50
469...	Gallup, Young A.	1	2 50
468...	Gallup, Mrs. L. J.	4	10 00
1188...	Galloway, A. J.	8	20 00
579...	Gamble, Mary C.	20	50 00
256...	Gallup, T. A.	4	10 00
692...	Gates, T. E.	1	2 50
594...	Glenn, D. C.	1	2 50
594...	Glenn, Mrs. Mary E.	1	2 50
1122...	Gorden, Mrs. Minnie.	40	100 00
1033...	Hamilton, Mrs. Lou.	5	12 50
1025...	Hamilton, Emmor.	5	12 50
1090...	Harlen, J. H.	5	12 50
1501...	Hassett, Aaron.	10	25 00
1090...	Helms, A.	2	5 00
613...	Hewes, Rosa M.	1	2 50
1477...	Howard, Chas. E.	1	2 50
549...	Huntley, Jos. Jos.	2	5 00
652...	Huntley, Jos.	2	5 00
749...	Hunter, A. B.	4	10 00
1686...	Jewell, H. M.	15	37 50
238...	Johnson, L. B.	5	12 50
130...	Jones, Nathaniel.	4	10 00
353...	Jones, Miss E. J.	2	5 00
352...	Jones, Mrs. E. C.	2	5 00
1684...	Jones, R.	5	12 50
1288...	Judson, Homer.	10	25 00
1494...	Kellogg, G.	8	20 00
263...	Kinnell, G. W.	4	10 00
1681...	Knief, John F.	4	10 00
824...	Langlois, Susan.	1	2 50
1087...	Lantenschlager, O.	4	10 00
1270...	Leffingwell, Wm. Jr.	4	10 00
1269...	Leffingwell, Wm. R.	4	10 00
1271...	Leffingwell, Adams.	4	10 00
1251...	Little, Horace.	8	20 00
783...	Linebaugh, A.	20	50 00
784...	Linebaugh, John.	2	5 00
839...	Linder, Lucinda.	2	5 00
847...	Linder, John E.	10	25 00
177...	Lunney, Phillip.	2	5 00
493...	Lynnan, Chas.	10	25 00
1159...	Matterson, F.	1	2 50
1346...	Marsh, James.	5	12 50
75...	Menzies, Thos.	1	2 50
101...	Middaugh Gilbert.	2	5 00
1153...	Muse, Wm.	2	5 00
1674...	Meyer, Jacob.	5	12 50
146...	Moore, L. C.	2	5 00
1029...	Moore, G. P.	5	12 50
1021...	Moore, Electa.	1	2 50
1348...	Morrison, S. T.	5	12 50
1821...	Motherhead, G.	1	2 50
283...	McClory, O.	1	2 50
600...	McClory, Mrs. C.	1	2 50
1523...	McCampbell, S. S.	5	12 50
1432...	Nelson, C.	4	10 00
98...	Niles, E. C.	2	5 00
678...	O'Brien, J. G.	10	25 00
236...	Pendergast, M.	2	5 00
547...	Prowse, Chas.	10	25 00
1655...	Proctor, G. W.	12	30 00
657...	Putman, J. C.	5	12 50
282...	Rauschman, Geo.	1	2 50
252...	Reese, Elizabeth.	1	2 50
250...	Reese, David.	5	12 50
397...	Reese, E. A.	4	10 00
1502...	Settle, C. T.	4	10 00
1139...	Sherburn, D. W.	4	10 00
645...	Slayton, O. O.	10	25 00
626...	Smith, J. W.	10	25 00
592...	Sollais, S. W.	1	2 50
833...	Strentzel, Miss Lou.	1	2 50
406...	Stockton, S. W.	2	5 00
445...	Stevens, L. D.	4	10 00
401...	Stevens, W. A.	2	5 00
719...	Stoddard, O. L.	2	5 00
855...	Stanley, H. Y.	4	10 00
875...	Stono, L.	10	25 00
189...	Taher, G. R.	2	5 00
608...	Tillotson, G. W.	1	2 50
94...	Tierney, Edward.	2	5 00
191...	Torry, James.	2	5 00
1120...	Van Sandt, A. A.	10	25 00
679...	Veardrup, F.	2	5 00
1488...	Voorhes, Geo. W.	4	10 00
1489...	Voorhes, Effie, A.	4	10 00
261...	Waidwell, G. C.	2	5 00
1877...	Watson, Mrs. Thos.	1	2 50
1669...	Warner, James.	11	27 50
1448...	Weymouth, Almon.	5	12 50
772...	Wells, C.	1	2 50
509...	Wells, Mrs. J. C.	1	2 50
1543...	Whitcomb, C. S.	14	35 00
436...	Whitout, Jessie.	4	10 00
505...	Wetley, Jacob.	2	5 00
4...	Wilson, E.	3	7 50
818...	Whitrow, C. W.	1	2 50
1032...	Wiscrover, J. R.	4	10 00
731...	Woodhams, A. R.	3	7 50
805...	Woodward, F. J.	4	10 00
1153...	Young, A. J.	1	2 50
1617...	Barnett, Chas.	3	7 50

1121...	Barnett, Chas.	2	5 00
608...	Black, W. H.	1	2 50
274...	Black, W. H.	1	2 50
1367...	Caldwell, D. A.	4	10 00
1149...	Caldwell, D. A.	1	2 50
1686...	Caldwell, D. A.	1	2 50
611...	Clark, Jas. A.	8	20 00
277...	Clark, Jas. A.	2	5 00
596...	Clark, Annetta.	1	2 50
276...	Clark, Annetta.	1	2 50
1463...	Ewer, W. B.	10	25 00
1660...	Ewer, W. B.	10	25 00
994...	Garlema, Dan'l.	2	5 00
1001...	Garlema, Dan'l.	2	5 00
1221...	Gordon, E. E.	44	110 00
1473...	Gordon, E. E.	8	20 00
255...	Gordon, E. E.	8	20 00
6...	Helpenstein, L. H.	2	5 00
1671...	Helpenstein, L. H.	1	2 50
1619...	Logan, H. A.	10	25 00
1679...	Logan, H. A.	2	5 00
5...	Merrill, Chas. H.	1	2 50
1676...	Merrill, Chas. H.	1	2 50
1635...	Meyer, Waldemar.	10	25 00
583...	Meyer, Waldemar.	10	25 00
603...	McCrory, James.	8	20 00
278...	McCrory, James.	4	10 00
642...	Prince, N. J.	10	25 00
877...	Prince, N. J.	5	12 50
157...	Quint, Frederick.	2	5 00
1394...	Roberts, Charles.	10	25 00
1656...	Roberts, Charles.	6	15 00
1611...	Webster, John.	3	7 50
543...	Webster, John.	2	5 00
485...	Wilsey, Amasa.	8	20 00
201...	Wilsey, Amasa.	2	5 00

And in accordance with law, and an order of the Board of Directors, made on the 27th day of June, so many shares of each parcel of such stock as may be necessary, will be sold at public auction at the office of the company, 38 California St., San Francisco, Cal., on Monday, the 22nd day of August, 1881, at the hour of Two o'clock, P. M., of said day, to pay Delinquent Assessments thereon, together with costs of advertising and expenses of the sale.

Grangers' Business Association of California, office, No. 38 California St., S. F.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### SONOMA.

FRUIT DRYING.—Santa Rosa Republican, Aug. 6: Crawford's is the largest orchard in Sonoma county. It adjoins the town of Sebastopol, and consists of choice varieties of all sorts of fruit. Mr. Crawford dries his surplus, and purchases considerable quantities from others. When looking around the town Thursday, the writer walked out to his place and found a dozen girls and men engaged in peeling and preparing peaches for the driers, of which there are two in full blast, one Plummer and one Butts. There were no great piles of rotten fruit lying around, as each drier consumes and cures 2,500 lbs. of green peaches daily.

THE FRUIT CROP.—Sonoma Index, Aug. 6: While the vintage of our valley will be a fair one, the fruit crop is unusually good. Peaches have been so abundant and heavy on the trees that many of them had to be pulled off before maturing to keep the trees from breaking down. Apples are abundant, and the pear trees are quite full. Perhaps there never was a better crop of cherries than the present year.

PURCHASE OF FRUIT.—Petaluma Argus: On Wednesday of this week, the agent of A. Lusk & Co., the well-known canners of San Francisco, purchased of the orchardists in the vicinity of Petaluma 80 tons of plums and pears, paying for the same delivered here two cents and a half per pound. This is the top price at wholesale, and proves conclusively that the fruit of this region ranks with the best.

#### STANISLAUS.

GRAPES WITHOUT IRRIGATION.—Modesto News, Aug. 6: We are indebted to Mr. V. E. Bangs for a fine supply of grapes grown on his farm from three-year-old vines that have never been irrigated. Mr. Bangs has two small vineyards, one of which has been irrigated by means of a windmill, and the other without water, save nature's rain supply. He is of the opinion that the vines grown without irrigation will prove not only the best as to quality, but also in the amount of the yield. The experiment is one that our people should take an interest in; especially should land owners give it their consideration. Mr. Bangs' farm and vineyard is only some three miles from this place, and is of the average of plain lands in this county.

A FINE DAIRY RANCH.—The capacity of Stanislaus county in the dairy product has not yet been fully tested. In fact we cannot expect to equal Marin and other favored localities in the making of great quantities of butter and cheese; still we are convinced that the product might be greatly increased even here in Stanislaus county. The other day we visited Mr. Samuel Miller's ranch, at the junction of the Stanislaus with the San Joaquin river. If we remember rightly, the ranch contains about 1,800 acres of land, mostly rich alluvial soil, considerable of which, however, for a short period is subject to overflow. Mr. Miller milks from 70 to 150 cows. He finds the business, where closely and carefully followed, a profitable one. He is gradually improving his herd of cows, as well as his large possessions. He has but recently built a large two-story house, and also a new barn containing all of the modern facilities and improvements, near his milk-house. The barn is calculated to hold 200 tons of loose hay, with sheds on the sides for milking. Each cow will have her accustomed place for milking, and can feed at the same time from the immense pile of hay. The flooring of the sheds is of heavy lumber, with an incline to a sewerage or waste duct. All of the recent improvements on this farm are of that extensive

character denoting stability of purpose as well as successful management of the business features of the place. The farm is certainly a valuable one, and is only just beginning to be successfully managed. The native grasses are of rich character. The soil is of the very richest, with water and shade in abundance. Mr. Miller has, we understand, recently leased the place, together with the stock, for a period of three years to his son-in-law, J. Walter Smith. Mr. Miller, by his energy and intelligent management, is showing owners of overflowed bottom lands in our county how to make their possessions valuable.

#### SOLANO.

THE FRUIT INTEREST.—Solano Republican, Aug. 5: Through the courtesy of Mr. George Graham, we are enabled to give the following items relative to the fruit interests of Yaca and Pleasant valleys. In addition, we can say that F. O. Scarlett sold his entire crop of Muscat and Tokay grapes at \$100 per ton. G. G. Briggs has contracted to deliver 1,000 tons of grapes, at Davisville, for \$55 per ton. Mr. L. W. Buck is paying from \$60 to \$100 per ton for grapes—Muscat and Tokays—to ship East. He is buying for a Sacramento company. It costs \$1,050 for a car to New York and Philadelphia, and \$800 to Chicago. The grapes are put up in crates holding four baskets of five pounds each. Four cars will be sent from Yacaville this week. The company will buy in the vicinity of Yacaville until the grapes come in about Florin, Sacramento county. They can buy there a little cheaper, and get a car for \$100 less. They have engaged at present only enough to fill orders this week. Peaches are getting scarce in Pleasant valley, and are worth from 75 cents to \$1.25 per box at the orchard. The three principal orchards, belonging to Mr. Thurber, Mr. McKevitt and Mr. Smith, have been bought by the San Francisco Canning Company.

THE ROCKVILLE FRUIT DRIER.—A. T. Hatch has manifested his enterprise by erecting a drier in his orchard. He has purchased one, of the largest size, of the Burns' patent, which he has placed upon a brick foundation containing an arched furnace. It is of the most substantial character, being of the thickness of two bricks. An iron box is set in the upper part of the brick-work over the furnace, from which the heat is distributed so as to reach all parts of the drier through pipes resembling the worm of a distillery. The heat can be so regulated as to use it at whatever point it may be needed, and in just the degree necessary. The drier is built of wood, with chests or drawers of double sieves, some of which are wooden and others of wire. Mr. Hatch has great preference for the wire sieve, as it gives better access to the fruit, and does not warp or get deranged through the heat drawing. The capacity of the drier is sufficient to contain about 40 bushels of fruit. Plums can be dried in 14 or 16 hours, and peaches in about 10 or 12 hours. The drier has not been running for two weeks. It does very fine work, the fruit being well cured and of a good color.

#### SAN BERNARDINO.

LIMES.—Riverside Press, Aug. 6: T. W. Cover has contracted a portion of his lime crop at \$5 per thousand on his place, picked but not boxed. He is also offered \$20 per ton for his refuse limes, to be manufactured into lime juice. Mr. Cover's orchard is an interesting sight, 1,000 trees being loaded with fruit. During the past few weeks the summer crop has blossomed, and in a few weeks longer the trees will be loaded to their utmost capacity, and the older fruit will begin to ripen. Mr. Cover estimates that some of his trees will yield 10,000 limes each, while the average will run from 2,500 to 3,000. He has refused \$5,000 for his crop on the trees, and expects to realize from \$10,000 to \$15,000 for this year's yield. One year ago last winter lime trees were badly injured by frost throughout southern California—his with the rest. Many orchards were rooted out as being valueless, and the few who kept their trees are now reaping their harvest, as limes this year will command a fair price.

MR. WHITE'S RIVERSIDE ORCHARD.—A. S. White has one of the finest young orchards in the valley; many of the budded trees are now loaded with oranges. When it comes to varieties he will stand at the head of the list, as he has some 70 varieties of pears, some 40 varieties of oranges and lemons, and nearly all the known varieties of grapes, including the best northern grapes. The orchard covers 40 acres. A large number of his orange trees have been converted to the Riverside Navel, and others are being budded. He first introduced the style of planting the fan palm alternated with the *Gravilla robusta* as a shade for the sidewalk, and the avenue in front of his place is rapidly assuming a very tropical appearance.

PROFITS OF A DAIRY.—Los Angeles Commercial: It seems to be the prevalent opinion among the farmers and dairymen of southern California that butter making is not a profitable business with us, and does not pay, hence little attention is paid to it. We have had a pleasant call from S. F. Clough, a former resident of this county, but now of El Casco, San Bernardino county. His dairy is situated in the San Geronimo pass, about six miles from the summit, and comprises about 2,100 acres, a portion of which is moist land and under fence, divided into numerous separate pastures for the better accommodation of his large herds, and from him we have gathered a few facts and figures, which we submit: He is milking 60 cows and 30 heifers—90 in all. The product for the first six months of the year has been 11,627 lbs. E. Germain has contracted for his



entire product, and has paid an average of 30 cents per lb.—the lowest being 22½ cents, and the highest 40 cents. His half year's dairy work, then, represents the sum of \$3,488.10. But this is not all. He has from 75 to 100 head of stock cattle to sell every year, and the refuse of the dairy will keep a herd of hogs. SUTTER.

**A SLIM WHEAT CROP.**—*Marysville Appeal.* Wheat is not arriving at the Farmers' warehouses at Yuba city in any great quantity. The price paid there is \$1.25 to \$1.30, about the same rates as were offered at this time last year. Mr. Ohleyer, manager of the Farmers' Association, who is certainly in a position to judge, states that the quality of this season's crop is not quite as good as that of last year. He thinks that Sutter and Yuba counties will not together have more than one-sixth the amount of last season's crop. His own experience was particularly unfortunate. From 150 acres sown to wheat he harvested only 300 sacks. About 120 acres of the wheat was killed entirely by the floods, so that the yield from the 30 acres cut was 10 sacks to the acre. This, Mr. Ohleyer thinks, is not worse than the experience of many farmers. He believes that many wheat growers this season have hardly made expenses. There is one consolation, however, that he points out. A great acreage has been left to lie in summer fallow, insuring splendid crops for next season unless visited by destructive floods in the winter. He believes that the average of the wheat yield this season on all the ground in Sutter and Yuba counties cut over, is about 10 bushels per acre, but that fully half the acreage sown was left uncut.

#### SANTA CRUZ.

**ORCHARD INSPECTION.**—*Courier Item.* The County Horticultural Commissioners met at the office of Sam Drennan, on Saturday, the 30th ult., and discussed plans for making the Commission a practical benefit to the fruit growing interests of the county. It was voted to district the county into four districts, as follows: No. 1. To correspond with Bajaro Supervisor district. No. 2. To correspond with Soquel Supervisor district. No. 3. To correspond with Branciforte Supervisor district. No. 4. To correspond with Santa Cruz and San Lorenzo Supervisor district. The Board by unanimous vote appointed Jacob A. Blackburn Local Inspector for District No. 1. B. Pilkington was directed to have charge of District No. 2., as Local Inspector. C. L. Anderson was directed to have charge of District No. 3, as Local Inspector. S. Drennan was directed to have charge of District No. 4, as Local Inspector. The Corresponding Secretary was instructed to inform Mr. Blackburn of his appointment asking him to set a time when he would be able to meet with the Board for consultation in regard to future work. It was agreed that each member of the Board proceed at his earliest convenience to look after the interest of his district and especially to bring to bear all possible guards against the introduction of noxious insects.

#### SAN LUIS OBISPO.

**STRONG LEGS.**—*Tribune*, Aug. 6: A few days since, while moving a threshing outfit on the Nipoma ranch, a young man named Charles Harrison fell in front of the engine and the ponderous machine passed over both legs between the knee and ankle. Wonderful to relate, the only injury the man sustained was a slight bruise, the skin not even being broken. The engine weighed six tons.

**EDITORS PRESS.**—The new wharf at Piesmo landing, four miles from Arroyo Grande, is progressing finely. The Santa Maria valley railroad is graded to within four miles of this place. When completed, parties wishing to visit the springs can get here from San Francisco in less than 24 hours, at a cost of about \$12.—D. F. NEWSON, Arroyo Grande.

#### SAN DIEGO.

**PEACHES: Union.**—Mr. R. G. Clark, of the Cajon valley, brought to the Union office yesterday a basket of peaches that surpass anything we have ever seen in southern California, and in fact equal anything in the State. The fruit is of the late Crawford variety, and has a flavor that is perfect. The largest of these peaches weighs nine ounces, and perhaps the entire product of the tree will average six ounces.

**SCALE INSECTS.**—In yesterday's paper we give an account of the ravages of the black scale bug in Los Angeles county, and remarked that there was nothing of the kind in this county. We regret to say that we were mistaken. To-day Mr. J. S. Harbison brought into the office several twigs clipped from his peach and pear trees now growing on his city premises. They are loaded with these pests, and even the white sage bushes growing in the same vicinity have been attacked by these parasites.

#### SANTA CLARA.

**THE WHEAT YIELD.**—*Santa Clara Journal*, Aug. 6: The general opinion seems to be that the yield of wheat in this part of the county is not more than two-thirds that of last year. Some say it will not be more than half as great. However this may be, the fact is certain that the crop is a much smaller one.

#### SONOMA.

**BURNS' FRUIT DRIER.**—*Flag*, Aug. 4: L. R. Giles, D. G. Jewett, J. H. Curtiss, N. A. Young and W. B. Reynolds, whom we recently mentioned as having bought the county right of Sonoma to manufacture, sell and operate the Burns' fruit drier, are taking hold of the business in an energetic manner. The company has

leased a building on the south side of the plaza, and placed therein a half factory-size drier, which was fired up Tuesday. They buy fruit—principally peaches now—and dry for the market. The company will also manufacture the driers in Healdsburg, and Mr. Young will travel through the county, introducing them. TEHAMA.

**NEW BRICK WAREHOUSE.**—*Tocsin*, Aug. 6: The new brick warehouse for storing grain, heretofore spoken of, is now being built for John Fennell about 100 yards west of the railroad depot. It will probably be the largest and best warehouse north of Sacramento. It will be 202 ft. long by 60 ft. wide; the foundation base is 51 inches, or 6 brick through; the foundation is 5 ft. 10 inches high and is 17 inches through on top, which leaves the floor above high-water mark; the inside of the foundation from wall to wall will be filled with gravel and dirt to top of foundation wall, and it will take 2,100 cubic yards of gravel to fill it; there will be no floor laid, boards will be rested on top of the gravel and the grain piled thereon; next year, after the weight of the grain has thoroughly packed the gravel, a concrete floor will then be laid, making it then as solid as a rock. The warehouse wall proper, will be 22 ft. high, and the holding capacity will be about 70,000 sacks. The warehouse is being put up by J. M. Abrams and his force of men from Chico. They have laid over 200,000 brick already, and it will take at least 400,000 more brick to complete the house. It is expected to be finished in about three weeks.

**CHICAGO SCREW PULVERIZER.**—The reader may find in our advertising columns a cut of the Chicago screw pulverizer, lately introduced to this coast, and which appears to be gaining rank among the standard machines for cultivating the soil. The points of advantage claimed for it are: Rapidity of work—said to amount to a saving of one-third the cost by other methods—and better preparation of the soil for the reception of seed. The machine cuts a strip eight ft. wide. The depth of cut can be regulated from two to six inches. About 15 acres per day, with six animals, is said to be average work. This rapid rate of preparing the soil for a crop, with the use of only six animals, is made possible by the construction of the pulverizer; the spiral cutters (or what corresponds to the mold boards of plows) upon skeleton cylinders three ft. in diameter, thereby giving the team the advantage of pulling upon a wheel in plowing and pulverizing the soil. The range of its work is wide and said to be highly satisfactory. The sale of the machine is rapidly increasing, and with present prices of wheat, it is worth while to investigate an implement that is claimed to reduce the cost of producing it, and, at the same time, increase the yield.

**ANDERSON'S SPRINGS.**—The proprietors lately arranged new croquet grounds near the hotel, having converted the old grounds into a fine carp pond. Recently, 1,000 young carp have been placed in the pond, which seems well adapted for fish-raising. A telegraph office has also been opened, bringing the hotel into general communication with the outside world. Following is a list of visitors during the week ending July 31st:

J. H. Boswell, W. H. Rookes, J. P. Fritts, Willie Bryant, Santa Rosa; L. Huchsmann, Sacramento; A. Ryan, Benicia; Dr. J. K. Laine, Mr. Brown, Sacramento; Henry Levy, S. F.; John Simpson, Sacramento; James McCormick, S. F.; Daniel Friendly, Peter Sbay, A. G. Johnson, Sacramento; Andrew Ryan, Benicia; Mr. H. A. Smith, Mrs. Smith, Virginia City; Mrs. C. Kopf, Miss B. Kopf, Miss Stella Cannon, Santa Rosa; Miss L. Furnchie, Miss S. Furnchie, S. F.; Mr. H. Webster, Carp Ponds; Mr. A. Maede, Mrs. A. Maede, Maed's Camp; Mrs. Belle Farmer, Miss Ollie Farmer, Miss L. McCall, Middletown; Miss Caddie Stoddard, Miss Clara Stoddard, Alhambra Mills; Mr. Swartz, Carp Ponds; Mr. Renikie, Mrs. Renikie, Mr. Butler, Mrs. Butler and child, Middletown; Mr. Coates, Miss Coates, Sopers Ranch; Miss May Baldwin, Miss Loe Kemp, R. S. Symington, Mrs. M. E. Symington, Danville; Mrs. Joice, Miss Gussie Hahn, Mr. R. Tidmarsh, S. F.; Mr. Ward, Yuma City.

**BARTLETT SPRINGS.**—We refer readers to our advertisement of this old and celebrated watering place. Dr. E. H. Pardee, of Oakland, (State Senator and Ex-Mayor), is among the many now rustivating there. Recent items in the dailies evince how loth he is to leave so good a hunting, fishing and health securing place. Thousands there are who have visited Bartlett Springs to eulogize their virtues and pleasures. *Mechanics' Fair Daily.*

**ITALIAN SHEEP WASH.**—Attention is called to the advertisement of the "Italian Sheep Wash" for which Chas. Duisenberg & Co. of 314 Sacramento St., S. F., have been appointed sole agents by the Italian Government Company. This preparation has been used in this State and we have seen very emphatic testimonials of its efficacy.

**THE CALIFORNIA WASHER.**—Attention is directed to the illustrated advertisement of this new invention in another column. It is in operation at the Mechanics' fair and wins great approval from those who see it. The advertisement shows the form of the washer and what is claimed for it.

**HEALDSBURG** is anxious to have more mountain roads, to bring trade to that point.

#### News in Brief.

**DIPHTHERIA** prevails at Sawyer's Bar, Siskiyou.

**JOHN CLARK**, once Surveyor-General of Utah and New Mexico, is dead.

**HARTMAN**, the Nihilist, has departed from New York, probably fearing extradition. His friends refuse to reveal his whereabouts.

The ship *Trafalgar*, 123 days from Antwerp, loaded with railroad iron for the California Southern railroad, arrived at San Diego Saturday.

The postoffice at Mammoth city has been abolished, and thus has the last vestige of that once thriving mining town passed away.

**HEAVY** fires are raging in the forests near San Bernardino mountain, and extending over into Bear valley. A large amount of damage to timber is reported.

The *Carson Appeal* says: "The trout fishers now find plenty of game in the deep pools of Carson. Since the water has begun to run low the fish have left the riffles and gone into the still pools."

The *Reno Journal* says the asylum and the new railroad will be the means of disburshing over \$100,000 at that place within the next three months.

**BARON ADOLPHE DE ROTHSCHILD**, brother of the partners in the Paris bourse, has bequeathed to the Louvre his collection of art works, with \$200,000 for their maintenance.

**JACKSONVILLE**, Oregon, Chinese have prepared and sent to China the bones of about 50 dead Chinamen of that place.

**TYEE JIM**, an Indian, has been killing deer for their hides at Big Lick, Siskiyou county, until he has accumulated 500 pounds of dried hides this season.

The census of Canada shows a population of 4,350,933, an increase during the decade of 680,498.

The Omaha Water Works, costing \$350,000, built by the Omaha Water Works company, a private organization, are nearly ready for operation.

The story that the Prince of Wales had been advised not to dine with his friends in his yacht at the Isle of Wight, because of a Fenian plot is called an absurd hoax.

The outlook of Plumas, says the *National*, is 50% better at the present time than ever before. The mines never looked half as well, and new ones are being discovered every day.

**L. VOSS**, the great lumberman of Little York township, Nevada county, keeps 15 four and six-horse teams running regularly between his mill and You Bet station, a distance of 14 miles.

The strike among the driver boys and the slate pickers of the Susquehanna Coal Company, at Nanticoke, Pa., continues. Two thousand miners and laborers are thrown out of employment.

The California extension of the Union Pacific from Nephi is now giving employment to 500 graders. The road runs through Tinic and other rich mineral districts of Utah and Nevada.

**MINING** on Klamath river, says the *Yreka Journal*, is paying unusually well this season. One claim, which employs 25 hands, is taking out over \$1,000 per day, the work going on day and night.

**VENNER**, the almanac man, prophesies a great change of the weather about the time the new comet is in perihelion, the 20th of the present month, and says there will be frosts and cold northerly winds.

**TANNER** is drawing up propositions to the Medical Faculty of New York to fast three months. He says he can fast 95 days, if fed on electricity, the air in his room to be charged with a strong current.

There are about 100 men employed in the Government store in New York who are paid as laborers \$2 a day, and as clerks and superintendents \$2.50 a day. This is about 30% less than they got in 1873.

The Denver and Rio Grande company contemplate building 3,000 miles of railroad in Utah within the next five years. They will give employment to at least 15,000 people, and Salt Lake will be their headquarters.

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The new survey of the boundary line between the counties of Los Angeles and Ventura has been ratified by the Supervisors of each county, and will take effect January 1, 1882. Los Angeles county gains about 3,000 acres.

The allotment for coinage of standard silver dollars for the month of August was made. The coinage of \$1,000,000 is ordered at San Francisco, \$900,000 at Philadelphia, and \$400,000 at New Orleans, aggregating \$2,300,000.

The heat on the Colorado desert is terrific. At Yuma the thermometer frequently registers 125°, and the air is so rarefied that objects 100 miles distant appear very near. A man requires five gallons of water daily to quench thirst.

**PRESIDENT GONZALES** proposes to build at Palpam, near the capital city, a vast hospital for the insane. The plans are for an edifice to cost \$2,000,000. His Excellency is getting ready for the higher civilization that is knocking at the gates of Mexico.

#### Suburban Residences in Oakland.

In our travels throughout the length and breadth of this State, we have often noticed the remarkable number of the people with whom we have come in contact, who express a desire to be able at some not distant day to purchase a home in Oakland, the city of schools, of delightful residences, of constantly enjoyable climate, avoiding the extremes of heat and cold so often met with in other portions of this State, and especially to be selected for a choice spot for a home from its proximity to the great business city of San Francisco, while it avoids its fierce winds, its ocean fog, and its great noise and turmoil.

Remembering these desires of our numerous readers throughout the State, we think we cannot render them a better service than by calling their special attention to one of the very finest pieces of property for

#### Suburban Residences.

We have ever seen offered on this coast. It has an altitude of about one hundred feet above tide-water, the breezes which blow directly off the bay of San Francisco, come laden with health and enjoyment, while the ever delightful views of bay and mountain side, city and valley are a source of continual pleasure.

From the elevated portions of this property, the eye takes in at a glance, the beautiful city of Oakland, a nest of homes embowered in trees and flowers; the distant city of San Francisco, which looms up as the great mart of commerce, with its wharves and shipping, its numerous steam boats and ocean steamers; the beautiful bay, the Golden Gate with its open portals welcoming the ships and the people of the whole world; the islands dotting the bay; the long lines of steam cars continually coming and going, crowded with passengers; the beautiful homes in the valleys and on the hill sides, and the spurs of the Coast range of mountains for a quiet background to the picture. In all these scenes can be found a source of pure enjoyment of which one can never tire and of which the owners can never be deprived.

This property is well named "Oakland Heights," and it is destined to be one of the very choicest of all the delightful residence sites of this city of homes.

Who would not like to have his home in such a place, within fifteen minutes' drive of the center of Oakland, within an hour of the great city of San Francisco, in a climate so genial that the orange and the fig will flourish, in a city noted for its public and its private schools, with the State University almost within sight, with Lake Merritt, one of the most beautiful sheets of water on the coast, immediately adjacent, furnishing splendid facilities for rowing and sailing, with beautiful drives by winding roads not only through this tract but stretching away for miles in every direction, constantly opening up new scenes and distant views which furnish ever constant sources of delight.

Every facility will be offered for obtaining pure water, the gas pipes from the city of Oakland will be extended through the tract, and the arrangements for sewerage will be perfect. And when we come to examine this property in a pecuniary point of view, either as to the prices now asked for the lots in it, or as to their prospective value as an investment, these considerations greatly add to its desirability.

The prices now asked are not only extremely low, but if a purchaser erects his home within a reasonable time, a large rebate in coin is given to him; while as to the future, when Oakland becomes the large business city, which it is sure in time to do, this tract will be the more eagerly sought after for the residences of its wealthy citizens.

Whoever of our interior friends are thinking of Oakland, as their future home, and as the place to enjoy life and to educate their children, should by all means, make an early visit to this tract, and secure a home site while the present great advantages in choice of lots, in price and rebate are offered.

The Oakland agents are the well-known real estate firm of A. I. Gladding & Co., 483 Ninth St., from whom maps, circulars, and all information concerning this property can be obtained free on application, by mail or otherwise.

**THE FRUIT EXHIBIT—ORANGES.**—Mr. Jules Raymond, of Chinese Camp, Tuolumne county, has contributed to the fruit exhibit at the fair several very fine plates of oranges raised by himself at Chinese Camp. It is pleasant to note this contribution by reason of the fact that it adds evidence to that already recorded of the possibility of raising oranges throughout all the central portions of the State. Wherever orange trees have been planted in the Sacramento valley and adjoining foothills success has uniformly attended the effort.

**ARTESIAN WATER.**—The *New York Tribune's* Washington special says: Commissioner Loring has requested Professor White, of Greeley, Colorado, and Professor Aughey, of Lincoln, Nebraska, to act as Commissioners for the selection of a site for sinking experimental artesian wells in arid regions east of the Rocky mountains. The area comprises the western portions of Dakota, Nebraska, a small strip of Western Kansas, the eastern portions of Montana, Wyoming, Colorado and New Mexico, and about one-third of Texas.

A PARTY of surveyors are hunting out the most feasible route for a narrow-gauge railroad from Hornitos to the Merced river, where a party of capitalists have in contemplation the erection of a 100-stamp quartz mill to do custom work. The distance is about six miles.

WITHIN the boundaries of Humboldt county there are 22 sawmills. The motive power in 17 of these is steam, in the remaining 5, water. The official returns show that during 1880 the lumber sawed was 36,969,766 ft. and the number of shingles made was 19,618,000.





## San Francisco.

By CLARA DOLLIVER.

[Read at the opening of the Mechanics' fair in this city, August 2, 1881.]

Young city of a proud new world,  
Kissed by the waters of a sea  
Which bath its bounds of mystery;  
But whose far western wave is curled  
By palace-stones, whose history  
Was old when Rome's rude wall was young—  
Who shall foretell your destiny?  
The time-worn, and the stripling, face!  
The Orient, cradle land of art,  
Greybeard of nations, weary, wrung  
With the misery of its selfish heart,  
Is feverish with its toasting race!  
And you stand proudly by the sea,  
So strong, and fresh, and brave, and free,  
Sending your white-winged argosy  
With precious wealth of golden grain,  
To that old world across the main  
Whose starving nations cry to thee:  
"Most happy land beyond the sea,  
More blest your treasures of the field  
Than all the gold your mines can yield!"

Oh! fair young city, you are crowned  
With nobler wreaths than ever bound  
The victors of the olden time!  
Your laurels are unstained of blood!  
In your memorials may be found  
Strange tales of fright, and fire, and flood;  
Of heroes black with smoke and grime;  
Of lofty deeds scarce understood,  
And unremembered, but sublime!  
Of romances of darker days  
The days of lawlessness and crime,  
That dragged your name in bidious ways,  
Until your own heroic hand,  
And upward struggle without cease,  
Have given you the right to stand  
Among the proudest in the land,  
And claim the victories of peace!  
Your sons, our city, know the word  
That opens every door—the name  
Of that great goddess who has stirred  
The blood of all mankind, to fame,  
To honor, wealth, in every age—  
Labor! From kings upon their thrones,  
And scholars stooping o'er the page  
In midnight toil, to peasants bent  
Beneath the burden of their groans,  
Is labor still salvation. Drones  
Taste of a bitter discontent,  
Tho' titled princes, they are weights  
That drag upon the steps of States.  
To-day is Labor's festival—down  
Where smoking incense clouds the street,  
Where engines shriek and anvils beat  
With thunderous noise her triumph-song,  
Her knights, with brawny arms, and strong,  
Have forged for her an iron crown!  
We cast our offerings at her feet,  
Varied as human souls. Tho' thought  
That almost flies the poet's pen;  
The unweary patient hands have wrought;  
The skillful touches of the brush  
That make the tender morning flush  
The purple mountain-tops again;  
The rougher work of ruder men—  
The crushing mill, the whirling wheel,  
The ponderous hammer, and the wires  
That fetter Earth with bands of steel  
And prison Heaven's immortal fires.

Oh, brave young city! raise on high  
Your banners, blazoned "Industry."  
For those who "neath that standard fight,  
Can lift a mighty arm for right,  
And home and country in its need;  
For who so battles day by day,  
Where tares and briars set the way,  
Loves home and Liberty, indeed,  
And faces death without dismay.  
We love you, Oh, our city! We  
Have seen your stately streets arise  
As if by magic from the sand;  
We love your deathless energy,  
Your courage, and your enterprise;  
Your ever-open, generous hand;  
And though we wander far, our own,  
And search the dim old world, our true  
Hearts ever backward turn  
To linger with our distant home;  
The chord you touch is never dumb;  
Your children all come back to you;  
The laurel fades by Athens' streams,  
But buds anew by yours; and we,  
Who love you, guess your destiny,  
And hail you proudly in our dreams:  
Another Athens by the sea!

## How Helena Mills Found Her Level.

"Harvey Mills has failed!" said Mrs. Smithson, one chilly spring evening, as she ran in to see her next-door neighbor and intimate friend, Mrs. James. "My husband just came home, and he says that what we supposed to be a rumor only, is a sad fact; the assignment was made yesterday. I threw on a shawl and ran right over to tell you. They are to keep the house under some sort of an arrangement, but they have discharged all their servants, and what in the world the Mills will do, Mrs. James, with Mrs. Mills' invalid habits, and Miss Helena with her dainty ways and refined bringing up, is more than I know," and pretty, shallow Mrs. Smithson looked at her nerve-loving friend and neighbor with the air of an epicure regarding some favorite dish.

"I heard all about it late last evening," said Mrs. James, adjusting the pink ribbons at the throat of her black silk dinner dress, "and this morning I presumed upon our cousinship so far as to drive over and see how they were getting along. And really, Mrs. Smithson, you will be surprised when I tell you that, although I expected to find the family in great confusion and distress, I never saw them in such a comfortable way and in such good spirits. The worst was over, of course, and they all had settled into

the new order of things as naturally as could be. My cousin, Mrs. Mills, was sitting, as calm as you please, up there in her sunny morning-room, looking so fresh and dainty as she ate her crisp toast and sipped her coffee."

"Our comfortable and cozy appearance is all due to Helena," said she. "That dear child has taken the helm. I never dreamed she had so much executive ability. We were quite broken down at first, but she made her father go over all the details of his business with her, and they found that by disposing of Helena's grand piano, the paintings, and slabs, and costly bric-a-brac her father had always indulged her in buying, we could pay dollar for dollar, and so keep the house. My husband's old friend, Mr. Bartlett, who keeps the art store, you know, and who has always taken a great interest in Helena, bought back the paintings, statuary, vases, etc., at a small discount, and Barker, who sold us the piano a year ago or so, and who is another old friend, and knew, of course, just how we were situated, took it back, deducting only \$25."

"Helena has just gone into the kitchen. What she will do there I don't know, but she says she needs the exercise, that she has not attended the cooking school here in the city for nothing, and that so long as the meals are served regularly and properly, and the house is kept in good order, her father and I are not to worry." After she told me that, I drew my call to a close, and ran down into my cousin's kitchen to see her dainty daughter there. And what do you think! I found that girl at the sink, with her sleeves rolled up, an immense waterproof apron on, washing a kettle!"

"Washing a kettle!" repeated Mrs. Smithson, holding up both her soft white hands in unmeasured astonishment.

"Yes, Mrs. Smithson, washing a great, black, greasy iron kettle that meat had been boiled in, and that had been left unwashed and gummy when the cook left. And, do you know, she was laughing over it all, and saying to her youngest brother, who stood near by, that she really liked it, for she now felt she was making herself useful."

"The ideal! Liking to wash kettles!" and the two fine ladies looked at each other in open-eyed wonder.

"It seems to me as if Helena Mills were trying to make the best of her altered fortunes, and was simply doing her duty in the premises," spoke Miss Carlton, Ida James' new drawing teacher, who was that evening engaged in giving her pupil a lesson on the opposite side of the center-table. She spoke earnestly and yet in a modest way, and it being the vogue in New City just then to patronize Miss Carlton, the pretty and accomplished graduate from Vassar, the two ladies looked at her amiably, and she went on:

"Somebody must wash the kettles, and it is always best, when one has a disagreeable duty to perform, to do it not only at once, but cheerfully."

"Yes, perhaps," replied Mrs. Smithson, "but how could a young girl of real native refinement [both sides of the Smithson family were of the "old stock"] take so kindly to washing pots and kettles? The fact of it is, people have been mistaken in Helena Mills. She never possessed that innate gentility she has had credit for. But everyone finds their level sooner or later—he, he!"

These two women having thus summarily disposed of Helena Mills socially, they repeated their belief that the lovely and dainty young girl had now found her proper level over and over in their set until it was the common talk in New City. Miss Carlton, in her round of professional calls among the so-called elite, was entertained in nearly every household with the information that Helena Mills had given up her studies even, and gone into the kitchen to work—and, if you'll believe it, she likes it! Then would follow reflections upon the natural ability and bias of mind of a young woman who was "fond of washing dishes."

This sensible, accomplished little drawing teacher was the only one to be found, who mingled in the "upper circles" of New City, who said a word either in praise or defense of Helena Mills' new vocation. Miss Carlton always and everywhere protested that the young girl's course was not only praiseworthy, but beautiful. She maintained that every woman, young or old, high or low, who took upon herself the labor of elevating the much abused as well as despised vocation of housework—upon which the comfort of every home depends—to a fine art, was a public benefactor.

Miss Carlton's friends all listened and laughed, and then went on with their senseless and malicious tirade. She was heartily glad when her engagements in New City were ended, and she was no longer obliged to move in such "select" society, whose ideas were always a mere echo of opinions—no matter how trivial and foolish—which had been expressed by a few of its more wealthy members.

Mrs. Dr. Forbes, nee Miss Carlton, had heard very little about New City society for five years. But having occasion to pass through the place on the cars lately she treated herself to a little gossip chat with the conductor, whom she had known as a New City gallant.

"There is no particular news, Mrs. Forbes," said he, "unless it is the engagement of Helena Mills to young lawyer Bartlett, son of Col. James Bartlett, owner of the big corner art store. A capital choice the young squire has made, too. She's as good as gold, and everybody says she's the best girl in the city. She's a perfect lady, withal, and treats everybody well.

Not a bit of nonsense or shoddy about her. Why, bless you, Mrs. Forbes, when her father failed in '75, she took entire charge of the family, and she has managed the house ever since.

"Her father is now in business again for himself, and employs more men than ever. Her mother, who had been an invalid for years, was forced by Helena's example to try and exert herself so as to share her daughter's burden to some extent. As a result of the new, active life she has followed, she lost all her ailments, and is now a happy, hearty, healthy woman. Helena's brothers have grown up to be fine, manly, helpful fellows, and the whole family are better off every way than ever before. As things were going on before Mr. Mills' failure, the whole family were in danger of being spoiled by too much luxury."

"There was a great deal of talk at first among the big-bugs about Helena's 'pots and kettles,' and they used to say she had found her true 'level.' I always thought there was a spice of malice in their talk, for the girls of her set envied her beauty and accomplishments. I am rather fond of telling them now that Helena Mills has found her 'level' in the richest, most influential, and just the best family in New City."—Mrs. A. E. Preston.

## A Pioneer Woman.

One of the most remarkable women in New York State is Mrs. Catherine Loper, who lives with her daughter, Mrs. Ketchall Lyon, in Rathboneville, Steuben county. She is in her 92d year, and is in the enjoyment of perfect physical and mental vigor. In 1823, she settled, with her husband and seven children, the oldest child being 12 years of age, near where Rathboneville now stands. The region was literally an unbroken wilderness, and in the midst of it, says the *Utica Observer*, Loper commenced the clearing up of a farm, and getting out timber. A small log house was erected, the nearest neighbor being miles away.

Mrs. Loper and her oldest son were Loper's sole aids. "I have saved 55 big pine logs a day for weeks at a time," says Mrs. Loper. "With the help of my oldest child, I cut with a cross-cut saw the greater part of the logs my husband ran into the mill in winter. I have taken my end of the saw many a time with my husband at the other end, and standing in snow knee-deep, have sawed logs all day, stopping only long enough to prepare meals for my family. When, after we had cleared up a few acres of land, and got it in crop, my husband began making trips down the river with rafts that I aided in getting together from the log-cutting to the river bank, I have remained at home alone with my children for months at a time, the trips and necessary business in getting a good market, sometimes requiring my husband's absence for half a year. In order to reach home he had to come most of the way from below on foot through the woods, and it was not possible, therefore, for him to return until his business was settled for that trip. At such times I took care of the horses and cattle, and did all the farm work except plowing, which I hired a man to do. Besides this, I had all my household work to do, and my brood of little ones to care for. The woods were filled with wild animals, wolves being especially plenty and panthers yet abounding. Deer actually ran in droves through the woods. After machinery was introduced for carding wool and preparing the rolls, it was a very easy task for me to spin 100 knots a day, and entertain company all afternoon at that. My skill became known all around the neighborhood, and the spinning of 100 knots was such an uncommonly large day's work, that a cloth draper of Penn Yan, named Squires, made a bet of \$50 with my husband that I could not do it. I went to work at sunrise, and by three o'clock in the afternoon I had the 100 knots completed. Squires paid the \$50, and gave me \$10 besides, so I made \$60 by one day's work. I have accomplished this large task many a time since I was 85 years old, and I am not sure but that I can do it now. Since that time I have made over 300 pairs of socks, mittens, wristlets and other knit articles."—*Woman's Journal*.

THE MEANING OF DREAMS.—Lively dreams are, in general, a sign of excitement of nervous action; soft dreams, a sign of slight irritation of the brain, often, in nervous fevers, announcing the approach of a favorable crisis. Frightful dreams are a sign of determination of blood to the head. Dreams about fire are, in women, signs of impending hemorrhage. Dreams about blood and red objects are signs of inflammatory conditions. Dreams about rain and water are often signs of diseased mucous membranes and dropsy. Dreams in which the patient sees any part of the body especially suffering, indicate disease in that part. Dreams about death often precede apoplexy, which is connected with determination of blood to the head. The nightmare, with great sensitiveness, is a sign of determination of blood to the chest. "To these," says Baron Von Fechterleben, "we may add that dreams of dogs, after the bite of a mad dog, often precede the appearance of hydrophobia, but may be only the consequences of an excited imagination." Dr. Forbes Winslow quotes several cases in which dreams are said to have been prognostic: Arnaud de Villeneuve dreamed one night a black cat bit him on the arm. The next day an anthrax appeared on the part bitten. A patient of Galen dreamed that one of his limbs was changed to stone. Some days after his leg was paralyzed. Hippocrates remarks that dreams in which one sees black specters are a bad omen.—*Dr. Hammond*.

## Lottery Morals.

The press as a moulder of public opinion, has performed several acts and earned many sores upon the body politic, which if they had been allowed to pass unnoticed, would have proved of great loss to the people, morally and financially. There are always gilt-edged concerns floating around the country, which seem to offer inducements for profitable speculation. Of these none are more pernicious in their effects and more demoralizing than lotteries. This has been recognized as a fact all over the country, and the statute books of nearly every State in Union contain laws for their extirpation. Even in Kentucky, where they were legalized by State enactment and brought under the control of State officers, a wide-spread feeling has been engendered that they are a curse to the State, and have done more than anything else to retard its material prosperity. Here in California laws were passed several years ago prohibiting the inauguration of lottery enterprises, and visiting with a heavy penalty all those engaged in their promotion. The wisdom of these laws is apparent, and no well-wisher of his State can be but thankful for the power which put them into force.

There seems to be something in the air of mining centers that makes gambling of all sorts more easy of recognition. The population is unsettled—here to-day and there to-morrow. Those civilizers of the human race, homes, are few and far between. As a consequence, the population resort to those dangerous devices which at once destroy both body and mind. It is in these centers of unrest that lottery enterprises are apt to find a more hearty reception. Their glittering prospectuses charm the unwary with visions of wealth acquired by a lucky turn of the wheel. No thought is given of the after effects; of the heart burnings which ensue when fortune frowns upon them. If they should by some chance win a prize, what is the result? We have never yet heard of a case where money won at the lottery wheel proved of any advantage to the winner. On the contrary, there are numberless cases on record where such winning has proved the curse of the holder of the lucky ticket. The sudden acquiring of wealth has incapacitated him for any honest effort. As it was earned quickly, it would seem that it must pass from his grasp in a like accelerated manner. And while the person is thus rapidly spending the gains which were won at the lottery wheel, vicious personal habits are contracted, and when money is gone, health is broken, and a total wreck is presented to the beholder of what was once, perhaps, the very embodiment of physical manhood.

There is no gainsaying the question of the absolute hurtfulness of these schemes of chance. We are sorry to state the fact that the last Legislature of Nevada passed a law legalizing them for the purpose of replenishing the State treasury. They are not called "lotteries," but the more polite term of "gift concert," is the phrase used. But they are none the less lotteries for all that, as money prizes are awarded to the holders of the winning tickets. A State is supposed to be the conservator of all that is good within its borders. It should be the protector of the people and not the inaugurator of schemes which tend to the moral degradation of its citizens. Let us hope that an enlightened public opinion will put the stamp of its disapproval upon all such schemes. If the State does wrong, let the people walk in the straight path, and not switch off into treacherous by-paths hearing the names of "lotteries" and "gift concerts."

## Can You Tell?

Can you tell why four-fifths of the young ladies prefer a brainless fop to a man with brains?

Can you tell why men who cannot pay small bills can always find money to buy liquor and treat when among friends?

Can anyone tell why it is that some mothers are always ready to sew for the distant beathen when their own children are ragged and dirty?

Can anyone tell how men live and support their families, who have no incomes and no work, when others who are industrious, are half starved?

Can anyone tell how young men who are always behind with their landlords, can play billiards night and day, and always be ready for a game of cards when money is at stake?

Can anyone tell why it is that when a man of wealth shoots down another in cold blood, the jury always bring in a verdict of "not guilty," of murder in the first degree?

Can anyone tell why it is that a woman of wealth can violate almost every law of virtue, decency and morality, and still be sought after, courted and honored by the nabobs of society, while a poor but honest girl who deviates ever so little from the path of virtue, is shunned and abhorred by these same nabobs?

Can anyone tell why it is that nine out of every ten of the criminals who die on the gallows, no matter how dark the deed for which they are executed, go straight to heaven, according to their spiritual advisers, while a majority of these same spiritual advisers would have us believe that even an infant, dying without baptism, is doomed to everlasting torment?



## Chaff.

"The rose by any other name," etc. But suppose you call your wife a catamount, whose funeral would it be?

TURKISH general to Turkish colonel: "Colonel, the day after to-morrow is pay-day. You will take care that to-morrow we have a warm engagement."

A BRIDGEPORT woman slipped down on a banana skin, the only case on record, we believe. In the fall she dragged a man down with her, which has occurred before.

Young lady to milliner: "I want something neat, but more plain than that." "Ah, yes; you want something to wear out with your husband. Jaue, show the lady something cheap and virtuous!"

HE was crawling slowly through the fence toward his neighbor's wood pile, when a hickory cane met him, and the query, "Where are you going?" The reply and the action were simultaneous. "Back again, be jabbers!"

SHE—"Why don't you grow a mustache, Edwin? You would look so much better." He—"Well but I don't want one. I've got a pair of cricketer's whiskers." She—"Cricketer's whiskers! What are they?" He—"Eleven on each side, dear."

"Oh—aw—don't you think these—aw—panties are a little too—aw—tight, now?" "Oh, no, sir; tighties are coming into fashion again, you know, sir." "Aw, yes, but—aw—I don't want my legs condensed at—aw—one operation, do aw?"

## Just His Luck.

"I'm hungry and ragged and half-sick and dead broke," muttered a tramp yesterday, as he sat down for a sun-bath on the wharf at the foot of Pacific street; "but it's just my luck. Last fall I got in to the city just two hours too late to sell my vote. Nobody to blame. Found a big wallet on the street in December, and four police came up before I could hide it. Luck again. Got knocked down by a street car, but there was no opening for a snit for damages, because I was drunk. Just the way. Last fall nails were way down. I knew there'd be a raise, but I didn't buy and hold for an advance. Lost \$10,000 out and out. Allus that way with me. Glass went up 25%, but I hadn't a pane on hand, excepting the pain in my back. Never knew it to fail. Now lumber's gone up, and I don't even own a fence-picket to realize on. Just me again. Fell into the river t'other day, but instead of pulling me out and giving me hot whisky they pulled me out and told me to leave town or I'd get the bounce. That's me again. Now I've got settled down here for a bit of rest and a snooze, but I'll be routed out in less than 15 minutes, and I know it. It'll be just my behanged luck."

He settled down, slid his hat over his face, and was just beginning to feel sleepy, when 100 lbs. of coal rattled down on him. "I knew it—I knew it!" shouted the tramp, as he sprang up and rubbed the dust off his head—"I said so all the time, and I just wish the damned old hogshead had come down along with the coal, and jammed me through the wharf."

A TURKISH LADY AT HOME.—When a Turk has disposed of his visitors he goes into his haremlik to dine or breakfast, first removing his babouches. This custom of removing one's shoes before entering a room is not a religious superstition, but comes of the necessity for keeping carpets clean, being that they fulfill the purpose of chairs, tables and sofas in other countries. The ladies' room may be furnished like Parisian boudoirs; but custom is stronger than fashion, and the Turks of both sexes like to recline or sit cross-legged on the floor. Their carpets are curiously soft and thick, and the carpets over the doors shut out all drafts and noises. Through the open windows that look out on the garden comes a scent of roses and the hum of bees, mingled with the laughter of children, who are playing on a well-trimmed lawn, under the eyes of the dark-eyed Circassian nurses. The mistress of the harem—the Buluk-Hanum (great lady), to give her her full title—dresses much like an English lady nowadays, reads French novels, and plays the piano, though she dons upon state occasions, such as the chaldas, when she entertains other ladies. Chalda means a cake, but has come to designate a party at which that dainty is eaten, just as we say tea for tea party in England. When a Turkish lady gives a chalda her husband is excluded while the strange women are in the house. These guests begin to arrive toward six, accompanied by their maid servants and negroes carrying lanterns and bringing their children with them. Closely muffled, they divest themselves of their bournouses and babouches in an ante-room, and put on delicate slippers, which they have brought with them in bags. The reception rooms are brilliantly lighted up with pink, wax candles, and scented with fragrant pastilles. There is no kissing or hand-shaking between the hostess and her guests; but each lady, as she comes in, lifts her hand gracefully to her heart, her lips and her brow, which means, "I am devoted to you with heart, mouth and mind." This mode of salutation, when smilingly performed, is very pretty. The greetings being ended, the company seat themselves on chairs if there be any Frank ladies present; if not, they betake themselves to the divans and carpets, and the cake-eating begins.

## Young Folks' Column.

## The Cat and the Rabbit.

EDITORS PRESS:—I always read the "Young Folks' Column" in your paper every week, and like it very much, and I thought perhaps I could write something that might interest some other of your little readers.

I was only 11 years old on Washington's birthday, 1881, so do not expect too much from your juvenile correspondent. Well, I must begin my story. My sister Maggie and I have several kittens, one of them is black, so we call him "Nigrum." I was watering the garden one evening and heard a strange noise, and, looking round, I saw him playing with a little wild rabbit. They were hopping around a hush as if playing bopeep with each other; scampering round and round, and having the merriest kind of a time until my sister Maggie called "Nigrum" to have his supper. Now, I think this was a very funny thing for such animals to do, as we know cats like to catch and kill rabbits.

This is a very short piece, hardly worth your notice, but I shall be very proud to see it in print; and I will try to write more next time if you give me any encouragement.

E. M. ROGERS.

Soledad, July 26, 1881.

[We like this little letter and hope our young readers will always feel free to send us notes of what they see that is interesting. We will say confidentially to the young folks that we did not have to change a single word in the above letter, which is more than we can say of some of the old folk's letters.—EDS. PRESS.]

## Cling to the old Home.

[Written for the RURAL PRESS by MYRTLE.]

How vacant the house seems after one of the dear ones has gone—gone to tread the rough highway of life! Little they think what will befall them in their wanderings. Oh, readers! when you leave home to find another, be prepared for all the trials, temptations and misfortunes you may meet. If you are in trouble, no one can help or sympathize with you as your own folks. Stay at your own dear home until you are sure you will have another as good. We do not appreciate home as we ought. How many persons recall their childhood days, and would give all the world to be as free and as happy as then.

Mason valley, Nevada, May 20, 1881.

## The Doll Who Was a Farmer.

Mrs. Florinda Agnes May was a doll. Her yellow hair was tied with a bright blue ribbon. Her eyes shut with a snap whenever you laid her down.

She had muslin dresses, and calico dresses, and a pink silk dress with a long train. But she was something more than a fine useless lady. She was a farmer.

All the long, pleasant summer days she spent out in the back lot where her farm was. She lived here in a house built of shingles, with a flower garden in front. She lived in peace and contentment.

The fields were three or four square patches of earth. The sod had been cut and taken to fix the banking.

The house was not very strong. "But it will do her good to have fresh air and sunshine," said Nellie.

There was in the house a table, a bureau, a couple of chairs, a lot of tin dishes, and the second-best tea-set.

Besides these there was old rag Dinah, who did all the hardest work. She certainly looked as if she had done a great deal of it in her life.

There was a charming flower garden in front of the house. When the flower seeds refused to come up, the girls stuck down bright blossoms from the real big garden and made it just gay.

There was a well, too, with a small bucket tied to a string.

Strange to say, the well was all above ground, and looked very much like an old tin dipper. I dare say some people would have called it so.

Mrs. Florinda Agnes May's farm was well taken care of, I can tell you. Every little stone was picked from the fields. If the crops did not flourish it was not from lack of attention.

The corn did really grow to be nearly four inches high. The beans came up beautifully, but the potatoes were a disappointment. Perhaps it was because they were washed and peeled nicely before they were put into the ground.

But if you thought this was all there was to be done, you were very much mistaken. There was the grass to be cut, of course. When it is to be done with an old shoe knife and a pair of scissors it takes time.

On the whole, Mrs. Florinda Agnes May led a very busy and pleasant life. Accidents will happen, however, and one day there came an earthquake which demolished the house and crushed all the flowers quite to the ground.

Nelly and Mabel came into the house hearing the dolls, who were still quite cheerful.

"Oh mother," said they, "Sixon came down and wanted to play with us, and he wouldn't keep still. He jumped all over our flower garden, and wagged his tail so hard that he knocked the house down. We called him an earthquake; and please may we have some more cookies?"

—Our Little Ones.

## GOOD HEALTH.

## Treatment of Colds in Children.

EDITORS PRESS:—Will some of your readers and mothers of small children, please tell me how to cure a cold in the head of a little one, a year and a half old. I want to know of some simple practical way, that can be used easily on a small child.—MRS. F. L. D., San Francisco.

## Unfavorable Effects of Irrigation.

The city of Ismailia was built up upon the banks of the Suez canal immediately after the construction of that work. It was supposed that the new city would immediately come into notice as a place of health resort. No one ever expected that a newly founded city, in what was little more than the open desert, with a fine fresh breeze blowing over it daily, would be otherwise than a sanitarium, but it was soon found to be quite the reverse. Many have tried to find out the reason why Ismailia should be so unhealthy, but the reason generally given is this, that the new city having now a fresh-water canal from the Nile running close by, the sandy soil has got thoroughly saturated with water by filtration, and also from irrigation of gardens at Ismailia (not to speak of decayed vegetable matter lying about here and there), so that the evaporation through the soil is immense, and such an unhealthy atmosphere breathed night and day by the inhabitants, who generally live in houses of only one story, and remember, in almost a tropical climate; all this combined seems to have produced the serious Dengue fever, which has of late raged there and compelled the Court, with many of the former residents, to remove to Mansoura, on the bank of the eastern branch of the Nile. Of course, M. Lesseps is much grieved at such an exodus from his pet city of Ismailia; and the Suez canal employees there, who form the bulk of the inhabitants, have lined the fresh-water canal with cement, to keep the water from saturating the soil as formerly; and the cultivation of cabbages and other vegetables which were grown so freely under a copious artificial irrigation has been discontinued.

MORTALITY OF BRAKEMEN.—The brakemen on our railroads find it quite difficult to get their lives insured. It is estimated that there are at least ten brakemen killed throughout the country every day while coupling cars and making up trains, or are knocked from the top of the cars by bridges, or slip or fall, or are injured or killed in collisions. Then there must be at least three times as many injured as are killed, of whom the public get no account. If 10 brakemen are killed every day, that would be equivalent to 3,650 during the year, which, added to the number injured in various ways while on duty, would give the sum total of deaths and injuries about 14,600 a year. These are frightful figures of a fatality, a loss of life, or injury to the body. The public has no idea of the number of accidents that occur on the various railroads throughout the country every day. There is no vocation so fraught with danger to life and limb as that of the brakemen on our railroads, particularly on freight trains. Indeed the life of a brakeman is a precarious one. Some insurance agents in some parts of the country do not take risks on employees on freight trains; but conductors and brakemen on passenger trains, where there is less danger, are insured by their paying an extra per cent. Railroad men say that only about 25% of the brakemen of freight trains die a natural death, also, that the average life of the brakeman, after he goes on the road is about 10 years.

FEAR OF DISEASE.—It is said that while the plague was raging in Buenos Ayres, the grave-diggers bore charmed lives. Of the 300 men so employed not one died of the disease. It has often been noticed that during the prevalence of pestilential diseases, physicians, undertakers, nurses and grave-diggers, whose business compelled constant liability to infection, have usually escaped in a far greater ratio than their numbers would warrant. The "charm" of this immunity from the prevailing scourge is very simple. They are not scared. They are positive to the disease, and repel its attacks. Fear is a great ally of death. Whoever is afraid of disease is in a negative condition and really invites its approach. And thus it is the world over. The brave die but once, while cowards die many times. Much unnecessary alarm exists in every community in regard to many diseases. We are, it is true, all liable to sickness and death. But if we are all sober, cleanly and brave of heart, we need have no fear of disease of body or mind.—Golden Rule.

IN CASES OF SPRAINS, says a medical writer elevate the limb, keep the joint perfectly quiet, apply luke-warm lotions or fomentations. When inflammation has ceased, apply stimulating liniments and bandages; shower the parts with cold and warm water alternately.

## DOMESTIC ECONOMY.

## That Bean Porridge.

EDITORS PRESS:—I picked up the PRESS after a good fatherly old gentleman had been reading it, and saw written on the margin, "I think, L. J. D., that one-half a pint of beans is plenty, and a little too much."

But, my dear sir, how can we test it in the old-fashioned way if we take only a half pint? You know the old saying is:

"Bean porridge hot, bean porridge cold,  
Bean porridge is best nine days old."

Half a pint is enough for a small family at one dinner, perhaps, but I don't think they would have much left to try how they like it cold, or warmed up the next day.

Now we like it nice and hot at noon, and then when the children come home from school they like it cold—in fact, we all like it cold; and if there is a dishful left to make bot for the next day's dinner, why, we are almost sure it is a little better than it was the first day. But as for spreading it out for nine days, I think that never was done. Some man wrote that couplet who judged that because he liked his porridge better when heated the third or fourth time, he would like it best the ninth day.

Most people will prefer their porridge without bits of meat, so they can take out the bone before the meat begins to break off.

## Sweet Apples.

If everyone knew how delicious sweet apples are baked, boiled or pickled, there would be more demand for them, and orchardists would look out to have the best varieties. Sweet apples must be cooked much longer than sour ones; if your oven is not very hot, they are better to keep them in all day, then the water you put in will be cooked down to a delicious syrup, so sweet, one would hardly believe there was no sugar in it, and the apples, oh, you ought to taste them! If, in cooking so long, you are afraid of scorching, bake in a jar with a piece of tin to cover the mouth, or arrange a cover to your pan.

LAURA J. DAKIN.

Soquel, Cal.

## Queer Bread Materials.

Earth bread is made from a white earth in Upper Lusatia, formerly a part of Germany, but now under the rule of Prussia, and the poor of that region use this bread in times of scarcity. The earth is dug from a hill where saltpeter was once manufactured. When laid in the sun until heated, it cracks, and globules like meal exude from it. These are mixed with a little flour and soon ferment, and is then baked. It is supposed that the saltpeter or soda in this earth gives its lightness.

Something similar to it is found in Catalonia, and is also used for bread. It is affirmed that in cases of extreme need, many have lived on this bread for weeks without experiencing any injury. Soft stones were ground and made into bread in the late famine in India, to prolong, if possible, the lives of that stricken people. Fish bread is still used in Iceland, Lapland, Crim-Tartary and other places far north. The fish is first dried, then beaten to a fine powder; and sometimes the inner bark of some of the trees of that region is mixed with it, and then wet and made into bread and cakes. Moss bread is manufactured in Iceland, from the reindeer moss or *lichen rangiferinus*, which, toward the month of September, becomes soft, tender and damp, with a taste like wheat bran. This moss contains a large quantity of starch, and the Icelanders gather it in the latter part of the summer season, thoroughly dry it, then grind into meal; and bread, gruels and pottages are made with it. The want of better grain frequently compels the poor Icelanders to bake a kind of bread from the seeds of the sand-reed; *elymus arenarius*, which on their shores are merely eaten by the birds of passage.

CHEAP TINWARE.—Now, a word or two about cheap tinware. You needn't expect to get a dish-pan for 20 cents that's worth 60; they don't grow, and if they ever did, the tree is dead and the seed lost. When you buy a pan for 20 cents, depend upon it, it's only worth 20 cents. The iron of which it is made is of an inferior quality, brittle and rotten; it won't stand bending; the tin with which it is covered is nearly all lead, and there's very little of it, anyway; and it will wear off, and the iron rust through in a few weeks, while a 60-cent pan, made of good charcoal iron, and covered with pure tin, and plenty of it, will last you for years.—The Enterprise.

CLEANSING KID GLOVES.—For cleansing kid gloves the following mixture is used in Paris: 200 grams soap powder, 8 grams aqua-ammonia, 135 grams eau de Javelle, 150 grams water. These substances are mixed, and a paste is formed, which, by means of flannel, is applied to the gloves and rubbed until they are quite clean.

PROF. BAUSCHINGER has lately tested some iron taken from a chain bridge built in 1829, and found that after 50 years of service its strength and elasticity had not altered perceptibly from what they were reported to be at the time they were put into service.





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## The Week.

The week has been a group of perfect days, and those in pursuit of business, or industry, or recreation have caught them all. Our summer air, to which we essayed to pay a tribute last week, in contrast with the oppressive August at the East, has seemed all the more delightful as fuller record of Eastern events has reached us. One journal comes with nearly four columns of short telegrams from different points in the Eastern States, showing the work of lightning during the month of July. The writer says:

In no other year within our memory has there been such a continuous flashing of lightning and roar of thunder, and the frightful records may be read and the smoke and flames arising from hundreds of thousands of dollars worth of city and farm buildings, churches and cheese factories, houses and barns, manufactories and stables, hay stacks and harvest bins, railroad depots and telegraph offices. Each succeeding year seems to show an increase of thunderstorms and adds largely to the list of valuable property burned. From June 1st to July 29th the telegraph has reported the deaths by lightning of 46 persons in the United States, besides the fatal injury of five more who were not instantly killed. Cases not reported would probably swell the list a third larger. The fatal casualties from this element, therefore, almost exceed those from any other one cause.

The reading of such a narrative is well calculated to call forth greater devotion to the peaceful skies of California, the land where lightning is a rarity and the "lightning-rod man" unknown.

The Mechanics' fair has been the event of the week in the city, and it well repays the attention it receives. The display is an excellent one in its many departments, and a more profitable entertainment is seldom offered to the people. The pavilion in the afternoon is a beautiful sight, and in the evening, with its electric lights, is a vision of beauty and variety. Our readers who come to the city during the present month, should set apart time for the Mechanics' fair.

## The Youth of California.

Four Stockton boys are under arrest for manslaughter. It seems that they were entertaining themselves by propelling a hand car along a trestle which was only the width of the track, waiting their opportunity to catch a Chinaman crossing the trestle. When an unfortunate Celestial essayed to cross they would rush the car upon him. The successful manner in which they pursued their fiendish sport is described by a witness in the Police Court, as follows:

The boys saw the Chinaman crossing the bridge, and one of them cried: "There goes a Chinaman." They immediately pushed the car toward the deceased. The Chinaman fell on his knees and elbows on the bridge close to the track. The hind wheel of the car struck the deceased and knocked him off the bridge. He struck a timber in falling and it turned him over. He fell sideways into the water and was drowned. Ten minutes before that the same boys had chased four Chinamen with the same car. Three escaped by running ahead of the car and by getting on the opposite bank before the car overtook them. One was caught by the car and escaped by catching hold and getting upon it. When the boys started the car after the deceased they kept yelling: "There goes a Chinaman; start her up."

The Stockton Herald says: These boys, or all but one of them, are members of Sunday schools connected with evangelical churches in this city.

We would gladly escape the duty of comment upon these appalling facts. We learn of this outburst of the worst type of hoodlumism in the interior of the State with the most profound sorrow. We had no idea the evil was so wide-reaching. It may be clearly shown that these boys had no intent to endanger life or to destroy it. It may be that they thought, if they thought at all, that the Chinaman they killed would save himself as the others they had attacked escaped. And yet when one thinks of the state of mind in boys which would lead them to such sport, and of the deplorable results if a taste for such sport should become general among our youth, the occasion for remark upon the occurrence cannot be set aside. If such are the boys of California, what set will be the coming men of California.

This is the question that every parent, every teacher and everyone who in any way exerts a molding influence upon the thoughts and conduct of our youth must squarely and resolutely face. If the facts described above do not enforce the lesson, it is hard to conceive any event capable of enforcing it. Here are four boys who have certainly been exposed to some good influences, indulging in a sport, in actions thoroughly bad in conception and murderous in execution. Where rests the blame?

Perhaps a share of it may be charged to a class sentiment more or less prevalent, that a Chinaman is the ordained victim of any persecution. Let this brutal sentiment bear all the blame which can be placed upon it. It is a disgrace to manhood, a triumph of cowardice, an outrage to every sense of fairness. It is inhuman, base and altogether abominable. Would that all the blame could be placed upon it for it is bad enough to father any crime. But can we charge a more or less prevalent sentiment with the corruption of our youth and idly wring our hands in contemplation of impending evil?

A public sentiment is the product of individual minds. We are prone to lose sight of our responsibility when we think of its existence or its influence. And yet the responsibility remains, and it is well to face it. The depravity of these Stockton boys is directly chargeable to their parents, and is doubtless the result of their home training or the lack of it. The Chinaman in the case is but a small part of it. Even if these parents cherish strong feelings against the encroachment of Chinamen upon the labor fields of the State, this is no excuse for persecution or for the encouragement of cruel thoughts in their children. No child whose mind had been properly trained to thoughts of gentleness and nobility would treat a dog as these boys treated a human being. It is plain that youth who early find sport in the persecution of any of God's creatures, will later in life develop into heartless men, reckless of everything, unless the early propensity is rebuked and suppressed. For this reason it behooves every parent to guard well the children entrusted to his care. The future of the children themselves demands it. The future of the State is imperiled by the growth of a cruel, cowardly sentiment in its citizenship. The old age of the parent will be no peaceful period if he allow the seeds of discord to find rooting in his children's minds. All considerations call for the full and conscientious discharge of parental duties, and the event at Stockton should most forcibly impress this fact upon all minds.

The Stockton Herald states that at least three of the boys were Sunday school scholars. This is the greater shame. It does not argue against Sunday school training, although it should incite teachers to exercise greater skill and care in the inculcation of the spirit of nobility and gentleness which is embodied in the gospels which they expound. It shows that the Sunday school teacher must endeavor to gain a closer acquaintance with the thoughts and desires of the youth they gather around them, and aim to repress the thoughts which neglect at home gives opportunity for growth. We trust the unfortunate occurrence at Stockton will open the eyes of all to the danger which threatens, and lead all to renewed and more earnest efforts to guard against it.

In Montana, farm laborers get \$40 a month and board.

## ENTOMOLOGICAL.

## The Scale Insects at San Jose.

The outlook for conquest on the side of the fruit growers against the pests which endanger their industry, becomes brighter when we remember the number of earnest men who are now working as amateur entomologists and unyielding insect-fighters in the different parts of the State. A forcible illustration of this fact comes to us this week in the shape of a report made to the Santa Clara Horticultural and Viticultural society, by S. F. Chapin and D. C. Vestal, two fruit growers of the county. This report was submitted at the last meeting of the society and it fills nearly four long columns in the San Jose daily newspapers. There is given a long record of observations on the insect which is an undescribed species of *Aspidiotus*, locally known as the "small, round, black scale." It also describes the results of 22 experiments in the application of different materials in different ways, showing that the committee has used due diligence in the aggressive departments of its work. We have not space for the introductory notes on the insect nor for the enumeration of the experiments aiming to destroy it, but the most practical portion of the report, which is a deduction from all local experience and experiments, will be found valuable everywhere that scale insects have come, and we shall give a statement of its essential parts.

As the female scale insect has no wings, she can, of course, only be spread about by becoming attached to something by which she is carried to different localities; and by crawling during the short period after hatching, before becoming fixed for life. Birds will carry them most frequently about an orchard; and it is thought that one source of danger is little regarded, viz.: carrying them about on one's clothing by brushing against infested trees. The system of return boxes and packages of any character, is known to be pernicious, and a fruitful source of the spread of all kinds of noxious insects, which either as insects, eggs or larvae are fastened to them and taken into the orchard to be developed in due time. If boxes or packages are returned they should be disinfected as soon as received by dipping in boiling water to which is added not less than one pound of potash to 25 gallons of the water used. Trees procured for transplanting should be washed as soon as received, with a strong potash wash, with not less than one pound concentrated lye, to three gallons of water.

Thorough and constant cultivation of an orchard should be kept up; and diligent watchfulness of every tree by the owner himself exercised, so that no scale insect shall escape observation, and when found the proper remedy should be instantly applied. All orchards, even though showing no scale, should be washed with concentrated lye of the strength of 1 lb. to 3 gallons of water, as this strength will keep trees healthy and free from moss and filth. Where infested with scale insects, the strength of 1 lb. of lye to 1 gallon of water (or not less than 1 lb. to 1½ gallons water) should be used. This strength will destroy all scale, and also will completely destroy the eggs and larvae of the red spider; as found from experiments made, any less strength will not destroy the eggs of this mite. Lye should be applied in a spray by the use of a garden syringe, or where large orchards are treated, the most economical means is to use a large barrel or tank placed upon a wagon or sled and drawn through the orchard, and the solution thrown upon the tree by a force pump, through 30 or 40 ft. of hose, to which is attached a nozzle having for its opening a simple straight slit, very narrow in width and one-sixteenth to one-eighth of an inch long. Great care should be observed to cover all portions of the tree, as upon its thorough application depends its success. Care should also be taken to protect the body from its effects, as it burns the skin. The lye is best broken up and dissolved in a small quantity of boiling water and then the required strength obtained by adding cold water. Strong lye should only be used when the tree is dormant—as in any effectual strength it will burn the foliage. One hundred large trees can be washed thoroughly.

The investigations of the committee show that where crude petroleum has been used it kills the tree if the sap is moving; where the tree is entirely dormant it may be used perhaps without destroying the tree. Crude petroleum is too heavy and its use is not recommended. Kerosene (refined coal oil) in no instance has killed the tree, but has destroyed the scale and relieved the tree of its presence, thus enabling it to recover. While not fertilizing the tree, it is effectual as a remedy and can be applied at any season of the year if of a high grade (150 test). The best time however to apply it is when the tree is dormant, and invariably used when the tree is dry; as it will be of no avail if applied to a wet surface. It should be applied in as fine a spray as possible, and as little used as will once cover the tree, taking care that the entire tree is sprayed. In this way high-grade kerosene is recommended. A lower grade (100 test) may be used only when the tree is dormant; the best time for application is in the autumn after the leaves have fallen. Concentrated lye

has proved itself, where used of sufficient strength, to be thoroughly reliable and effectual, and has the great property of fertilizing the tree and soil, as potash is one of the natural constituents of both, and is required for the health of the tree. Its use is therefore recommended—60 lbs. of the concentrated lye of the American Lye Co. is equivalent to 100 lbs. of Commercial potash.

Where trees are very bad it is recommended to first apply kerosene in the autumn and then by the time the sap starts late in winter apply lye 1 lb. to 2½ gallons water. For summer washes (other than high-grade kerosene) to be best applied about the first of June. The following are recommended:

Whole oil, soap oil and sulphur. Mixtures, 1 lb. to 1 gallon water; or, soft soap 1 lb., sulphur 1 lb., tobacco 1 lb., added to three gallons water, are all that can be recommended.

The different proposed means of destroying the scale, by boring the trunk of the tree and putting in the hole preparations of various sorts have been proven ineffectual, as the committee has observed that where tried no effect at all has been produced and the trees are still alive with scale. So far as they can determine no remedy can be effectual, which does not directly reach the scale, and through its penetrating power destroy the insect itself. The committee's experiments show that young orchards may be kept free from scale by constant care, and where invaded, the insect at once destroyed. Old orchards infested very seriously may become cleared and the trees given new life and vigor. It is the firm conviction of the committee that could united action be secured, the pest could speedily be destroyed and stamped out of existence.

## QUERIES AND REPLIES.

## The Linnet Nuisance.

EDITORS PRESS:—The California linnet, though a very small bird, is becoming a big nuisance.

In those parts of our State where fruits are a specialty, it rivals the squirrel and the gopher in destructiveness. In the southern counties where the apricot is being largely grown, it has become a terrible pest, picking into the choicest specimens as soon as they begin to ripen, and in many cases destroying one-third of the crop before it is ripe enough to gather. Nor is the apricot alone attacked. Next to it the bird attacks the pear, the prune, the apple and fig. Nor these alone, but all other kinds, and especially those that are sweet. It is also a voracious devourer of flaxseed, canary seed, etc. Take it all in all, it does us more harm in southern California than all other birds together. And the evil seems to be increasing. There are more this year than I have ever known before. I presume the same is true in all parts of the State; I presume \$100,000 worth of fruit they have destroyed this year in the southern counties alone. Nor am I aware of any compensation rendered by these birds to the farmer and fruit raiser for all these depredations. They seem to subsist mainly, if not entirely, upon seeds and fruits. I have never seen them crop a worm or chase a beetle. Like the squirrel, and gopher, and wildcat, and wolf, etc., it is an enemy to the agriculturist, and he must destroy it if he can. But the question arises: "How to do it?" To answer that question is the object of this paper.

The name of the bird suggests the special food it lives upon, or would if it could—linnet or flax-bird, from the Latin *linum*, flax. It seems to have received that name in Europe, on account of its special fancy for the flax plant; and we, in this part of the State, have found that poisoned flaxseed is the most efficient wholesale destroyer of these birds we can find. We take from a pint to a quart of flaxseed in a dish and wet it moderately; i. e., so that it will take up and absorb all the water. Put in a small handful of sugar; mix up thoroughly, then sprinkle in a half ounce of strychnine well pulverized, and mix thoroughly. It is spread out in trays so made that the wind shall not blow out the seed. Place them in the tops of the trees or on the fences, where the birds resort. About as good a plan as I know of is to nail a lathe along the upper edge of the top fence board, and spread the flaxseed between them on the upper edge of the board. In this way, I have slaughtered flocks of them in a few days. The object of the sugar ingredient is to make the poison adhere to the seed, and also to neutralize the exceeding bitterness of strychnine.

I am persuaded that we must not only do this in fruit time, but at other times through the year, when they have less to eat than in fruit time. If the farmers and fruit men will pursue this method persistently, and also tear down their nests when found, I believe we can rid ourselves of this great and growing pest of the farm and orchard.—S. BRISTOL, San Buenaventura, Aug. 6, 1881.

VISIT TO FRESNO.—Readers should not forget that they will have an excellent chance to visit the thriving colonies around Fresno, by taking tickets on the excursion train which will leave Stockton and San Francisco, August 15th, for Fresno, fare round trip \$7, good for five days. There will be teams to carry excursionists to all the colonies free. The idea of the excursion is a good one, and interested people should avail themselves of it.



## The Napa Explosion.

Many of our readers have heard ere this of the explosion of a threshing engine in Napa county, by which three men were instantly killed and others wounded. It is a sad theme to dwell upon, and yet the findings of the coroners jury are such that they must be set forth for the warning of many who are working with steam machinery. We have often called attention to the causes of explosions, the extreme danger of neglect and carelessness, and the imperative need of enforcing the act to guard against the employment of incompetent engineers.

It seems in the instance to which we allude, that the engine had been out of order and had not run well for two or three days, and that its dangerous condition was the talk of those about the machine. The gauges were defective, and, just before the accident the proprietor allowed the engineer to screw down and firmly fasten the safety-valve, in order to save steam that it was thought ought not to escape. The witnesses before the coroners jury testified that they did not regard the proprietor or the engineer competent to manage an engine. The verdict of the coroners jury was as follows:

We, the jury convened to inquire into the cause of the death of the deceased, find their names to be J. G. Platt, aged 44, a native of Germany, and Willis Crowe, aged 32, a native of Pennsylvania, and Robert Davis, aged 19, a native of California, and that they came to their death from the explosion of a portable engine while at work threshing on the ranch of Mr. W. T. Sneed, in Napa county, on the morning of the 28th of July, 1881, and that the cause of the explosion was from incompetency of the engineer, in carelessness on the part of the proprietor, and we strongly recommend that the law or laws in reference to engineer's certificates be enforced, and the attention of the Board of Supervisors of this county and our representatives in the Legislature be called to the matter.

We trust that this warning will be heeded. There is altogether too much carelessness and incompetency in the ownership and management of these motors, and some agency to place them in skilled and careful hands is needed.

In Europe, they have boiler insurance and steam-power companies, who inspect and insure boilers. The chief engineer of one of these companies, whose headquarters are at Manchester, in discussing the question of additional legislation effecting boilers, says that it is quite evident that the general adoption of independent inspection of boilers, coupled with insurance, throughout the country, would lead to a very great diminution in the number of accidents. If additional legislation be really necessary, all experience, in his judgment, goes to show that it is to the enforcement of efficient periodical inspection of boilers by independent persons other than government officials that attention should be directed.

The conclusion seems a valid one. We have a good deal of "red tape" and not much good practical result out of Government inspection. The inspection seems more a matter of form than anything else. If, however, it were left to people whose principals had to pay for bad judgment, few poor boilers would be passed. Those companies whose business lies in this direction find a gradual increase in their operations. The one above referred to, in England, reports that operations of the company during the 12 months have been on a scale of much greater magnitude than heretofore, and they have also been unusually successful. Two thousand eight hundred and ninety-five boilers were proposed for insurance, being an advance of 840 over the previous year, and the largest number proposed in any one year since the commencement of the company. In addition to the ordinary inspections, 13,071 thorough or internal examinations and hydraulic tests were carried out. Only one serious collapse of flue occurred, and not one explosion, fatal or non-fatal, for which the company were liable took place, although over 20,000 boilers were under supervision during the 12 months. From these figures some idea of the magnitude of the business may be gleaned.

These remarks refer especially to the large stationary boilers used in workshops and the like. The need of protection against poor portable concerns and against those who do not know how to use a good one is needed fully as much. We trust the Napa county disaster will not be allowed to go unheeded by.

**DEATH OF BISHOP HAVEN.**—The death of Bishop E. O. Haven, which occurred in Oregon last week, robs our coast of a good friend. Aside from his labors in the religious field which would no doubt have been of great value, we count his death a notable loss to our material interests. He had a keen appreciation of true progress in the industries, and his faith in our industrial resources was great. We can ill afford to lose Bishop Haven.

**LAKE COUNTY FAIR.**—We learn from a copy of the premium list, just received, that our entry of the Lake County fair in our fair list last week was incorrect. The fair will be held at Lower Lake from Sept. 14th to Sept. 16th, inclusive. D. L. Miller is secretary of the society.

**THE RURAL PRESS IN MISSOURI.**—A reader of the Rural in St. Joseph, Mo., in a letter renewing his subscription says: "Of all the agricultural publications for which I subscribe, none is looked for and perused with such interest as the Rural Press."

## Improved Grape Stripper and Crusher.

The engraving shown herewith represents a combined grape stemmer and crusher, a patent for which has this week been granted through the MINING AND SCIENTIFIC PRESS Patent Agency, to George L. Wenzel, of 309 Fulton St., S. F. Fig. 1 is the grape crusher, which is also adapted to the crushing of apples for cider making. The invention consists in the ordinary stand and mechanism to operate the rollers. These rollers are of wood, and are constructed with alternate depressions and elevations, the depressions being made deeper than the periphery of the ends of the rollers, thus forming a basin, whereby the juice of the fruit is prevented from flowing out at the ends, but

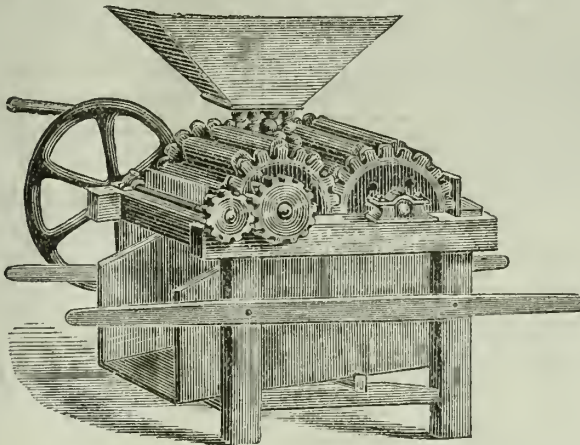


FIG. 1—IMPROVED GRAPE AND APPLE CRUSHER.

is carried down with the roller, and discharged into a receptacle. The elevations or ridges of one roller are so rounded as to fit exactly the depressions of the other, and vice versa. The hopper is set over rollers, and its bottom is so shaped as to direct the fruit in small quantities upon the middle of the roller, immediately within the very bottom of the depression, where it will be cut and crushed by the elevation on the other roller.

Fig. 2 is the grape stripper or stemmer, which may be placed above, so as to discharge into the

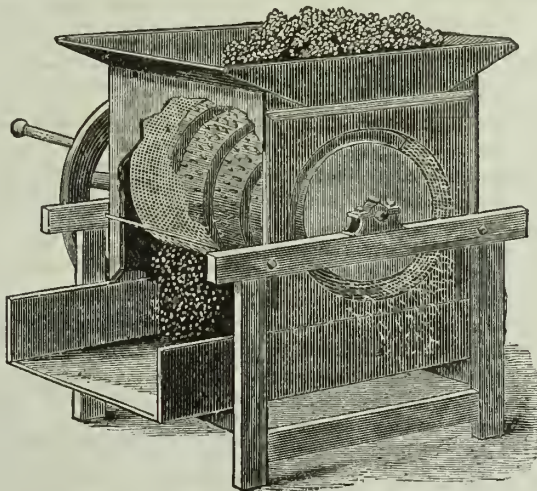


FIG. 2. IMPROVED GRAPE STRIPPER OR STEMMER.

hopper of the crusher when the machine is used for wine making. The stripper has a large roller, which revolves within a stationary wire netting. The roller is provided with wooden pegs or teeth and spirally running flanges, the former to catch and tear the stems against the grating, the latter to carry them to one side. The grapes are fed to this roller through an opening above it, and after being stemmed are discharged through the netting into the hopper.

The machines are very simple and effective in operation. They can be used either by hand or with power.

**OLIVES.**—Mr. H. J. Rhodes, who is sojourning in Berkeley, showed us the other day a sample of pickled olives which he prepared from fruit grown at Berkeley. The olives were quite ripe when gathered, and are consequently very rich in oil, and of a deliciously sweet flavor, no trace of bitterness discernible except now and then in a green berry which had got among the ripe ones. Mr. Rhodes removed the bitterness without the use of lye, merely using fresh water, changing it once a day. He had about 25 gallons, gathered from two trees nine years old. The trees have borne since the fourth year from the cutting.

**GRASS VALLEY JOURNALISM.**—We learn that H. S. Spaulding, formerly of the Napa Register, has bought the Grass Valley Free Lance, a daily paper started about a year ago. He has also leased the Foothill Tidings, published in the same place, which is a weekly paper, and will conduct it in conjunction with the daily. We expect Mr. Spaulding will do well in his new field. He was in our office for a few weeks last spring, and we gained a good impression of his journalistic ability and gentlemanly deportment.

## Routing the Gamblers.

There are indications that a better spirit is creeping into the management of our agricultural fairs, and that the moral question is being considered as well as the financial. It has been our shame that many of our leading exhibitions have been girt about by a disgraceful ring of petty gamblers, and traps for the guileless, to such an extent that many have really feared to take their families to the fairs. Last year Gov. Perkins proclaimed against this abomination and received the approval of all good citizens for it. Now we see that the managers of the San Joaquin Valley fair at Stockton, have taken a stand which will likewise be commended.

The Herald of last week says:

The managers of the San Joaquin Agricultural Society have decided not to permit any banking games to be conducted at the race track during the week of the fair. This will quiet one of the most serious complaints that have heretofore been made against the management of the association, and if the municipal authorities of Stockton will also resolve to rigidly enforce the laws against gambling within the city limits, they will be cordially sustained by all the better classes of citizens, and, at the same time, aid materially in improving the reputation of the city. There is no reason why the laws should be regarded as a dead letter during fair week any more than at any other time; neither is there any reason to believe that the success of the exhibition should depend upon the presence in

this city at that time of a crowd of thieves, gamblers and blacklegs who have made a practice of congregating here on such occasions.

Good for Stockton. We believe a similar policy has already been determined upon by some of the other district societies. Let it go on. It will do as an entering wedge of reform which may shiver old methods and policies until the agricultural fairs may indeed become true to their name, and win the support and approval of all producers and good citizens.

**EVAPORATION FROM STIRRED SOIL.**—We have received a copy of a very valuable pamphlet on corn-growing, by Dr. E. L. Sturtevant, of South Framingham, Mass. The essay was prepared for the Massachusetts State Board of Agriculture, and is a part of its last report. It is a very comprehensive treatise on the subject, and should be in the hands of all corn growers, although, of course, many of the practices described are not applicable in this State. In reading the essay we chanced upon an item concerning the evaporation of moisture from soils, which will interest many of our cultivators. It is an allusion to experiments executed by Dr. Stockbridge, of the Massachusetts Agricultural College, to show the influence of cultivating the soil: Boxes of a cubic foot capacity were filled with undisturbed soil. Those which had the surface hoed lost by evaporation 900 lbs. from clay soil, and 540 lbs. from light soil; but unhoed, the clay gave off 1,170 lbs., and the light soil 1,276 lbs., showing the retentive influence of surface cultivation. But where deeply pulverized in the boxes, twice as much water escaped from the light soil, and four times as much from the clay, as a consequence of the deep tillage. The surface hoeing doubtless left that portion in a finely pulverized condition, operating as mulching; while the deep stirring opened many crevices for the escape of moisture.

## Counterfeit California Peaches.

It appears from an account in the Grocers' Bulletin of Chicago that there are peaches being sold in that city with a California label upon them which were grown and tinned at or near Baltimore, Md. This is an outrage upon our product, and it bids fair to be fully shown up to dealers through the journals devoted to their trade. The chance for profit in this nefarious business is described by the Chicago paper in these words:

The profit in palming off Eastern peaches for California goods at the price of the latter needs no argument. Standard Eastern peaches have been selling in this market to the retail trade at \$1.85 per dozen cans; the price of the California variety was \$2.55. It will be seen that handsome profits might be made by selling one for the other, and that the temptation for false labeling must, therefore, have been extremely inviting for men with deficient moral perceptions, and whose business perceptions are capable only of estimating to what extent the trade can be duped, and how much in extra profits counterfeit goods can be made to yield.

This is another illustration of the haste with which sharp Easterners debase our fair name in their counterfeitings. The selling of glucose for California extracted honey is another instance in which a good name is made to serve a base purpose. The Grocer, of this city, which is keenly pursuing trade frauds of this description, says:

The difference of \$1 a dozen in the market value of Eastern peaches—and this also applies to other varieties of fruit—and those put up in this State, clearly demonstrates the value of the reputation which California fruit enjoys. It also shows the necessity for guarding this industry against that class of mercantile pirates who are disposed to profit illegitimately at our expense. It is obvious that until every salmon and fruit canner on the coast takes strong and decided ground against every irregularity in this business, these great industries must suffer by reason of false brands and counterfeit goods.

We trust our canners will proceed as marked out. They will have the sympathy of producers in their efforts to put down the evil. Our fruit interest has too good a prospect to quietly allow the counterfeiters to proceed with their ill-gotten gains.

**WATER FROM THE ROCK.**—We had a paragraph last week alluding to the benefits of pure water and the ease with which it can be obtained in many cases. Tunneling into the hillsides was mentioned as one method which has yielded satisfactory results. We find a record of such experience in the Lakeport Bee-Democrat: It is stated that generally, an abundance of water can be obtained by tunnelling horizontally into a hillside for a distance varying from 50 to 100 ft. A point should be selected some distance above the residence or place where water is desired, and with a comparatively light expense the water can be conveyed to any part of the premises in unceasing abundance. Irrigation is made possible and easy by this same process, and in fact, its usefulness cannot be estimated. Henry Alter, of Paradise valley, has given this subject practical proof, also D. M. Hanson, of East Lake, and the result is satisfactory to the last degree. The cost is no greater than digging a well; that is, for the same distance, and then when water is found, the labor and expense of pumping is wholly avoided. Frequently water will be found but a few feet below the surface in digging a well, but even then the water is likely to be of an inferior quality. Not so with the tunnel; water secured by that means is invariably of the best.

**THE GREASE TREE OF CHINA.**—Mention has been made in these columns of the value of the grease tree of China as a lubricant. It is said that large forests of this vegetable lubricant are to be found there, and they form the source of a considerable local traffic. This tree not very long ago was imported into India, and it is said that the experiment of cultivating it there has proved quite successful. In the Punjab and northwestern provinces generally, it grows as rapidly and vigorously as in the native soil, and there are already thousands of trees on the government plantations yielding tons of seeds, admirably adapted to a variety of commercial purposes. Dr. Jameson, a chemist in the Punjab, has prepared a quantity of grease from this tree, and has forwarded on trial a portion of it to the Punjab railway to have its qualities tested in a practical manner as lubricating matter for those parts of the machinery constantly exposed to friction. The grease thus obtained forms an excellent tallow, burning with a clear, brilliant and, what is infinitely more to the purpose, a white light, and at the same time emitting not a trace of any unpleasant odor or of the ordinary disagreeable accompaniments of combustion.

**KANSAS AGRICULTURAL REPORT.**—The Second Biennial Report of the Kansas State Board of Agriculture is given in a handsome volume of over 600 pages, for a copy of which we are indebted to J. K. Hudson, of Topeka, the Secretary. The information it furnishes is largely statistical, and shows strikingly the large resources and the rapid increase in the productions of this young State and its enterprising population. It is unfortunate that there are no copies of the report to be had, as the edition was very small and is already exhausted. It seems poor economy that such a complete report should fail of its effect, because the Legislature arranged for so few copies that interested people cannot obtain them. The volume is adorned with a portrait of the late Secretary, Col. Alfred Gray, who died in the midst of his useful work.



## Meeting of the State Horticultural Society.

(CONTINUED FROM PAGE 99.)

achemon, and is a hawk-moth. It is of a beautiful ash-color, with red hind wings. It lays round, green eggs, singly, on the upper surface of the leaves. The caterpillar, when hatched, is about one-quarter of an inch long, with a black, hair-like tail, recurved over the back. This tail disappears after a few moltings of the skin, leaving a tubercle in its place. When mature, the smooth caterpillars are three to four inches long. Some are green, and others brown in color. The caterpillar enters the ground and becomes a brown chrysalid. When the moth is about to emerge, the chrysalid works to the surface, bursts open, and the moth crawls out. The moth flies at dusk, hovering before flowers and sucking their nectar by means of its long tongue. It is particularly fond of the petunia. There are probably two broods in a season in California.

### Suggested Remedies.

Plant white petunias, and catch the moths at dusk. If necessary, destroy moths and eggs on vines during the day. If some hatch out, put on enough men to kill them with scissors. Kill the chrysalids in winter by all means—hogs, thorough culture, harrowing, rolling and poultry, and also encourage the birds. Mr. Blowers, of Woodland, keeps the pest from doing him serious damage by catching the moths about his flowers and by thorough winter culture. He is having a corrugated iron roller made to use in connection with a disk harrow, which should be very efficient. Hogs will root up the chrysalids eagerly in winter and devour them. A sufficient number of them turned in in winter should, in connection with thorough culture, practically clear a vineyard of the pest.

W. W. Smith remarked that when a boy in Kentucky he killed the moth of the allied tobacco worm by striking it with a stick when about the flowers of the Jamestown weed (*Stramonium*), and suggested that Mr. Briggs should sow that plant as a lure in his vineyard.

Mr. Dwinelle said that there was already plenty of it outside of the fence.

### Fruit Statistics.

Mr. Hatch spoke of the value of accurate statistics to fruit growers. As it is, the dealers know all about coming crops and the fruit growers know nothing and cannot act intelligently in deciding upon prices. He thought the Horticultural Society was the proper agency to secure this information for the growers. The proposition was approved generally by those present, and Mr. Hatch was invited to submit to the next meeting some suggestions as to the way in which this work could be done by the society.

As J. P. Moore was unavoidably detained from the meeting, the subject of mildew on fruit and fruit trees was postponed to the next meeting, when it is hoped that he will address the society.

W. W. Smith, of Vacaville, was appointed to open a discussion on pear growing, and the society adjourned.

### Arabs.

EDITORS PRESS:—What a marvel the genus homo is? We shed seas of tears over the benighted condition of the barbarian. We levy on ourselves heavy contributions to send missionaries to win him from his nomadic life to the comforts and enjoyments of a home and to the pursuits of civilization. And yet there is a charm about his roving life—a wild and fascinating enchantment, so irresistible that persons of wealth and culture and refinement are impelled to forego the ease and comfort, the conveniences and adornment of happy homes, filled with all the charms and luxuries that the highest civilization affords, and become pilgrims and wanderers from place to place, camping wherever night overtakes them, weary and dusty, exposed to the annoyance of all manner of insects and reptiles.

The writer was, recently, the recipient of a visit or call from one of these roving hands of arabs, consisting of Mr. and Mrs. C. J. Cressey, Miss Cora and Master William Cressey, and Mrs. A. J. Butterfield, of Temescal, Mrs. J. J. Porter, of Oakland; Mr. and Mrs. A. L. Cressey and three children; Mr. and Mrs. J. R. Briggs and Mrs. T. W. Drullard, of Modesto. They had started from Modesto June 16th with three teams and a number of saddle horses, and came via Sacramento city, Woodland, Cache Creek canyon, Lower Lake, Siegler's springs, Howard's springs, Adams' springs, Kelsey, Soda bay, Lakeport and Blue lakes to Ukiah city. There, yielding to a lofty and noble spirit of patriotism, they stopped to do honor to the memory of the day that gave birth to this glorious nation of sovereign and independent States. At Ukiah they were the guests of Mr. Carpenter, of the Ukiah City Press, and Mr. Hagans, of the Ukiah house. After the Fourth of July celebration they stole away to Mendocino City, "down by the sea." And standing there on the utmost verge of the Occident, looking out on the great Pacific ocean, fittest symbol of eternity, their backs fanned by the breezes that come over its placid bosom, they laved their weary, dusty limbs in its waves, which came rushing in, laden and

rippling with the kisses of the Orient. They followed down the beach to Timber cave, and then took the new road over the mountain for Guerneville, on Russian river, and stopped to take a drink of cold water at the Temperance camp ground, in a grove of majestic redwood trees at the mouth of Hulbert canyon, on the bank of Russian river. They arrived at Santa Rosa July 15th, and after resting one day they resumed their pilgrimage via Cloverdale to the Geysers. From the Geysers they design visiting Calistoga, the Petrified forest and White Sulphur springs, and go down Napa valley and across the straits at Martinez. After which they purpose doing the southern sea coast.

S. T. C.

Santa Rosa, July 18th, 1881.

### Durhams or Jerseys.

EDITORS PRESS:—In a communication from Robert Ashburner, published in the Press of July 23d, I am made to say that in the month of January I marketed 3,300 lbs. of butter from 100 half-bred Jerseys. What I did say, was that in the month of May I marketed 3,300 lbs. of butter from 100 half-bred Jerseys, fed on grass alone.

Again, I am made to say I feed in the barn and weigh every bit of food the cattle get. What I said, was I keep my cattle in the barn in winter, and tested the quantity each cow consumed in a given time by weighing their food, and that two graded Durhams would consume as much food in a given time as three half-bred Jerseys would in the same time.

Again Mr. A. says: "Does Mr. J. mean to say he keeps two separate herds, one of each breed, at the same time?" When I commenced with the Jerseys in 1873 I had both kinds. After I had given the tests, spoken of, I commenced disposing of my old herd as fast as I could raise Jerseys to take their place in the dairy. The butter test was made by measuring the milk and churning it separately, and weighing the butter. I have fed and milked them separately long enough to satisfy myself of the relative value of the two breeds for a butter dairy.

Again Mr. A. says: "I do not by any means propose to accept his statement," etc. Well, as I am not breeding cattle for sale, and am not writing this article as an advertisement for my herd, it makes very little difference to the people of the State in general, or to me in particular, whether he accepts it or not.

WM. JOHNSTON.

Richland, July 25, 1881.

[The incorrect report of Mr. Johnston's speech must be referred back to the reporter of the Stockton paper. It is always unsafe to make a reporter's outline of a speech the basis of a critique, as Mr. Ashburner will, no doubt, acknowledge. We wish the writer had omitted the last paragraph of his letter above.—Eps. Press.]

OLD lady asks neighbor to look at picture by her son. "Come awa' ben, Mrs. Smith, and see the new pentin' din by our Jeems. It's a scene in Arran wi' a horse an' kairt in't, an' it's sae weel pentit that ye canna' tell the yiu frae the tither."

### Horticulture at the Mechanics' Fair.

The horticultural features of this year's fair are unfolding in a gratifying manner. The garden, which is one of the most delightful resorts ever contrived in connection with an industrial exhibition, is now giving delight to throngs who enjoy a turn from the maze of merchandise and machinery to the cool and quiet of the miniature lawns and growing shrubs, the musical splash of the fountains, and the many forms and hues of the flowering and foliage plants on exhibition. The garden as a whole is in fine condition this year. The stands and benches of potted plants are fewer than last year, and this, we think, will strike most visitors as an improvement, for it gives more room for the promenaders and shows the really fine plants to better advantage than when too much material is crowded into too little space. The exhibits from Woodward's Gardens and the Exotic Gardens are both in perfect condition, and "well grown plants," which are the delight of the amateur, may be seen in great abundance.

The fruit show this year is prominently made on the main floor near the Mission street entrance. Some excellent fruit has already arrived, and it is fair to expect that the long tables will be laden with the best that can be found as each variety ripens. It is noticeable that the interest in the fair is wide reaching, as fruit is being received from the distant parts of the State. The exhibitors this year thus far are Sol Runyon, Sacramento river; Jules Raymond, Chinese Camp, Tuolumne county, who exhibits some very fine oranges; G. P. Coleman, J. Messenger, Calaveras county; W. L. Rhodes, Yolo; G. W. Hincley, Winters, who has a fine display of peaches; J. H. Culver, Secretary of the Mechanics' Institute, Spanish melons; and J. H. Gilmore, Superintendent of the fair, who has a good display of peaches, grapes, apples, pears, melons, figs, etc., from his Alameda ranch. John Hanna, of Anaheim, exhibits some lemons which are apparently as good as those from Sicily.

The fruit exhibit will improve from day to day, and, standing as it does near the main entrance to the pavilion, will attract the attention of all, and give to strangers proof of the extent and diversity of our fruit-growing interest, which is now one of the most promising in the State. We shall have more to say of the horticultural departments of the fair hereafter.

WATER IN AN AMETHYST.—An Atlanta paper reports the recent finding, in Rabun county, Ga., of an amethyst bearing a drop of water or similar liquid in a cavity near the center of the stone. It is not an uncommon occurrence to find such water-filled cavities in crystals of quartz and other minerals, but this cavity in amethyst is said to be unique.

## Petaluma Fruit Drier.

WE WOULD LIKE TO SAY A FEW WORDS TO THOSE CONTEMPLATING PUTTING UP SOME KIND OF A

## FRUIT DRIER.

FIRST—ALL DRIERS, EVERYTHING BEING EQUAL, WILL PRODUCE DRIED GOODS OF EQUAL VALUE.

Now the question arises, what kind of a machine is the most profitable? To this we would answer, the machine that does the most work with the least amount of labor and capital.

Can a Drier do as much work whose whole side is thrown open every ten minutes and kept open for a long time to raise the trays by hand, as one where all the trays are raised at once, and in less time than it takes to raise one by hand.

The Drier that opens its sides every ten minutes to raise the trays loses fully one-quarter of the heat, thereby losing one-quarter of the capital in fuel.

Suppose there were Fifteen trays in the chamber, and each had to be raised separately by hand, would it not take just fifteen times as long as it would take to raise the whole by one automatic motion.

With the improvements that have been added to the already FIRST-CLASS PETALUMA FRUIT DRIER, we have no fears in coming before the public with the claim of the best and cheapest first-class Drier in the U. S., and to parties contemplating erecting driers we think we can convince them of the fact, by addressing

J. W. CASSIDY, Petaluma Cal.

Or LITTLEFIELD, ALLISON & CO., 309 & 311 Washington Street, S. F.



## At the SANBORN WAGON DEPOT,

24 and 26 Beale Street, S. F. Cal.

## WAGONS

Three sizes of THOROUGH-BRACE WAGONS, with 1, 2 or 3 seats. Eight sizes of EXPRESS AND DELIVERY WAGONS. Three sizes of FOUR SPRING WAGONS, with 1, 2 or 3 seats. Besides Business Wagons and Buggies.

Also, all sizes of FARM WAGONS, made by Mitchell, Lewis & Co., of Racine, Wis., who make the best Farm Wagons in the world. All our Wagons are fully warranted.

A. W. SANBORN & CO.,

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## BOARDING AND DAY SCHOOL,

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Trains boys for College and for Business in the most thorough manner.

Next School Year will commence July 11, 1881.

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The Principal is determined to spare no expense in making this institution increasingly worthy of patronage. For Catalogue address

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THE FALL TERM WILL BEGIN

Thursday,.....July 28th.

Catalogues can be had at the Bookstores of A. L. Bancroft & Co., San Francisco, and W. B. Hardy, Oakland.

For Catalogues or other particulars, address

S. S. HARMON, Principal,  
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## HOME SCHOOL

### FOR YOUNG LADIES.

1825 Telegraph Avenue, - - Oakland, Cal.

The next year will begin on Wednesday, July 27, 1881

MISS H. N. FIELD, Principal.

## DAIRY COWS WANTED.

Wanted, from TWENTY to FORTY GOOD DAIRY COWS that will come in between August and October. Address, with particulars, B. MARKS, Fresno, Cal.

A SINGULAR SURGICAL OPERATION was recently performed upon a well-known St. Louis real estate agent, in which a pound of adipose tissue was taken from the back of his neck. The patient is a very large man, whose weight is 249 lbs. The fat had begun to gather in such heavy folds about the neck as to become a source of constant annoyance, the head having been crowded forward and held in an unbecoming position. The skin was divided at right angles, so that the wound made a sort of cross, from beneath which all the underlying fat was taken. The piece of flesh is said to have weighed exactly one lb. The patient took nothing to sustain him in the trial, and did not appear to suffer much, even when the parts were being cauterized, to prevent a formation of new tissue. The wound being closed up and bandaged, he lighted a cigar, ordered the pound of flesh to be thrown into the sewer, and sat quietly down to read the paper. Only a few drops of blood were lost, and no serious consequences are expected. The patient was not prevented from taking his usual morning walk, and expected to be able to attend to his usual business within a week from the time of the operation.

DISCOVERY OF ANOTHER COMET.—Mr. J. M. Schaeberle, of Ann Arbor, Michigan, discovered, July 13th, a new comet, the third of 1881. In the telescope it showed a bright center and a clear though faint tail. It appeared in the northeast, in the constellation Auriga, not far from the point of appearance of the comet now passing out of sight. The new comet is rapidly increasing in brightness, and will continue to do so until about August 21st, when it promises to be quite conspicuous, certainly as a telescopic object. It will be nearest the earth about August 20th, a day or two after its perihelion passage, when it will be about 40,000,000 miles away. So far "the orbit presents no special resemblance to that of any known comet," the Harvard astronomers say, though Prof. Stone, of Cincinnati, thinks he finds in it a close resemblance to that of the great comet of 1337. It seems to be moving in a northerly direction. This comet will not go so far north as the recent one. We will be able to see it early in the evening in the west, and early in the morning in the east. It has something of a tail, which will grow more distinct. The comet is labeled "C," being the third comet discovered this year. The comet so recently visible near the polar star is comet "B."

SUN POWER.—The *Echo* states it is not impossible that before our coal fields are exhausted, we shall have discovered some means of doing many things without that, at present, invaluable fuel—at least, in regions where the sun shines. We have previously given an account of M. Mouchot's solar engine, but that extraordinary method of utilizing the heat of the sun has been eclipsed by an improvement devised by M. Pifre. It is stated that the latter has gone so far as to utilize 80% of the available heat of the sun's rays at Paris, and has actually constructed an apparatus with which he pumped water to a height of 10 ft. at the rate of over 20 gallons a minute. As in Mouchot's solar engine, a reflector receives the light and concentrates it upon a boiler, in this case containing nearly 90 gallons of water, which, under a clear Paris sky, begins to boil in about 40 minutes, and in a few minutes longer has sufficient pressure to drive the engine working the pump. In the not distant future, then, tropical countries will be the places where motive power can be had for next to nothing.—*Journal of Applied Science.*



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs.

HENRY PIERCE, 723 Montgomery Street, S. F. Jersey Cattle, bred from Importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yuba Buena," of noted hutter strains on the Island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound hutter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

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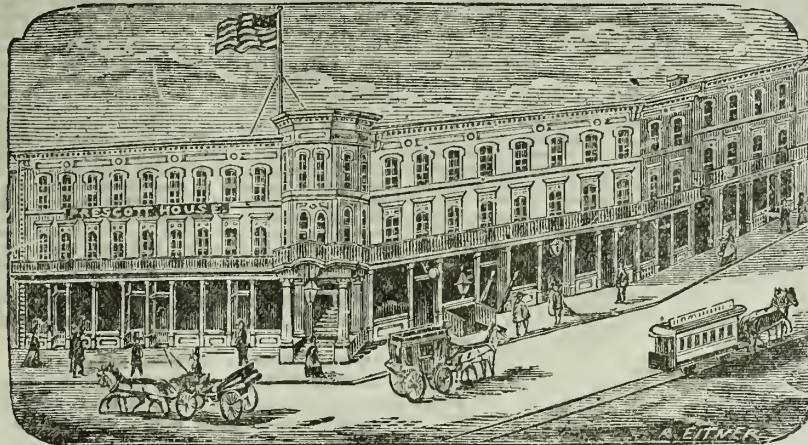
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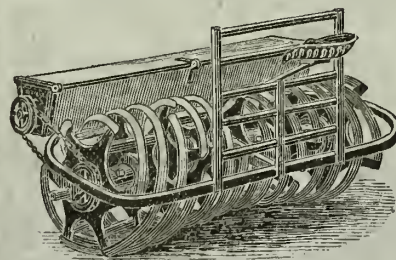
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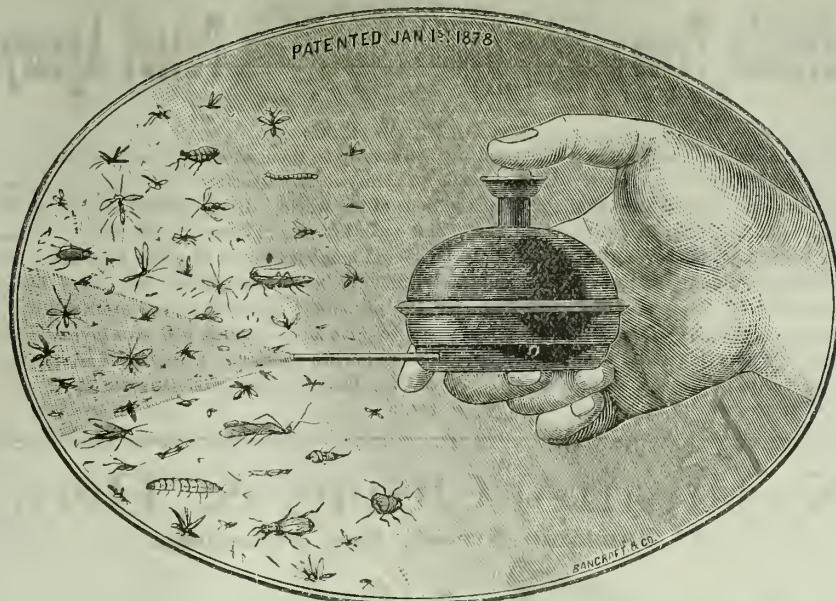
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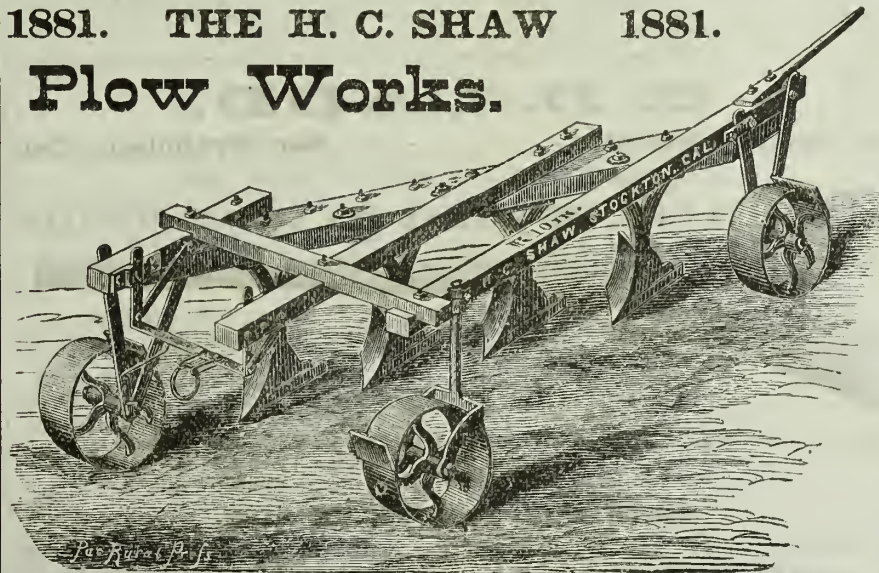
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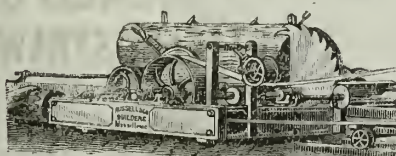
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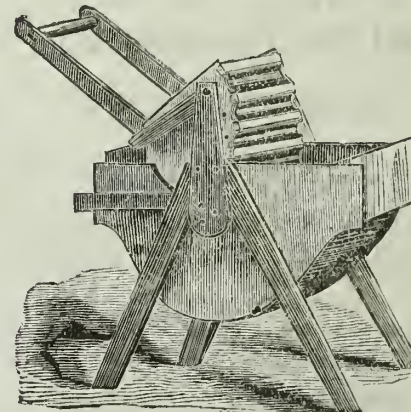
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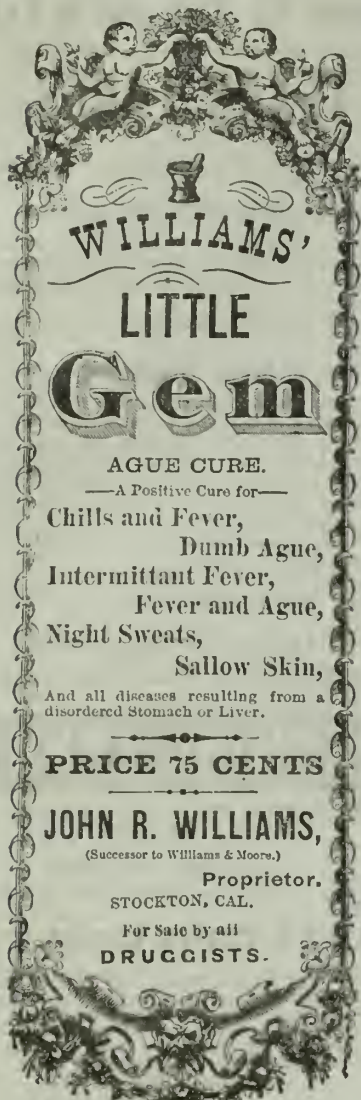
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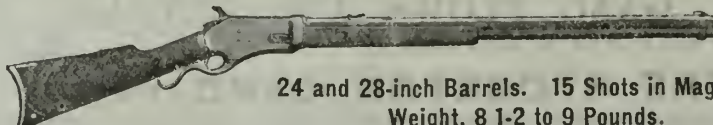
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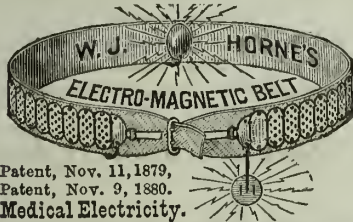


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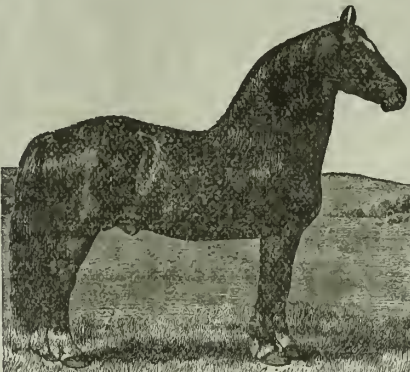
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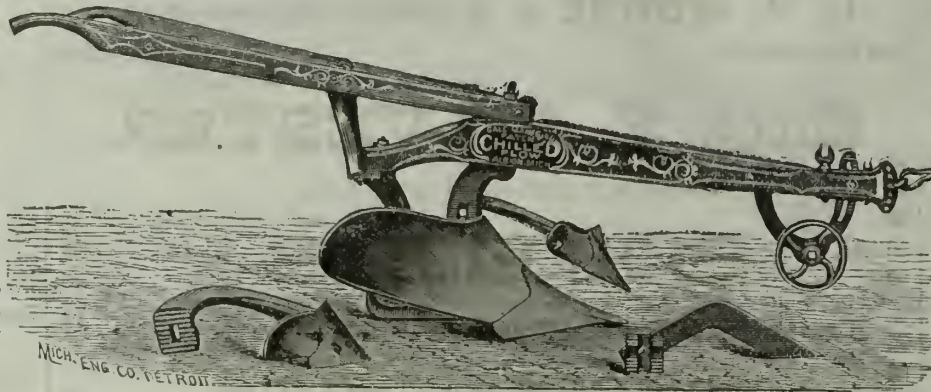
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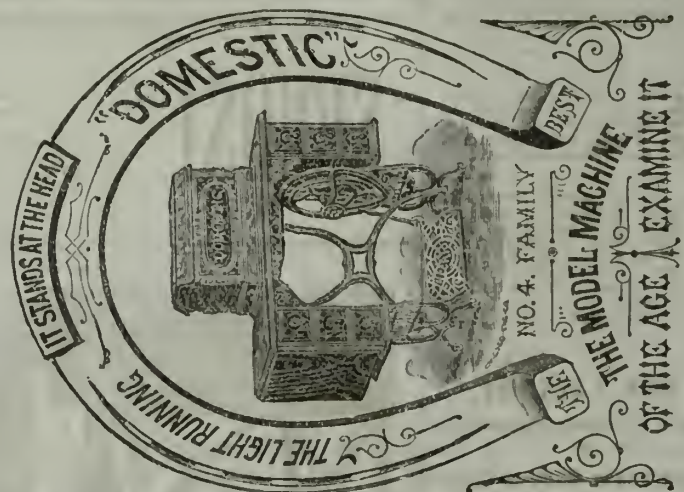
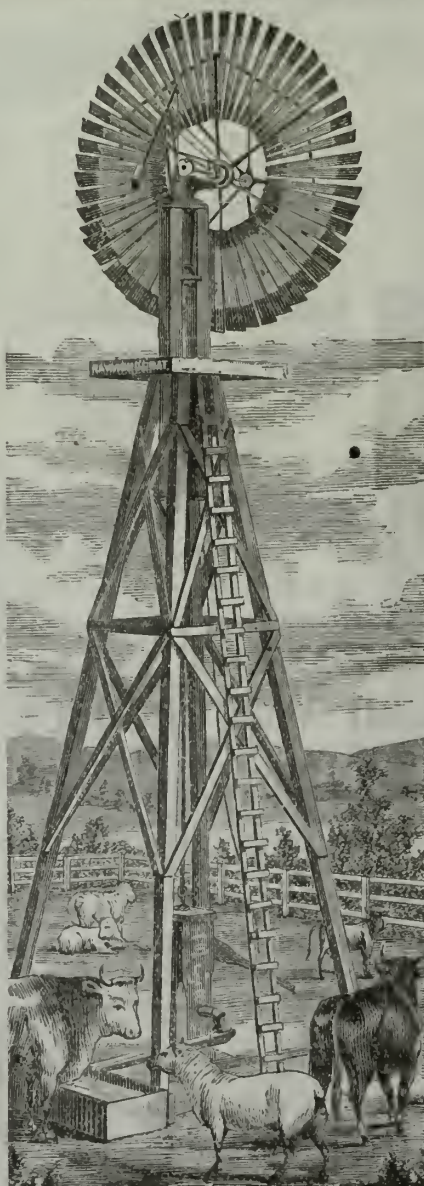
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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, AUGUST 20, 1881.

Number 8

## The Lumber Interest.

Now that the lumbering industry is awake and operations being extended in nearly all the lumber regions to meet the increased demand for home use and for export, there will probably be general interest in new lumbering machinery and appliances. We give on this page a scene in the woods where a plant of portable sawing machinery has been established, and the process of lumber making in progress. The use of this style of saw mill has increased largely in the Eastern States during the last few years, and the manufacturers, Russell & Co., of Massillon, Ohio, have had to greatly enlarge their shops to meet the demand for their "pony saw mills."

The value of this kind of a mill is obvious to those acquainted with lumbering. It is true that in the great redwood regions lumber can be most cheaply produced by floating the logs to the large stationary mills, which are generally located on tide water near the mouths of the creeks and rivers, which are numerous along the coast, or the mills are adjacent to the railways. In the coast pine regions, on the other hand, this means of transporting logs is not so generally available, and many situations are found where it is cheaper to move the mill to the logs than to move the logs to the mill. The same is true where the forest is not dense, and where long hauling would soon be inevitable if a stationary mill were set up. As there is often about one-third refuse material in a log, it is clear that the finished lumber can be hauled more cheaply than the log, not to speak of the greater ease in handling sawed stuff, and the facility with which it can be brought out from places difficult of access whence logs could not be brought.

In short, it is evident that pony mills like the one shown in the engraving can be used to advantage where stationary mills might be impracticable or unprofitable. The product of the small mills would also minister to a local demand in many thriving communities where building and improvement would be promoted by the supply of cheaper lumber produced near by.

In this connection, some general statements concerning the present condition of the California lumbering industry are appropriate. A circular lately issued by Thomas Magee states that the city and country demand for rough and dressed pine lumber is at present very good, with constantly increasing business. The pine lumber mills are at present running to their full capacity, and have been all spring. The redwood market has not been so active, but the demand is very fair at advanced rates. The mills are sending a great deal of pine lumber direct to ports south of Santa Cruz. There is an immense trade carried on at present in railroad ties and rough sawed lumber, for our southern ports and Mexico, at an advance of fully 10% on both material and freight. In this direction Eastern orders are so numerous, that not more than half or two-thirds can be filled during the present year. The demand from South and Central America for building, railroad and mining purposes, is at present stimulating the mar-

ket in a manner most satisfactory to the majority of our lumber firms. Shipments to the Sandwich Islands continue to be very large; indeed, the extent of trade in that direction is surprising to most of our dealers. For China and Australia the demand has been light for a couple of months past, with orders principally filled at Burrard inlet, and other mills in British territory. The city demand for manufactured lumber is rather light; country and foreign shipments are reported very good, especially down the southern coast.

Concerning the export trade in California lumber the *Commercial Herald* of last week has these interesting items: Shipment of telegraph poles are being made to Guaymas, El Paso, and Nevada, while large shipments of ties are being made to the front of the Atchison, Topeka and Santa Fe railroad. Heavy orders for building material are being filled for points south of here, while shingles by the millions are being sent out of the State. In Butte county there is also great activity. The demand in Eastern States for doors and windows,

## Work on the Lick Observatory.

A reporter of the *San Jose Herald* lately visited Mt. Hamilton to see the progress of work in preparation for the construction of the Lick observatory. Upon the summit he found a level tract of about 10 acres, which had been cut down for the erection of the observatory and additional buildings. In some places the top had been cut down as much as 50 ft. Most of this work was done by the strongest blasting, as the summit is almost solid rock. The debris from the blasting was rolled over and graded up to extend the limits of the summit. When some of these large rocks would be loosened, they would roll down the side of the mountain, sometimes for a mile, cutting brush, trees and everything else in their path. The observatory and all the main buildings are to be built of brick. The brick is now being burned near the summit. Those supervising this matter have

## Cork Oak and Camphor.

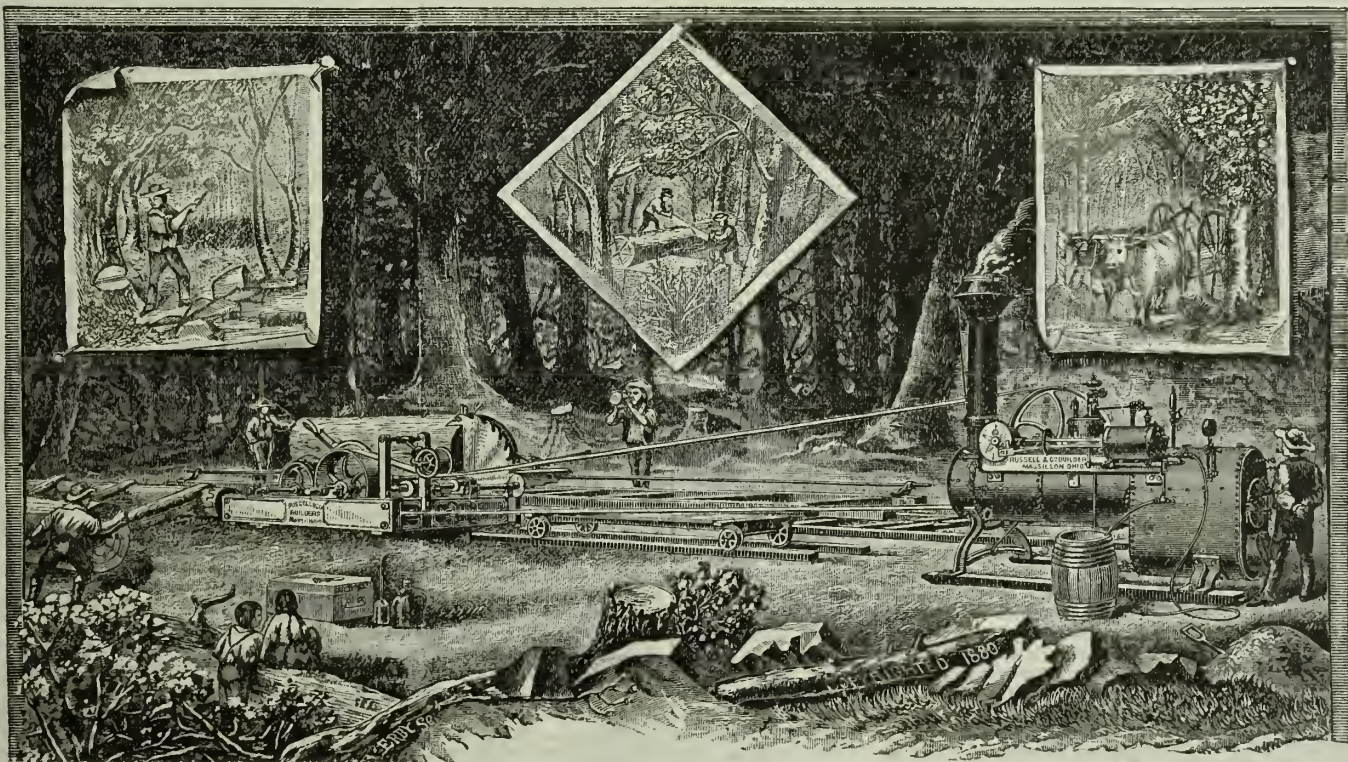
The camphor tree has been planted near Los Angeles, Cal., with every prospect of success. Why not also the cork oak, which is proved by a tree or two to be perfectly adapted to the climate, there being a good sized one in the town of Santa Barbara. It is too slow for American enterprise.—*Gardeners Monthly*.

The cork oak is growing in this State more generally than our contemporary thinks. There are already fine specimens of considerable age in several places besides Santa Barbara. Mr. Richardson, of San Gabriel, Los Angeles county, has one or more notably fine trees, which have borne acorns for several years, and we know that these acorns have been in active demand hitherto, and it is fair to presume that many have young trees growing. And for larger trees, if we remember correctly, there are some good ones in Sonoma county, and perhaps elsewhere. But the remark of the *Gardeners Monthly* is a pertinent one, and we trust our republication of it will call more general attention to the tree. It has shown itself well adapted to our conditions, and should be more generally grown and tested to determine its fitness for land not available for crops yielding quicker returns. It is true that cork growing seems rather slow business when our minds are so filled with the quick and bountiful returns from vineyards and orchards, but it is worth attention nevertheless.

As for the camphor tree, it is one of the most interesting growths lately introduced to this State. Occasionally camphor trees were brought here years ago, and have attained considerable size, but the greater number have been planted within the last three years. We have not heard much of these trees, but the few we have seen in the different parts of the State have grown well. One, which we planted

two and a half years ago in our garden, in Berkeley, and was at planting hardly larger than a knitting needle, is now seven and a half ft. high, and is voted by visitors the handsomest plant on the place. Its bright green of its older leaves and the Eastern autumn-leaf tints on the new growth at the ends of the twigs make it a beautiful object. Its symmetrical pyramidal form is also a beautiful characteristic. It has shown itself perfectly hardy in our bay climate. Last fall it received considerable water, as it stood near our camellias, which were then making rapid growth, and were watered accordingly. This started out the camphor tree at a lively rate, and the leader made a growth of two and a half ft. in a few weeks. It was such a lush growth that we feared the results of the frosts, which soon followed. But they had not the slightest effect apparently, for the wood hardened during the winter, and the tree has since then grown rapidly and healthily. Our experience would point to the camphor tree as worthy of general planting for ornament, and, perhaps, for headache medicine. What is the experience of others with this tree?

The *Astorian* says that 260 fishermen left for San Francisco by the steamer *State of California*, taking with them an average of \$300 each as the result of the net earnings of the fishing season just closed.



CARRYING THE MILL TO THE LOGS—LUMBERING WITH THE MASSILLON PONY SAW MILL.

etc., made of sugar pine, is so great that several large firms in San Francisco are manufacturing these articles and shipping them East, and millions of feet of sugar pine will be brought to this city from Butte. Two new sawmills are being put up in that county. Lassen and Lake counties have valuable timber lands, which settlers are gradually taking up. In Plumas and adjoining counties is a vast wealth of forest, containing an immense amount of valuable timber, such as sugar pine, fir, spruce, cedar and yellow pine.

**HOT SPRING CHICKENS.**—One of the most interesting projects to utilize the natural resources of California is that of J. H. Ormsby who, according to the *Calistogan*, has come to Calistoga and constructed an incubator for hatching chickens, the heat used for the purpose being derived from steam taken from a spring on the Hot Springs grounds, the pipes being laid through the incubator and the temperature therein being kept at 103°. Three hundred eggs were put into the incubator this morning as an experiment, and three weeks will be required to show what there may be in hot-spring chickens.

**ALWAYS ALIVE.**—The *PACIFIC RURAL PRESS*, a paper that is always alive to anything that affects the interests of the farmer or dairyman.—*Petaluma Argus*.

been very fortunate in finding the finest and best kind of clay for this purpose.

The water supply is from a natural spring about a mile north of the summit. The place is higher than the site of the observatory. The water is forced out by engines with great power and sent in great supplies to the place of work. It is pumped into four large tanks.

The buildings will be commenced early in September, and the work pushed forward as rapidly as possible until their completion. Prof. Burnham, the celebrated Eastern astronomer, who was here about a year ago, will return this fall, and study the heavenly bodies from Mt. Hamilton, as he says it is about the most favorable locality in the United States.

**THE AMELIA PEACH.**—We lately received a sample of the fine peaches grown by George Clark, at Wildwood, in the upper part of the Sonoma valley. Among other excellent fruit of well-known varieties was the Amelia, a peach Mr. Clark introduced from Tennessee, having become acquainted with its good points during his residence there. It is a good-sized peach, light skin, with an unusually handsome blush. The flesh is rich, melting, in color white, red at the pit, and with exquisite flavor and aroma. It seems to take kindly to California conditions, and will make a name for itself here as at the South.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Alameda County Notes.

EDITORS PRESS:—Alvarado lies a few miles about southeast from Haywards. The surrounding country is low and level, being but a few feet above the sea level. The soil is a rich, deep sandy loam, well adapted to fruit and vegetables, and holds moisture remarkably well. Fine artesian water is found at a depth of 70 to 100 ft., which in some instances is used for irrigation, although the soil is of such a character as to scarcely need it, yet the increased production justifies its use where it can be had at small expense. Among others that might be named, Mr. John Hall has a splendid flowing well, in which the water rises about three and a half ft. above the surface, in a large and powerful stream. Around the top of the well is a cement tank about four ft. in diameter, sufficiently high above ground to retain the flow of water, say three and a half to four ft., with a pipe in the bottom for the outflow, which is thus given considerable force. This by means of a hydraulic ram is carried up into a tank for the use of house and barn and the surplus is used for irrigating. He has about 80 acres of sugar beets which he is raising for the sugar factory at Alvarado.

### Sugar Beet Growing.

Large tracts of land in this part of the county for miles around, are devoted to beet culture. This is owing to the commendable enterprise of the Standard Sugar Manufacturing Co., located at Alvarado, which have created a market for sugar beets at prices that made it a profitable crop for the farmer—so much so that other crops are comparatively neglected. An industry of this kind is of great advantage to the farmer and to the country generally, and should receive support and encouragement. Manufacturers of all kinds are the great need of the country at present. Every enterprise that converts our raw material into articles of our own consumption, right at our own doors, saves freights, employs labor, and keeps money in the country. This company has persevered through many difficulties, obstacles and losses, until now they have achieved success, and established the enterprise on a sure and safe paying basis. The time of running for the last year was from the first of September to some time in February, during which time they turned out on an average about 64 tons of refined sugar per day. The profits have been equal to 2% per month on the investment on the last year's work. They make but three grades of sugar, the cube, granulated and fine crushed; all of refined grades, and of superior quality. It is so perfectly refined as to exclude all vegetable taste or smell, and is thought by many to be of superior flavor to sugar made from cane.

The company do not engage in beet raising at all, but purchase them from the farmers, paying \$4 per ton. The average product is 15 tons per acre; \$60 per acre pays well for cultivation, and is much better than grain farming. April and May are the months for planting in this section. The first plowing should be 10 or 12 inches deep, and the last plowing shallow. The seed should not be planted deep, and the plant should be cultivated well and so as to make most of it grow beneath the surface. That which grows above ground contains but little saccharine matter, and is nearly worthless for sugar, and is usually cut off and fed to stock. Medium sized beets also contain more saccharine matter than large ones, so that a beet weighing two and a half to three lbs. generally contains as much sugar as an overgrown one of 10 lbs. This is an important fact, and perhaps not generally known. These facts were given me by Supt. E. H. Dyer, of the sugar factory, who has spent much time and money in developing this important industry, and who intends devoting the remainder of his life to it. The mill will start up again early in September. The crop of beets is better this year than ever, and it is expected that the mill will turn out 80 tons of refined sugar per day during the coming season, with profit to the owners. C. E. W.

[A description of the manufacturing, and the process of making beet sugar will be found in the RURAL PRESS of July 16th.—Eds. PRESS.]

A WOOD FILLER.—There are many fillers in use for porous hard wood. A correspondent of Von Nostrand's Engineering Magazine suggests the following as very good: "Take boiled oil and cornstarch, and stir into a very thick paste. Add a little japan and reduce with turpentine. Add no color for light ash. For dark ash and chestnut, use a little raw sienna; for walnut, burnt umber and a slight amount of Venetian red; for bay wood, burnt sienna. In no case use more color than is required to overcome the white appearance of the starch unless you wish to stain the wood. The filler is worked with brush and rags in the usual manner. Let it dry 48 hours, or until it is in condition to rub down with No. 0 sandpaper, without much gumming up, and if an extra fine finish is desired fill again with the same materials, using less oil, but more of japan and turpentine."

## THE DAIRY.

### How to Tell Good Butter.

The Legislature of Ohio passed a bill providing for the inspection of butter and cheese, "and all substances having the semblance of butter and cheese," and of dairies and other places where milk is sold or butter and cheese manufactured; to be done by inspectors appointed by the State Board of Health. The Superintendent of Inspectors of Butter and Cheese, Mr. Robert Orr, has issued a circular of instructions to his subordinates, giving information which may be of value to butter makers and buyers generally. He says:

When butter is properly churned, both as to time and temperature, it becomes firm with very little working, and is tenacious; but its most desirable state is that of waxy, when it is easily moulded into any shape, and may be drawn out a considerable length without breaking. It is then styled gilt-edged. It is only in this state that butter possesses that rich nutty flavor and smell, and shows up a rich golden-yellow color, which imparts so high a degree of pleasure in eating it, and which increases its value manifold.

It is not always necessary, when it smells fresh and sweet, to taste butter in judging it. The smooth, unctuous feel in rubbing a little between the finger and thumb expresses at once its rich quality; the nutty smell and rich aroma indicating a similar taste, and the bright golden, glistening, cream-colored surface shows its high state of cleanliness. It may be necessary at times to use the trier, or even use it until you become an expert in testing by taste, smell and rubbing.

### Dairy Notes.

We take from the August issue of the *National Live Stock Journal* (Chicago, Ill.) some notes on dairy practices, etc., which will be found of value to our readers:

#### Effect of Comfort on the Milk.

The quiet and comfort of the cow has much to do with the quality of her milk. In hot weather, the annoyance produced by flies, and excitement caused by fighting them, makes the night's milk still poorer than it otherwise would be. Chemical analysis has shown a great falling off of fat in the milk of the same cow when chased by a dog. Any unusual excitement of the cow affects the fat in her milk. Extremes of heat and cold also affect the milk. When we consider the fact that milk is secreted from the blood, we can readily see the effect that may be produced by excitement on the nervous system of the cow. In a case occurring in the city of Albany, N. Y., where a nervous cow was milked by a passionate man, who whipped and otherwise ill-treated her at milking, the milk was given to a child who had been healthy, but, after using this milk, became ill and suffered from intestinal irritation, followed by a fever which seemed to affect the brain and nervous system. This illness was traced directly to the milk of this ill-treated cow.

#### Feed Dairy Cows Liberally.

We believe the dairyman should study how he may produce all the food necessary for his cows upon his own farm, and that he should make all the provision that an intelligent foresight can do; but he should never suffer his herd to go with deficient food, even for one week, for this he cannot afford to do. And that we may encourage him to be liberal, even when his pasture is short and he has no extra green food for them, let us compare the cost of nutriment in some by-product, such as bran, cotton-seed meal, linseed meal, corn meal, etc., some one of which the dairyman may always find near at hand, with pasture grass. Pasture grass has about 80 per cent. of water, and the nutriment in 100 lbs of it is supposed to be worth 21 cents. The nutriment of 19 lbs of fine bran is just equal to 100 lbs of pasture grass; 10 lbs of cotton-seed meal, 12 lbs of linseed meal, or 19 lbs of corn meal, is equal to 100 lbs of grass. Now, 100 lbs of pasture grass is a ration for an ordinary-sized cow per day. If the pasture, then, is short one-third, or one-half, or in any other proportion, it is easy to make up this deficiency by feeding some one or several of these foods, which are so easily handled. It is seldom that more than one-third would have to be fed to make a full ration on short pasture. Let us suppose the dairyman to be feeding 7 lbs of fine bran; this, at \$8 per ton, would cost 2.8 cents per day, or about 19 cents per week. Now, the extra milk per week produced by this bran would much more than pay the cost. If he should feed, instead of bran, 4 lbs. of linseed meal, it would cost him about 28 cents per week; or if 3½ lbs. of cotton-seed meal, it would cost 22 cents per week; or 6½ lbs. of corn meal, it would cost from 20 to 35 cents per cow, per week. If he has the command of all these, let him make up a ration nearly as follows: 4 lbs. bran, ½ lb. linseed meal, and 1½ lbs. corn meal to each cow per day, which will in most cases, cost only 20 cents per week, and will keep a generous flow of milk till the fall rains renew the pasture, and then the extra food can be discontinued. We have known many who have used an extra ration similar to this during short pasture and never found one who reported it unprofitable. The ration may be varied to suit all circumstances. Corn meal will be found cheap in some localities; but it is always best to

mix some bran with it; and in most parts of all our broad dairy belt bran will be found the cheapest extra food to make up for short pasture. [Pacific coast readers will have to remodel the financial side of the argument to meet the local prices of bran, corn meal, etc. The principles of nutrition involved are, of course, the same everywhere.—Eds. PRESS.]

#### Testing Value of Dairy Cows.

Tests for a year must also be a safer reliance than for a shorter time. The tests of milk and butter yield for a few days are open to so many errors, that they cannot form a basis for calculating the annual yield. The variability in the yield of some cows in different parts of the season of lactation is very great, while other cows are very uniform through three-fourths of the season, only decreasing gradually during the last two or three months. The circumstances then, all being favorable, may produce a very large yield for a few days, when the annual yield would only be respectable. If the short test is given, several important points should also be given to assist in forming a correct estimate—such as the length of time from calving, the season of the year, the food before and at the time of trial—all these are necessary elements in determining the value of a test.

## THE VINEYARD.

### American Vineyards Which Resist the Phylloxera.

[Written for the RURAL PRESS by J. I. BLEASDALE.]

The following passage from the introduction to his work on "American Grape Growing and Wine Making," by George Husman, Professor of Horticulture in the University of Missouri, will convey the most reliable assurance of two, out of eight or nine species of vines distinguished by botanists and peculiar to North America, for restoring vineyards devastated by phylloxera, especially as stocks on which to graft European varieties: "It appears even probable that this continent, in its *estivalis* and *cordifolia* varieties, will have to furnish the only reliable basis upon which the failing vineyards of Europe and of California, where all the varieties of the *vinifera* fall before the hidden ravages of their underground enemy, the phylloxera, can be rejuvenated."

The only four species cultivated are the following:

1. *Vitis labrusca*—the Northern Fox grape.
2. *Vitis vulpina*—the Southern Fox grape.
3. *Vitis estivalis*—the Summer grape.
4. *Vitis cordifolia* or *riparia*—the Winter or Frost grape, or the Riverside grape.

Whether the *Vitis Californica*, the one indigenous to this State will prove a perfect resister of phylloxera or not, is not yet quite certain, but indications are all in its favor at present.

For the purpose of this catalogue, however, we confine our attention to the above named two varieties, and a few of their derivatives. For further information, the reader is referred to Prof. Husman's book, published by Orange Judd Company, 245 Broadway, New York, 1880.

*Vitis estivalis*, Michaux.—The term, Summer grape, is the equivalent of the specific name. This has large leaves, which are clothed on the underside with loose cottony or woolly down, which is bright red or rusty, "smoothish" when old; the clusters slender, compact, dark blue or black, with a bloom. It is the latest flowering of all the Northern species; its range is more Southern and Western than the *labrusca*, and it reaches great perfection in Missouri, Kansas, Arkansas and Indian Territory. Norton's Virginia and Herbeumont are prominent among the varieties, as will be seen at the proper place, in the "*estivalis* class."

*Vitis cordifolia*, Michaux; and *Vitis riparia*, Michaux.—Michaux described two species of the Winter or Frost grape, one as *V. cordifolia* (the heart-shaped leaved), and the other as *V. riparia* (of the river banks). The two were kept distinct by Torrey & Gray in the "Flora of North America" (1838). In the "Flora of the State of New York" (1843), Doct. Torrey gives both species, and says of *V. riparia*: "This species is most readily distinguished from the preceding (*V. cordifolia*), with which it is often confounded, by its incisely serrate leaves." Doct. Gray, in his "Manual of the Botany of the Northern States" (1856), unites the two under *V. cordifolia*, Michaux, and says: "*Var. riparia* has the leaves broader and cut-lobed." (*V. riparia*, Michaux.) Doct. Chapman, in his "Flora of the Southern U. S." (1860), follows the same arrangement as Gray. Later, Doct. Engelman, in Riley's "Report on the Insects of Missouri" (1874), and in the "Bushberg Catalogue," again restores Michaux's arrangement, and gives both *Vitis cordifolia* and *V. riparia*. Those who are aware of the acuteness he brings to the investigation of obscure subjects, and the high esteem in which he is held in the botanical world, will attach great importance to Doct. Engelman's views.

According to him, besides the difference in the leaves, the fruit of *V. cordifolia* is black, without a bloom, ripens late, and has a "strong and very fetid aromatic taste, which unfits it for making into preserves, or for pressing wine." In *V. riparia*, he says that the berries are usually larger than in the last, mostly with a bloom, ripens much earlier, and is much pleasanter. While no cultivated varieties of *V. cordifolia* are known, *V. riparia* gives several,

the best known of which is Clinton. In a strict botanical classification it might be necessary to keep these two species distinct, but in a viticultural arrangement, where the *cordifolia* class has become established by usage, it seems hardly worth while to insist upon calling it the "*riparia* class." As the *V. cordifolia*, as understood by Engelman, affords no cultivated varieties, no confusion is likely to result from the use of the term, *cordifolia*, to designate that class of grapes of which the Clinton and Taylor are best known, and which the Elvira promises to bring into greater prominence than it has heretofore enjoyed. The remaining species:

The *estivalis* Class.—For General Cultivation.

Cynthiana.—Synonym, Red River. This most valuable grape was obtained by me from Wm. R. Prince, who had it from Arkansas, and introduced it into Missouri about 1838. It resembled the Norton so much in growth and foliage, that I supposed it to be identical with it, until it bore fruit, and more especially when I made wine from it, when the difference became very apparent. This seeming identity has prevented its dissemination, as many still believe it to be the same, but the bunch is generally heavier, with broader shoulders, the berry somewhat larger, sweeter, and less astringent, and the wine is not quite as dark, less rough and astringent, without that coffee-like taste of the Norton, and much more spicy and delicate, resembling the best Burgundy. Those who have tasted good Cynthiana wine once, will not easily forget it; and the fact that, besides the innumerable premiums awarded in this country, it was awarded the first premium as "best red wine of all nations," at the Vienna exposition, should speak volumes in its praise, and warrant the belief, so often expressed by me, that it will become one of the staples of the country, and cannot be excelled anywhere. Bunch medium, compact, shouldered; berry below medium, black, with blue bloom, sweet and vinous, with dark-red juice, moderately juicy, very rich. Specific gravity of must 118°. Vine a good grower, healthy and hardy, but does not grow readily from cuttings, and will not bear much before the third year, when it becomes very productive; not liable to any disease, and one of the surest we have; will bear best on spurs on old wood, like the Norton's.

Norton's Virginia.—Synonym, Norton's Seedling, Virginia Seedling. Introduced by Dr. Norton, of Virginia, who found it on an island in the Potomac. Introduced into Missouri in 1850. It caused a revolution in grape culture here, as its merits as a uniformly reliable grape for red wine became fully known. There is, perhaps, no other grape which has given such uniform satisfaction as this, and although I have warmly praised and recommended it from the first, I have seen no reason to retract a single word which I have said in its favor. It seems to succeed everywhere, though its products, of course, differ, and I had occasion to admire a splendid exhibition of it at the Centennial, from Egg Harbor City, New Jersey, where I first saw it, and had occasion to try its wine. As made there, it has not the heavy character of our Missouri Norton's, but is a very good claret. Bunch and berry smaller than Cynthiana, and not so heavily shouldered; berry small, black, with blue bloom, with a very dark-colored, astringent juice, though sweet and very spicy when fully ripe. Specific gravity of must 110°. Makes, perhaps, the best medicinal wine in the country; it has already saved thousands of lives, especially of children suffering from summer complaint, and acquired a world-wide reputation. Even as a table grape, many prefer it on account of its spicy character, and its plump bunches will keep like winter apples. Perfectly free from phylloxera and other diseases; a strong and healthy grower; bears best on spurs on old arms. As it starts late in spring, it is not liable to spring frosts.

Herbeumont.—Synonyms, Warren, Warrenton, Herbeumont's Madeira. A specifically Southern grape, for which we in Missouri are too far north, but where it is in its proper latitude, one of the very best. Bunch large and heavy, compact, shouldered; berry below medium, black, with blue bloom; skin thin, no pulp, but its berries are filled with the most spicy and refreshing juice, which that nice discriminator of fruits, the late A. J. Downing, called "bags of wine." Fine for the table, and when pressed immediately, makes an exquisitely white wine; if allowed to ferment on the husks, a pale red wine, somewhat resembling Madeira. Should be planted on southern locations, in rather poor soil, which is naturally well drained; it is useless to plant it on rich soils, or those retentive of moisture, as it will grow too rampant, and not ripen its wood. My friend, Onderdonk, of Victoria, Texas, writes to me, that it is the best and most successful grape they cultivate, and it has for several years been largely imported into France, as its roots are phylloxera-proof, and it succeeds splendidly there. Ripens rather late, and is somewhat tender even here. It promises to make the foundation of a race of true wine grapes, and if we can obtain seedlings of it, with all the good qualities of the parent, but somewhat earlier and more hardy, they will be all that can be desired. Mr. Onderdonk already reports one seedling, the Harvard, in all respects similar to the Herbeumont, but double the size, and may become exceedingly valuable. The Herbeumont is a strong and very beautiful grower, very productive, but somewhat subject to a peculiar kind of dry rot. Leaves large and thin, light green, deeply lobed. Specific gravity of must 85°.

(TO BE CONTINUED.)



## HORTICULTURE.

### Extermination of Rabbits.

EDITORS PRESS:—The destruction of several young vineyards and damage to uncultivated orchards in our valley by the unusual influx of hares and rabbits the present season, illustrates one of the difficulties encountered by settlers in many newly opened sections of the State. From regard to this source of danger alone, many who have not adequate fencing facilities, have felt restricted or altogether prohibited, year after year, in the development of their lands, thus sustaining an indirect injury, the effect of which, upon both individual and public interests, is of really vast importance. Were our open lands free from the incursions of these creatures, an unprecedented impetus to horticultural, and especially viticultural interests, would certainly be witnessed. Fencing for an orchard costs more than the trees to plant it, and many times the expense of cuttings for a vineyard. This presents a serious question to the families of small means, who, from natural causes, are crowded to the outskirts of extending civilization, and from their disadvantageous position, have but too few means of improving their circumstances.

A good fence is unquestionably the surest and only permanent protection; yet, where this is not at command, something can still be done through determination and energy. Trees can be wrapped with old grain sacks cut into strips, or brush can be tied thickly about their stems, or they can be painted over with repellent mixtures, such as roots and clay, or fresh cow dung and clay, mixed with water to a consistency of thick paint and applied with a brush.

It is believed that a practical extermination of hares and rabbits can be effected in many communities by a concert of well-directed efforts. It is reported that in New Zealand and Australia the prevalence of rabbits has been a source of terror to the inhabitants, inasmuch that it is made a subject of legislation, and the rural police are instructed to see that landowners use means of destruction prescribed by law. Phosphorized oats have proved a most efficient agent, for which the following recipe is employed in their preparation:

- 1 lb phosphorus.
- 2 lbs dark sugar.
- 9 gallons water.

Boil, and stir slowly and cautiously 10 minutes; then stir in 100 lbs of oats, to remain until saturated. Nearly all kinds of vermin eat it with avidity, and always with fatal results. By its use rabbits are said to be destroyed by the hundreds of thousands.

Being much troubled with hares, rabbits and squirrels amongst my crops, I recently made a test of a similar preparation as follows:

- 1 stick phosphorus.
- $\frac{1}{2}$  lb brown sugar.
- 2 gallons water.

Heated as above, and 20 lbs wheat added. After cooking for half an hour (being kept hot and occasionally stirred), I added enough wheat middlings to about the remaining liquid, and, by stirring, gave a coating to the grains of wheat. The preparation was then dried by being spread in the sun upon a flat rock. The cost is a mere trifle.

One-half of this quantity was scattered through the trails along the outskirts of the ranch, several parallel trails being traversed and about a dessert spoonful dropped at the intersection of each cross-trail; also, numerous deposits were made in the squirrel colonies.

The effect was most remarkable. The squirrels have entirely disappeared, and not one hare is now to be seen where previously they could be counted by dozens trooping down from the hills. They will doubtless stray in from neighboring ranches; but I am firmly persuaded if all my neighbors would act together covering an extended range, using liberal quantities of the poison and occasionally repeating the treatment, we could rid ourselves of the evil, and turn our profitless hillsides and outlands into vineyards, whose returns would rejoice the owners, and whose verdure would bless the vision of each passing traveler.

O. S. CHAPIN.

Poway, San Diego Co., Cal., Aug. 8, 1881.

### New Varieties of Fruit.

EDITORS PRESS:—In the report of the State Horticultural Society in this week's RURAL it was stated that I would obtain buds of any of the seedling peaches exhibited for any who desired to "buy" them. The word I used was "try," which, being of a like sound, the mistake may easily be accounted for. It is of but little importance, except that I would not wish to be thought of so mercenary a spirit as the former word might imply. So much for that.

A more pertinent question is suggested, and that is, that it might be of great benefit to the State if more attention were given to the originating of new varieties of fruits which would be of peculiar value to the fruit-growing industry. It is but very rarely that a seedling is found now that will be superior to, or even equal to our known propagated varieties. But some few of these might be brought to light if some systematic method were adopted to hunt

them up. Could not committees be appointed by horticultural societies throughout the State, whose duty, and pleasure, it will be to visit old orchards, especially the more remote and less frequented the better? These committees could report at every meeting, bringing or sending samples of fruit which they deemed worthy of notice.

But more gratifying results would follow from experiments with crossing and hybridizing varieties and species of our propagated fruits; not done at haphazard or ignorantly, but with a well defined object in view as to the desired end.

Let, again, a committee of members of the Horticultural Society, be appointed to thoroughly study up this matter, as to what varieties it would be well to experiment with, and which should be the one to fertilize.

When this has been determined, responsible men should be asked to undertake, at proper time and in the proper manner, the task of so experimenting with two given varieties. The following year, supposing good seed to have been obtained from such cross breeding, the plant can, by being budded or grafted onto an old tree, be soon brought to bear fruit.

I have myself made one experiment this way, believing that the final result will be most gratifying, but it must be several years before such can be known. LEONARD COATES, Yountville, Cal.

[Mr. Coates is right about "buy" and "try." We heard it "try," and wrote it "try," and knew that Mr. Coates' proposition was wholly in the interest of members, and no trade considerations in it at all.—EDS. PRESS.]

### Fruit Tree Planting.—No. 2.

EDITORS PRESS:—We spoke of the soil and climate for fruit production that every home should have trees, but he who intends to supply the market should be careful to select land suited to the fruit he wishes to produce. Often, within a few rods of the best orchards, we find land utterly unsuited for trees. A streak of "adobe" or alkali, only seen by the practiced eye, makes a world of difference. A man may spend years of his life in rearing an orchard only to find that he has raised dwarfs, which can never mature first-class fruit. If, on the contrary, where knowledge, experience and industry unite with climate and soil, eminent success and profit will result. An illustration of this I saw a few days ago on the grounds of a long-continued reader of the RURAL, William W. Smith, two miles northwest of Vacaville, between two mountains or hills running northwest and southeast, in a valley a mile wide, with a creek and an alluvial soil, moist and yet well drained. Mr. Smith has planted an orchard of 100 acres, one-half in bearing, yet no trees more than seven years old. Four thousand black Tartarian cherry trees promise, next year, to yield \$10 to the tree. At the time of my visit he was sending away more than \$300 worth of peaches each day. He has 200 acres of land, 50 of which are on the hillside. Mr. Smith's success is no accident. He knew before he commenced what would be the result. Many men, seeing his orchard in the best climate and soil, will rush into tree planting far out on the adobe and alkali plains, where the fierce wind drinks the sap from the leaves and lashes the fruit on the branches, and after years of futile effort will wake up to the importance of our subject—the best soil and climate for fruit growing.

#### What Kinds to Plant.

Often is the question asked, "What kinds of fruit had I better plant?" We answer, plant for drying and canning. If you are in a heavy fruit-producing region you will have a canning factory; if not, you must dry your fruit. Peaches and apricots, at two cents per pound, will pay better than wheat at the same price. Pears and plums can be produced much cheaper, because more certain. In this estimate a long series of years, with the time consumed in rearing an orchard, is taken into the account.

#### When to Plant.

It is always safe to plant early, if the earth is dug up round the tree in the spring without disturbing the roots. Planting may be done in February and March if care is taken to have the ground in good order. Last spring I sold a large number of trees to a neighbor on February 21st. They were planted well and are all growing thriftily, except one which the gophers took. On March 7th to 10th another neighbor bought about the same number; more than half are either dead or badly stunted in their growth. These last were planted by contract, in cloddy ground. W. W. BRIER, Centerville, Cal.

LARGE STEAM ENGINES.—Monster steam engines seem to be one of the features of the day. The Centennial engine, in Machinery hall, Philadelphia, was considered a monster in size and power. It is rated at 500-horse power. They are now putting up a 2,000-horse power engine for the Providence Water Works. These are very large for stationary engines. But engines of much larger power have long been in use in ocean steamers. There are now several trans-Atlantic steamers which develop from 4,000 to 5,000-horse power; but the Mail Canard steamer service will develop 10,000-horse power.

## POULTRY YARD.

### The Egg Trade of San Francisco.

A reporter of the *Call* recently made the egg trade of San Francisco the subject of extended investigation, and gained from dealers many points which will be of interest to egg producers. We shall condense from this source the following information:

Eggs come into this market from every port along the coast, from Portland, Oregon, to San Diego, and from nearly every railroad station in the State. They come in large numbers from Oregon, in still larger from Salt Lake, and during the fall, winter and early spring, by the hundreds of thousands of dozens from Iowa and Nebraska. They are graded according to quality into "ranch," "choice," "good" and "bakers." The ranch eggs are by far the fewest in number, and bring always a fancy price, ranging from one to three cents per dozen, wholesale, above the ruling highest quotation for eggs. They nearly all go to the restaurants, or upon the tables of those who are willing to pay a few cents per dozen more for eggs that are as nearly fresh as it is possible to obtain outside of their own "hennery"—if they have one. They come from the chicken ranches located in the vicinity of the bay, the owners of which always send them to the market two or three times every week, so that none of them are probably over three or four days old when they reach the consumer. These ranch eggs are always more attractive in general appearance than those of the other grades, simply because the rancher cares for his poultry, sees that they have nice dry spots in which to lay, and the eggs are consequently clean and white, and because he sends them to the city frequently, so that they have an unmistakable and attractive fresh appearance.

#### Grades of Eggs.

Step into the back part of the store of a commission house which devotes more or less attention to its egg trade, and there the uninitiated will see many things to interest them. Either in a very dark corner, or better, a little room where a ray of light cannot enter, burns a candle or a gas jet—generally a tallow candle. This is about on a level with the eyes of a man standing or sitting before it. He opens a box of eggs, takes up two or three and passes them in front of the candle. If the light shines clearly through they are good—that is, they are not rotten or even stale enough to be noticeable to the taste. A strictly choice egg is one which is "as clear as glass," and which when shaken a little remains perfectly solid. Next come choice eggs, which, while perfectly clear when held before the candle, yet, when shaken, reveal a distinct movement of the contents of the shell, showing with unerring certainty that they are becoming a little stale, though you could not detect it by tasting. Next come those, the contents of which move so freely that it is easy to imagine there is a lump of lead within. This egg is quite stale, though fit to be eaten. Break the shell and you will find the yolk will break and mingle with the white. Next is the egg which shows a cloud within when held before the candle; this is because the yolk is beginning to approach the stage of rottenness; or, you will find a fixed cloud in one end; this is because the egg has been standing upon this end until it has become stale, and the yolk has settled into that end. Cook this egg and you will find there is just enough of a peculiar taste about it to make you wish you had another one in its place, but still not pronounced enough to prevent you from eating it, especially if you are hungry and not over delicate in taste. This is the last stage of goodness in the egg; in the next it becomes bad, though not very bad. By the candle's assistance you find that the next egg has a fixed ink-black spot within as large as a pea; in the next this spot is larger, and so on until you can no more look through it than you can a lump of coal; and even further, yet when its badness is so intense that its envelope cannot contain it, and the shell sweats and is found covered with moisture. It is but a step to the last stage, where the egg has become so thoroughly rotten that when you touch it, snap goes the shell with a report like that of a pistol, and from within comes an odor that makes you flee with all possible celerity.

In the process of "candling" eggs they are met with in all the conditions described above, the proportion of stale and rotten ones being reduced to a minimum in winter, and reaching the maximum in the hot weather of summer. Many firms assort these eggs as they are candled, of course throwing out all rotten ones in any event. The finest are laid aside for the "gilt-edge" portion of their customers—those who are willing to pay fancy prices. The next best go to grocers; the next—the badly shaking, the ones with cloudy yolks, and even with the little black spot—find their way to the bakers. The thoroughly rotten eggs are put aside—not thrown away, as one might think—and finally disposed of for two to five cents a dozen for use in the arts. The eggs from one country store may finally be thus assorted into several grades, and when a return is made to the shipper, he gets a fair price, less the rotten and broken ones thrown out, and it is just barely possible that

the commission merchant, come to balance up his accounts for this particular shipment, finds that what with giving the shipper an average price for his good eggs, nothing for the rotten, and a few cents per dozen for the broken ones, he has profited more on the shipment than in justice he should—that is, 5% commission on the amount of the sale. Unless the shipper thoroughly understands that his eggs are of that quality that they should bring a little above the market price, and so informs his commission merchant, he may rest assured that if more is received he will get none of it—that is, perhaps he won't. He will get the highest market price, and very probably the seller will consider himself entitled to all he can get above it as a reward for his capacity in getting a fancy figure. In the winter, the bulk of all the eggs that arrive in this market, unless they are several weeks old and have been pretty thoroughly shaken up, are fit to enter a restaurant kitchen. It is scarcely necessary to candle them, as rotten ones are few and far between. But in the summer the direct contrary is the case. An egg may be perfectly fresh and nice as far as outward appearances go, but your candle may show that it is as "black as a hat" within. Even the test of the candle is not always infallible, for sometimes an egg may be pretty clear and yet taste badly, but these instances are rare.

#### Pickled Eggs.

As butter is pickled when it is plentiful, in anticipation of the dry season when it shall be scarce and high, so eggs are packed by the thousands of dozens when they are down to about 18 or 20 cents, preparatory to the time when from 40 to 50 cents per dozen will have to be paid for a fresh article. Some of the largest bakers pack down enormous quantities, generally in lime, which is also a favorite preservative with some of the commission houses. The eggs are simply placed loose in a barrel—and, by the way, it seems a little singular that so fragile a thing as an egg can bear the weight of hundreds of dozens of its fellows without breaking, when a very slight pressure between your fingers will crush it; but such is the case, and box after box is emptied until the barrel is filled. Then lime is mixed with water and poured into the barrel until it is full, when it is covered over and left until the market has advanced 100% or more, when its contents are drawn upon. The eggs come forth, in outward appearance, as fresh as though laid but an hour previously, and the candle shows them to be beautifully clear—the action of the lime and the water keeping the air from them, have prevented them from changing in the slightest degree since their immersion. Break one of them open and there is no smell, even though they might have been packed the year previously. Eat it raw and you detect nothing about it different from a freshly-laid egg. Use it in your pastry, or boil and eat it, and you find nothing to excite any suspicion of age or anything else. But fry it, and you will note that it acts strangely in the spider—more especially if it has been packed a long time—for it "spatters" and sends the grease flying in minute drops in every direction; the white of the egg has become impregnated in a slight degree with lime. These are known to the trade as "lime eggs," and thousands of dozens are sold every year to a trusting public as "fresh laid California." It is worthy of note that half the time the grocer himself thinks they are fresh eggs, and if here and there in his box a little lump of lime is found clinging to an egg, ten to one he fancies it was there when the egg was laid, though occasionally he knows what it means. The only way in which they can be detected is in the presence of lime carelessly left adhering to the shell and by the "spattering" in the pan. There are very many ways of "putting down" eggs so that they will keep for a long time, but lime is the most inexpensive and, as it is more generally used than anything else, is probably the best. The writer has seen eggs preserved by a process which necessitated the employment of a chemical acid. The eggs came out after six months immersion, looking in every respect, inside and out, as though they were just from the hen house, but there was a disagreeable smell about them which induced the return of them all to a grocer, who had bought a case of them on the strength of their general good looks, supposing them to be perfectly fresh. Anything which will absolutely keep the air from an egg will preserve it; but, as stated above, lime water is regarded by the egg merchants as the best agent yet produced. Chemicals are both dangerous and expensive to use, and if not, they are very apt to leave strong evidences of their presence behind them.

SALICYLIC ACID FOR BEE STINGS.—Although salicylic acid, from having been too highly extolled, has fallen somewhat into disfavor, there can be no doubt that it is useful in the case of bee stings. An Austrian paper recommends the following treatment: First, to remove the sting as quickly as possible with a forceps or by scratching with a finger, but never between the thumb and forefinger, because this squeezes more of the poison into the wound. Next, squeeze the wound until a drop of blood comes out, and rub the place as large as a dollar with an aqueous or dilute alcoholic solution of salicylic acid. The effect is still better by injecting the salicylic acid into the wound with the hypodermic syringe. After this the spot is painted with collodion to keep out the air. A sting treated thus causes little or no pain, slight inflammation and swelling, and is not followed by nettle-fever or lameness in the most sensitive and nervous individuals.—*Scientific News*.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### The Grange and Debris Destruction.

The *Sutter County Farmer* of last week publishes the following resolutions lately adopted by the Wheatland Grange:

WHEREAS, The Order of Patrons of Husbandry was founded for the express purpose of fostering and protecting the interests of agriculture, and for the mutual protection of its members in their property interests and in the proper pursuit of their business, and

WHEREAS, There has grown up in this State a system of mining, known as hydraulic mining, by which huge masses of earth, rock and gravel are constantly being thrown into many of our rivers and their tributaries, and by the force of the waters carried from the mountains toward the sea with fearful and damaging results, some of which are below mentioned:

1st. It has fouled the waters of such streams, thereby rendering them unfit for man or beast.

2d. It has filled the natural channels of these streams to such an extent in some instances as to obliterate them entirely, thus causing the waters to diverge to the right and left, thereby inundating thousands of acres, of once valuable agricultural lands, and utterly destroying them by the deep deposit of mud, sand and gravel, which is constantly being carried down from the mines above.

3d. It has so choked several of our once navigable rivers as to render them entirely unnavigable, and others that once floated vessels of the largest size, are now navigable for vessels only of the lightest draft constructed expressly for this purpose.

4th. It has shoaled the harbors on the bay from the Sacramento river to the Golden Gate that their utter destruction is only a matter of a few years time.

5th. It has compelled farmers along these rivers to construct immense levees to protect their land, the cost of strengthening and repairing the same being, in many instances, greater than the net income of their lands, thus bringing financial ruin upon the owners.

6th. It has so raised the beds of the rivers that have been leveed, that the water now flows several feet above the adjacent lands, causing such lands, in many instances, to be unproductive by the water which percolates through and under the levees.

7th. It has caused a shrinkage of values amounting to many millions of dollars in the taxable property of the State, rendered hundreds of families homeless, and if not summarily checked will not only destroy the great belt of fertile lands yet undestroyed along the Yuba, Feather, Bear and Sacramento rivers, but will also destroy the cities, towns and villages along their banks and on the bay below, and jeopardize our commercial metropolis, San Francisco, itself. Further he it

Resolved, By this Grange, that all citizens have a right to the peaceable use of their property, subject to the common law, and that it shall not be so used as to injure or destroy that of another.

Resolved, That we should favor and foster every legitimate enterprise of whatever character, yet we most earnestly add emphatically deprecate and denounce the present system of hydraulic mining as now practiced to wit: sluicing the mountains down into the valleys.

Resolved, That we commend as praiseworthy the acts of those citizens and their legal representatives, who, having failed in the last election of the State Legislature, to obtain any redress of their grievances, are now seeking the abatement of this great evil through the courts of our State.

Resolved, That we commend the action of those of our State and county officials, who have lately directed their attention to this matter through the medium of the law.

Resolved, That we look to our brethren of this order, and all other good citizens, for aid in this our extremity, making political and all other questions secondary to this.

Resolved, That we ask each and every Grange within the jurisdiction of this State, to fully consider the foregoing, and if endorsed, to so publish by resolution.—J. M. JASPER, DANIEL FRASER, FRANK KRISHNER, C. K. DAM, A. J. WEBSTER, Committee.

#### Action by Sacramento Grange.

A meeting of the Sacramento Grange was held in Sacramento on Saturday, when the following preamble and resolutions were adopted:

WHEREAS, By a certain process of hydraulic mining operated in certain mining districts of this State, large quantities of sand, clay and other barren material are being continually washed into and down the rivers upon this valley, causing great damage to property by destroying the navigation and drainage capacity of our water courses, covering up and forever destroying the productiveness of our land, endangering prosperous towns, and changing one of the most desirable sections of the State into a wilderness unsuited for the abode of man; and believing the destruction of fertile fields, navigable rivers, beautiful homes and stately cities to be the greatest calamity that could possibly befall any people, we hold those responsible who are guilty of such vandalism, however great may be the pecuniary consideration. Neither are they guiltless who would permit the same to be done if in their power to prevent it.

Resolved, That no persons have the right to so conduct their business as to interfere with the rights or property

of others. That the citizens of this valley are justified in resorting to every means the laws of their country provide for self-preservation and protection.

Resolved, That we recognize the importance of science in freeing our rivers and restoring them to their former usefulness, but deny the right of these miners to place any more barriers in their way.

Resolved, That it is the duty of the State to prohibit by statutory law the further abuse of our rivers as a place of deposit for earth material that could in any way impair the navigation of our waters or imperil the property of our people.

Resolved, In view of the fact that hydraulic mining has already destroyed much valuable property in this county, and a large portion of that remaining is in imminent danger from the same cause, that we recognize the important service of the Board of Supervisors in bringing this matter before the courts, and look forward to a speedy and impartial decision.

Resolved, That we deprecate the necessity of litigation, but delay means increased danger and loss of property without a hope of adequate compensation. That we recognize in the Attorney-General of this State a true and conservative officer, and fully endorse his course in bringing the suit now pending between this county and the Gold Run mining company, and desire, without necessary delay, a decision from the courts of this State for the protection of our property, now being menaced and destroyed by others.

### Shall We Live Again?

[Read before Temescal Grange by J. V. Webster, and published by request of the Grange.]

O Horatio,

I have been troubled with a thought  
So weird and full of mental doubt,  
That in its grasp my soul is shrivelled up,  
And all my frosty locks are set on end.

Like a lone sailor

Sounding the depths of an unknown sea,  
With lead and line too light and short  
To reach the solid bottom,  
I have vainly endeavored  
To probe the depths of eternity.  
Hope has hung her shining mantle  
On the crumbling brink of death,  
And heinous men to seek the truth,  
Wrapped in doubt and mystery beyond.  
At times I seem to wonder to myself,  
And with anxious heart I feel around  
For evidence of what I am,  
Like one groping in the dark.

The Christian's hope is based upon belief,  
Confirmed to him by change of heart;  
While Swedenborg's disciples tell  
That, through the visions of the mind,  
They have beheld the conscious forms  
Of loved ones counted lost,  
And with them held communion.  
Word for word and face to face.

But then defective mortal sight,  
Looking through imagination's lens,  
Is so uncertain and so oft deceived,  
That, like a rainbow's shining curls  
When reached, melt alone remains.  
From gloomy chambers of the skeptic's mind,  
Like slimy serpents of a hideous mold,  
Crawls out the dark, cold thought  
That "death is an eternal sleep."  
While the scouter and the babbling fool,  
In their conceit, declare there is no God.  
Can it be, good Horatio,  
That these men divine the truth?  
That the soul is but a black opinion,  
And that annihilation stands  
Aghast the gaping door of death?

If this be so,  
Then, farewell, hope and ruined hopes!  
Farewell, reward for well doing;  
And let the longing, thirsting heart  
Feed upon its cup of bitterness.  
If death is an eternal sleep,  
Life in its vastness, pathless way,  
Is like the tollsome, footsore journey  
Of a weary, hopeless traveler,  
Climbing the heights of a frozen mountain,  
To look beyond on desolation!

No, my friend, it cannot be.  
The brute cat to satiate and is content:  
The birds have no thought but song,  
And for their chirping nestlings;  
While man, with luxury surrounded,  
With every temporal want supplied,  
Sighs and pines for something  
Beyond the reach of mortal life.  
The contemplative sage in solitude,  
And the hurly, tattooed bushman  
Running naked through the world,  
Draw their highest inspiration  
From the same fond, joyous source.  
The innate hope of a hereafter.

How can it be thus, Horatio,  
If there was not a purpose, a design,  
In the make-up of creation?  
If God has so ordained it that the  
Hopes and longings for a higher life  
Are part and parcel of our being,  
And has not made its counterpart—  
A rest, a respite, beyond ourselves  
Then the crowning glory of His work  
Is but a life-consuming fire,  
Wherein the Divinity within us  
Is turned to dust and ashes.

#### THE GRANGERS' ENTERPRISE AT PORT COSTA.

The work for the Grangers' Business Association in the construction of their new wharf and warehouses at Port Costa is going forward at a rapid rate. Fifty men and three pile drivers are employed, and as the construction is by "day's work," it is being done in a most thorough and substantial manner, under the direction of an experienced railroad contractor. The Grangers' Association believes it will have the best and most convenient wharf and shipping establishment along the bay shore. Three tracks with requisite switches are now being laid. They are now ready to receive and care for grain sent down by barge, and expect to be ready to receive by rail by September 10th. There are already 2,000 tons of grain on their wharf, and they expect as much more within 10 days. Secretary Adams assures us that the work is going forward to completion in an encouraging manner and promises to be of immediate and important advantage to grain growers and all concerned in the trade.

A GRANGE VISIT.—A "big majority" of Temescal Grange suddenly took possession of the nice and cozy home of Bro. P. H. McGrew (of State Executive Committee), in East Oakland, on Wednesday evening of last week. Sieter McGrew was truly and agreeably surprised, and a most enjoyable time was had. Feasting lasted till past 12 o'clock, and we understand that dancing went joyfully on much later.

### Meeting of California State Grange.

EDITORS PRESS:—The California State Grange will hold its next annual meeting at Santa Rosa on the first Tuesday in October next.

Santa Rosa Grange has been buying its committees with preparations for that event. At its meeting on Saturday last the committees reported that arrangements had been effected with the hotels in the place, and with the railroad company, which, it is thought, will be abundantly satisfactory to all members who do themselves the honor of attending the meeting of the State Grange. Let me assure them that no pains will be spared by the resident members to make the meeting a pleasant one to those who come from abroad.

S. T. COULTER.

Santa Rosa, August 15th.

THE publication of the delinquent sale list of the Grangers' Business Association (which was received in time for a portion of our edition only, last week), has been further delayed.

At the last meeting of Temescal Grange, the Committee on Free Produce Market in Oakland reported progress. A petition, with 40 names signed, was received from Walnut Creek Grange.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### AMADOR.

SILK CULTURE.—*Dispatch*: We do not deem it amies to again call attention to the experiment of Mr. J. A. Garbarini in the culture of silk, a few miles above Jackson. He has demonstrated a doubt that the climate and facilities of this county are as well adapted to this branch of industry as any other part of the world. He says that the samples of silk which he has already reeled with one of his own home-constructed machines, are of as high quality as any he ever saw in Italy or France. Our soil and climate are just suited to the culture of the best quality of mulberry trees, and the worms are as thrifty as though they were a native insect. Thus far the matter has been merely experimental; but a thorough test of five years has convinced Mr. Garbarini that there is no place on earth better adapted to this industry than this part of Amador county and in consequence thereof has planted a large number of imported mulberry seedlings; and, in view of these facts, we would call the attention of some enterprising capitalist to a fine opening to invest his capital in establishing a silk factory at or near Jackson. If none others will venture the enterprise we would like to see a local company formed who could carry the experiment to a final success. Mr. Garbarini intends to take some of his cocoons and reel to the State fair next month, and make a public exhibition of Amador county's experimental culture of silk.

#### COLUSA.

FINE FRUIT.—*Sun*, August 13: About the finest looking fruit, and certainly the finest flavored we have ever seen this year came to us with the compliments of A. R. Kelsey, of Bear valley. The box contained several varieties of peaches, two of plums, and several very fine apples. In a note Mr. Kelsey says he did not end it claiming it to be the largest and best fruit in the county, but only as a sample of what can be grown on land which a short time ago was considered fit only to graze long-horned Spanish cattle or mustang horses. We remember well when Mr. Kelsey first settled in Bear valley, some 13 years ago, it was thought that the land would not grow wheat or barley, and if one should have talked of such fruit as Mr. Kelsey sends he would have been set down as a lunatic. But there were those who concluded to try it, and a magnificent success is the result. Mr. Kelsey has some 700 trees in his orchard, consisting of apples, peaches, pears, apricots, plums, nectarines, almonds, oranges, etc., etc., and has demonstrated that there is as fine fruit land in Bear valley as there is in this State.

THE ASH FIRE.—On Friday, of last week, the heaviest fire this county has had in a grain field for several years, broke out on the farm of Wm. Ash, near Berlin. Some 40 or odd stacks of wheat were burned before it could be checked. Of course, all the men for several miles around congregated there to fight the fire. Some of those who were present and saw the ground burned, put the loss as high as \$12,000, but Mr. Ash places it at about \$7,000. During the fire, in plowing ahead of it, a fine mare got tangled in the harness, fell and broke her leg so badly as to have to be shot. Mr. Ash seems to feel this worse than the loss of the wheat. The fire caught at noon and probably from a cigarette. An incessant smoker of cigarettes was driving along the road and the fire caught just behind him. S. B. Greenleaf happened along just as it sprung up but could not succeed in extinguishing it before it got too great a start. There should be a law making it a misdemeanor to smoke during the harvest season while passing along wheat fields. There are so many men who thoughtlessly throw away the end of a cigar or cigarette, that the practice is an exceedingly dangerous one. There was no insurance on the property lost. As it was on rented land of Schutz & Mccassell, they lose one-fourth.

### MENDOCINO.

SCARCITY OF SHEEP.—*Ukiah Press*, Aug. 12: Sheep are very scarce this year, and the demand is unusual. Consequently, prices are high. Large numbers have been driven into the Territories from the southern counties, which have heretofore held a surplus, so that supplies are cut off from there. F. O. Towneend and Judge McGarvey traveled through Fresno and adjoining counties, and found miles of former sheep ranges teeming with wheat, and not a mutton visible where thousands roamed a few years ago.

UKIAH WOOL WAREHOUSE.—Messrs. Crawford & Fandl have at length completed their arrangements, and announce the opening of a warehouse in Ukiah, where wool will be received for storage or shipment, or sold on commission.

### NAPA.

WOOL PRESSING.—*Register*: At 11 o'clock Wednesday the first bale of wool was turned out of a new wool press at Sawyer & Co.'s tannery. The press is one of Gove's patent railroad pressure. It is 20 ft. high, 8 ft. long, 3 ft. and 6 inches wide, has a rise of 7 ft. and 8 inches, and presses a bale of wool weighing 530 lbs. into a space 3 ft. and 9 inches long, 24 inches wide and 20 inches in depth. It stops itself when up and has an indicator to show the position of the follower in the press. The press when put together weighs five tons. J. H. Gove, the patentee, superintends the construction, which, in this case, has taken one week. The press turns out a bale firmly bound in two and a half minutes. It is run by a crew which is driven by a 30-horse-power engine. The screw is capable of resisting 1,500 lbs. to the square inch. The total cost of the machine is about \$1,350.

TILE MAKING.—About a year ago Messrs. W. B. Dennison & Son, of the Napa pottery, commenced the manufacture of drain tile, and last fall sold \$3,000 worth of it in this and Sonoma valleys. During the winter work in this line was suspended, but when spring opened the firm made some improvements, put in new machinery and added a 10-horse-power engine to their works. They have had a struggle in getting themselves established, want of much needed capital being among the obstacles they have had to meet and overcome; but with the continued patronage of farmers and vineyardists in this district they will pull through, and Napa valley will have a manufacturing establishment within her borders that will add to her taxable property and her consequent wealth and business thrift.

### NEVADA.

HORTICULTURAL COMMISSION.—*Transcript*, Aug. 11: Tuesday the Horticultural Board of Nevada county, met at the City Hall in this city for the purpose of organizing and putting in motion the machinery for their work. On motion of Mr. Hatch, Mr. Gillet was elected Chairman, and Mr. Barker Secretary. It was decided by lot that Mr. Gillet should serve three years; Mr. Barker two years; and Mr. Hatch one year. The county was then divided into three districts as follows: District No. 1: Grass Valley and Little York townships, Chas. Barker, commissioner. District No. 2: Rough and Ready and Bridgeport townships, H. L. Hatch, commissioner. District No. 3: Nevada, Bloomfield, Washington, Enreka and Meadow Lake townships, Felix Gillet, commissioner. Rules and regulations were adopted, and on motion it was ordered that 2,000 copies of the rules, address to fruit growers, and Section 2, of the Horticultural Act be printed for distribution; also 1,000 one-cent envelopes be procured for use of commission; also 300 blank envelopes. It was ordered that all the envelopes be printed on the upper left-hand corner with the following: "Horticultural Board of Nevada county." On motion, the Board adjourned to meet at the call of the Chairman.

### SANTA CLARA.

SILK.—*San Jose Mercury*: The Pacific Silk Manufacturing Company set their weaving apparatus in motion yesterday, and turned out their first web of fabric—a piece of six or eight yards of the best quality of black silk. They have as yet but one loom put up. It was made by Mr. Alfred Saufrignon, the treasurer and engineer of the company. The company is composed of J. Saufrignon, President; Xavier Van de Castele, Vice-President; Alfred Saufrignon, Treasurer and Engineer; G. Hermann, Manager. Mr. Alfred Saufrignon was a professor at Santa Clara College, and resigned the position in order to devote his entire attention to the new enterprise. The manufactory is situated at the corner of Delmas avenue and San Salvador street. Other looms have been ordered from the East, and will soon arrive. There were none to be had on this coast. The enterprise was started as a joint stock company, with shares at \$5 each. The gentlemen whose names are given above, all possess liberal means, and deeming that the concern could be managed to a better advantage in the hands of a few, bought up the stock and are now sole owners.

### SANTA CRUZ.

STRAW AGITATOR AND GRAIN SAVER.—*Pajaronian*, Aug. 13: N. McLean has invented a grain-saving attachment for threshing machines. It consists of three beaters, situated near the end of the straw carrier, and worked by a two-inch belt. The beaters, being constantly in motion, beat upon the straw as it passes over the carrier. The long straw is carried over, and the shorter straw, chaff and grain fall down on a sieve, which, by means of a crank, is kept in steady motion from side to side. The grain falls



through the sieve into a semi-cylindrical box, and the chaff and straw work over the sieve and fall to the ground. In the apartment in which the grain falls, works a "worm," which forces the grain out into a chute, down which it passes into the main elevator, and from thence is carried in on to the shoes, and the grain passes finally, with the other grain, out the grain chute. The attachment is simple, small and compact, and works easily. The beaters extend across the carriers, and though apparently weak and small, do their work effectually. While we were watching the attachment, Charles Knapp and the writer fastened a sack into a slide of the chute down which the saved grain passes, and in 10 minutes saved a bag full of fine straw, chaff and wheat. Afterward the mass was cleaned, and the result was six pounds of wheat—wheat which without the use of this attachment would have gone over into the straw pile. Six pounds of wheat in 10 minutes is the lowest saving yet made with this attachment, and twice that quantity of barley or oats has been and can be saved, the machines' loss on those grains being greater than on wheat.

#### SHASTA.

**FRUIT.**—Redding Independent, Aug. 12: Some specimens of fruit brought us this week by Dr. J. F. Winsell, of Battle creek, show conclusively that Shasta county can produce as fine if not finer fruit than any place in the State. Among the samples, which include some apples and peaches as large and well-flavored as any we have seen, are some fine specimens of the Prune d'Agen, or French prune, which the Doctor thinks will prove a valuable variety to cultivate for profit. We are thoroughly convinced that Shasta county will soon take her place among the first fruit-producing counties in the State.

#### SOLANO.

**GRAPE PRICES.**—Dixon Tribune, Aug. 13: Some persons supposed that we must have been in error last week in saying grapes had been sold in quantity at Vacaville at \$100 a ton. It is literally a fact, nevertheless. Of course that extremely high figure was only for the earliest and best, and which were bought to ship East. But though the price has already fallen from the highest figures, it is certain to continue good throughout the season, and \$40 or \$50 a ton will be only a fair price for the finest quality. Dr. Wells has been offered \$40 a ton for the whole yield of his vineyard, while G. G. Briggs, according to the Suisun Republican, has contracted to deliver 1,000 tons at Davisville for \$55 a ton. Mildew has spoiled a good many grapes in this vicinity, which may be one thing that contributes to the high prices. Farmers who dug up their vines a few years ago, thinking there would never be any money in them, may well wish now that they had them back again. The vineyards that were destroyed must have amounted to several hundred acres in this immediate vicinity.

**GRAPE-CRUSHING MACHINERY.**—Vallejo Chronicle: Mr. John Heald of Vallejo has just completed and added some fine improvements to his already famous grape crusher and stemmer. A trial run was made before a number of friends and invited guests Friday, which proved at once and conclusively what admirable perfection this machine has been brought to. The thorough manner in which it performed its work, together with its speed, called forth ejaculations of surprise and satisfaction from each of the astonished beholders of the wonderful feats they had witnessed. The trial was made with all the grapes that could be got hold of; these were stemmed and crushed at the unprecedented rate of 20 tons an hour. The stemmer, by means of late improvements introduced, does its work cleaner and more thoroughly than if the stems were taken off by hand; this, too, is performed at the extraordinary rate of 20 tons per hour. Another great advantage the new improvements give to this machine is, it now takes out about 50% more of the must from the pomace than could possibly be done before by this or any other process. The advantage to the wine grower is very apparent, as he is thus enabled to get a far larger percentage of white wine, besides saving much of the labor of pressing, the pomace being left in a drier and altogether better condition for the press.

#### SONOMA.

**BANK PROTECTOR.**—Healdsburg Flag: A. M. Baker, of the Island Gardens on Upper Dry creek, has not only succeeded in saving his banks, but actually in reclaiming a barren waste of gravel which is now blossoming like a rose as part of his fields. It is done by weaving willow, or willow with other branches, against the bank, one overlapping the other, and all pinned to the bank with stout stakes as firmly as possible. The waters rise, gravel at once accumulates and binds the boughs, in time the willows grow, dead water is formed and the gravel bars buried in sediment and reclaimed.

**SHIPMENT OF PEACHES TO SAN FRANCISCO.**—At last, owing to big prices at the bay for choice peaches, it has become possible to ship this kind of fruit to San Francisco, and W. N. Gladden is doing so. He has disposed of his crop at \$40 per ton, delivered at the railroad depot here, and also receives same price for plums; \$50 for Coe's Golden Drop and Yellow Egg. Mr. Gladden regards these fruits as more profitable than grapes, and we propose to give his demonstration in a future issue.

**SCARCITY OF BEEF CATTLE.**—Petaluma Courier, Aug. 12: A large stock dealer of this city informs us that there are no beef cattle of any consequence anywhere on the coast, from San

Francisco bay to Oregon. With warehouses full to overflowing with grain, and no remunerative market for it, and an abundance of hay and other kinds of feed all through the country, it is no compliment to the sagacity of our farmers and stock raisers, that butchers have to look to Nevada and other outside places for a fall and winter's supply of beef. Were it not for the old cows which butchers throughout the country have been killing for two months past, beef would be very scarce and high. Sonoma is one of the best stock counties in the State. The grass and crops never fail on account of the drouth, nor from any other cause, and cattle, horses, sheep and hogs keep very healthy and do remarkably well. The climate is not severe, and most seasons stock run out upon the ranges all winter. The land properly cultivated will produce an abundance of all kinds of feed. With such advantages it does seem to us that it would pay every farmer to raise and fatten each year a few cattle, horses, hogs or sheep for market. Such a course would keep up their lands and furnish them a market at home for almost everything they could raise.

**GIVE YOUR TREES ROOM.**—Mr. J. W. Cassidy, who has been engaged extensively in fruit raising here for the last twenty years, gives us his experience as to the proper distance from each other, fruit trees and vines should be planted. He says, when I first set out my orchard I set out my trees 16½ ft. apart each way. After the trees came to maturity the fruit began to deteriorate; it was not so good nor abundant and the trees became more or less diseased. Five years ago I began to thin my apple orchard by taking out one half of the trees alternate in the rows so as to give them a space of 33 by 28 ft. The first year after making the change I did not perceive any difference, but the second year I got more than double the quantity of fruit that I formerly had from the same ground with all the trees standing, and of better quality. And the increase on the yield has been continued since and my trees 50% healthier and in better condition every way. It is my judgment that standard pear and apple trees should not stand nearer than 33 ft. apart each way after they get to be 15 years old. Other kinds of fruit trees should be planted from 20 to 30 ft. apart. I had about the same experience with my vineyard. I first set out my vines six ft. apart each way. After the vines became about 12 years old the fruit was of inferior quality and the yield small. I then commenced thinning them by digging up every third row, finally I dug up three-fourths of them until I made them stand 18 by 6 ft. apart. Now for the result: About the second year after thinning out, I picked 800 30-pound boxes of as fine grapes as can be raised anywhere in Sonoma county, on ground that formerly yielded but 200 boxes of fruit of an inferior quality. The fruit of one vineyard adjoining mine, set out and standing in the old way, was so inferior and so little of it that it was not gathered. And another vineyard also adjoining mine and of about the same number of vines that I originally had, did not produce over 100 boxes of inferior fruit. Since then the owner of the latter vineyard has been thinning out his vines, and the improvement in the yield and quality of his grapes has been remarkable.

#### TULARE.

**THE RAIN.**—Delta, Aug. 12: About 2 o'clock last Sunday morning there was a slight rainfall in Visalia, and again on Sunday afternoon, though in neither case was it appreciable. The weather was cloudy and very sultry during both days, and created the general impression that an earthquake was imminent. Reports from the mountains and foothills show that there was a heavy rainstorm Saturday afternoon. The grain fields escaped damage, as the light sprinkle in the valley was not harmful. The creeks and ditches were generally swollen near the foothills, but the parched condition of the plains prevented an appreciable rise in the valley. A cloud-burst and heavy rainfall occurred along the upper Kaweah and Kings river. As a result of this sudden storm, the Kaweah arose between two and three ft. in two hours, at a point opposite Clotfelter's, and Kings river rose more than two ft. These streams fell as rapidly as they rose. Cross creek ran to such a depth for a time, that Lake-side ditch was well filled by it last Tuesday. Such phenomena are among our rarest in mid summer.

**LARGEST PEACH YET.**—Mr. Alex. Taylor, whose ranch is on the county road from Hanford to Visalia, and about five miles northeast of Hanford, has placed on the editorial table of the Mussel Slough Delta the largest of the many large peaches brought to Hanford from the young orchards around it and Grazeville. It was a white cling. It measured, in circumference, 11 5-16 inches, and weighed full 13 ounces. It and two others weighed in all 32½ ounces. These fine peaches grow on trees about five years old.

**THE BENTON, MONTANA.**—Record says: It has recently come to light that some 17 Nez Perces were massacred by the Sioux, under Sitting Bull, in the north, a month or six weeks ago. It will be remembered that after the surrender of the Nez Perces to Gen. Miles in the Bear Paw mountains, in 1877, that a fragment of the band escaped, fled across the boundary line and associated themselves with Sitting Bull's band. These massacred Nez Perces were the remnant of these fugitives.

#### News in Brief.

**THE Monterey Whaling Company** will begin operations on the 1st of September.

**WAGON** loads of immigrants from Missouri and Kansas are daily arriving in Baker City, Or.

**A NEW TOWN** has been established above Lovelock's, Butte county, and is named Junction.

**THE Carson Mint** will not start before the 1st of October. They are busy building the new refinery.

**AN Atlanta (Ga.) dispatch** says the General Assembly has defeated the Temperance bill—20 to 19.

**CLAUS SPRECKLES** of San Francisco purchased a large band of mules near Chico for shipment to the Sandwich Islands.

**BEFORE** snow comes, says the Republican, Truckee will again be on its feet, so to speak, and pursue even the tenor of its way.

**LARGE** numbers of Indians are in the Mogollon mountains, Arizona, and the timber is afire in all directions. The grass is all burnt and cattle are in a bad fix.

**AN** unsuccessful attempt was made to wreck an excursion train having on board 550 men, women and children, by laying ties across the track near San Antonio, Texas.

**AN** American missionary, after an interview with General Iguatieff, Minister of the Interior, obtained from him an order directing the authorities of the Caucasus to grant him facilities for pursuing his labors.

**ABOVE** 10,000 troops have signified their intention to be present at the Yorktown celebration. It is believed that the militia alone to take part in the celebration will exceed 30,000. Many States will send full regiments.

**IT** is reported that the Vatican insists upon the abolition of the tribunal for a trial of ecclesiastical cases, as a preliminary condition of yielding upon the question of notifying the Prussian government of clerical appointments hereafter.

**THE** Bannock and Shoshone Indians have consented to provide for the occupation by the Utah and Northern Railroad Company of a strip of land across their reservation, amounting in the aggregate to 772 acres. For this the Indians receive \$6,000.

**AT** Yaquina bay the railway is laid, and cars built, and they will commence next week to lay stone on the breakwater. The large wharf has been thoroughly stanchioned and braced, previous to landing the rock. There is about \$9,000 yet to be expended.

**AT** Tom Hughes' Colony at Ragby, Tenn., two deaths occurred on Saturday, and there are 20 well-defined cases of typhoid fever from bad drainage and water. The settlement has a population of 400. A corps of doctors and nurses have been forwarded.

**THE** Division Superintendents of the United States Railway Service met in Washington recently, to discuss the question of providing some method for heating postal cars in winter that will not endanger the burning of the car in case of accident to the train.

**JACOB BLINN** and Jacob Rich, two old Shasta county pioneers, have resided and been partners on Long gulch for the last 27 years. Last Monday Blinn committed suicide by shooting himself with a rifle. He was about 56 years old, and his partner was past 73.

#### The Value of the Press to Beginners in Agriculture.

**EDITORS PRESS:**—I wish you would hint to the rich men who have the welfare and development of the State at heart that they might do a good work by distributing the RURAL PRESS among the settlers on government lands. There are many such in Lake county who are too poor to pay for the paper and it would be a boon to many poor settlers on these mountain ranches who are too poor and inexperienced to try experiments. If they could have the RURAL PRESS it would be of great benefit and encouragement to them. I have found it of the greatest benefit and if I were better off these would be a great many more copies of the PRESS coming to this county.

L. R.  
Lake county, Cal.

**DEVON HERD BOOK.**—The progress of fine stock breeding in the United States is seen in the number of herd books now published in this country. Nearly all of the leading English breeds are represented and some from the continent as well. The latest to fall in line are the Devon breeders. We learn from an Eastern exchange that the first volume of the American Devon Record has been issued by the editor, James Buckingham, Zanesville, Ohio. It is described as a handsomely gotten up volume of 1,068 pages, and printed on fine paper. In the book is a history of Devons, by J. Tanner Davy, editor of the English Devon Herd Book, and also a history of Devons in America, with the names of persons who made importations into this country. The bulls recorded are 1,268 in number, both imported and those bred here. The cows are numbered the same as the bulls and comprise 2,736 pedigrees. The Kentucky Live Stock Record says: "Taken as a whole the work is admirably done and reflects credit on the editor; and should be in the hands of every breeder of Devons in the country." There are some Devon breeders on this coast to whom this item will be of interest.

#### Silk Exhibits at the Mechanics' Fair.

In view of the new life which silk culture is assuming in this State, and it is worthy of note that the exhibits of silk, winding appliances and silk products are very rich in this year's Mechanics' fair. First are the handsome and well-filled cases of Joseph Neumann, a pioneer in California silk culture and manufacture. His position is on the main floor, near the musicians' stand. His exhibit is an unusually large one, occupying one elevated glass stand and a glass case. Both in variety and quantity of cocoons and raw silk, the display is remarkably good, and reflects great credit upon the exhibitor for the care, perseverance and expense he has gone to in endeavoring to build up this industry in California. Several pyramids representing the silkworms spinning their cocoons are shown, besides over 20 cases of cocoons, all raised in this State. These latter represent many different varieties, from the smallest up to the full size of the French Annual. The specimens of raw silk exhibited are very fine, and establish, as clearly as it is possible to do, in that the silk manufactured from the worm bred in this State is, in its raw condition, equal to that of any country in the world. Mr. Neumann, through his own unaided individual efforts, has done much to establish this, and he is deserving of every praise for it. Interspersed among his exhibits are the different medals (nine in all) that have been awarded his exhibits in other places and countries, the whole constituting a well-arranged display of silkworm productions and the marks of appreciation extended toward them by others.

The two other exhibits of silk may be found adjoining each other in the east gallery. One of these is by the California Silk Culture Association, which is the name chosen by a large number of energetic and public-spirited ladies for their society, which is now the most active agency in awaking new interest in silk culture. The society has already enlisted a large number of ladies in different parts of the State in sericultural experiments, and the results thus far obtained are very encouraging. The exhibit of the Silk Culture Association is very comprehensive. It contains first, a collection of wild silkworm moths from India and China, as also a number of the ordinary kinds. They are the property of Dr. Behr, of this city. In cocoons, the finest exhibit is that made by Mrs. S. A. Sellers, of Antioch. It is made under the auspices of the association, and comprises the following different varieties, all of California growth: French Annual, Japanese Annual and Bivoltines. The French Annual cocoons are considered the best, for manufacture, being also the largest. The Bivoltines, or, as the name signifies, bi-annuals, are the smallest varieties. In addition to the cocoons, Mrs. Sellers exhibits a lot in different colors of reeled raw and floss silk, together with a number of silkworm eggs and moths. The display is a very complete one, occupying one entire large case, and would do credit to any exhibition in the world. The other exhibitors in the stall of the California Silk Culture Association are Mrs. Keeney and Mrs. McLean, of San Rafael, Mrs. Dodson, of Red Bluff, Mrs. James G. Whitney, San Francisco, Mrs. F. Dennis, Sutter Creek, and Mr. Bettelheim, of Antioch. The newly invented frame for silkworms to wind cocoons, the idea of Felix Gillett, of Nevada City, is worthy of notice, as are two very fine specimens of the California wild silkworm moth. It is stated that a very similar kind of moth to the California one is found in some portions of Tartary, and that the people make from it a rough silk cloth that gives unending wear. Garments made from it have been handed down by the Tartars from generation to generation, from time immemorial. Mrs. T. H. Hittell, the indefatigable Secretary of the California Silk Culture Association, has some interesting old German illustrated works treating of the silkworm and silk culture, and Miss Mary Wackerreuder, of San Bruno, has a very pretty imitation in wax of the mulberry tree, and the silkworms feeding. The operation of reeling the silk from the cocoons may be seen on Wednesday and Saturday afternoons.

One of the most striking displays in the pavilion is that of the California Silk Manufacturing Co., of this city. It consists of a large upright glass case filled with silk manufactures, chiefly spool silk. There is an architectural method of showing this spool silk, which shows much skill, and presents a charming effect. An excellent imitation of the State Capitol, at Sacramento, and the steps approaching thereto, and the lawns approaching it are all made of silk manufacture. The building is wholly of spools of selected colors, and embracing all kinds of silk thread. This exhibit should be sought for by all who visit the fair.

**HENRY HOWGATE**, Disbursing Officer of the Signal Service, was arrested at Mt. Clemens, Michigan, for embezzling \$40,000 from the Government by means of fraudulent vouchers. He waived preliminary examination and left for Washington with the officer. He says he can explain the discrepancy.

**THE** Gila river is now so high as to require the use of boats in crossing. It is said that about 12 years ago the mail-carrier from Maricopa got caught between the Gila and Salt rivers, and was unable to cross for six weeks, so that the people at Fort McDowell were kept without mails for that length of time.





### Woman's Mission.

To uplift,  
Purify and confirm by its own gracious gift,  
The world, in despite of the world's dull endeavor  
To degrade, and drag down, and oppose it forever.  
The mission of genius: to watch, and to wait,  
To renew, to redeem, and to regenerate.  
The mission of woman on earth! to give birth  
To the mercy of Heaven descending on earth.  
The mission of woman; permitted to bruise  
The head of the serpent, and sweetly infuse,  
Through the sorrow and sin of earth's registered curse,  
The blessing which mitigates all; born to nurse,  
And to soothe, and to solace, and to help and to heal  
The sick world that leans on her.

—Owen Meredith.

### A Chapter for Husbands.

Never was a young wife happier and more disposed to be pleased with her new home than the little woman whom Philip Birney, one bright, sunny morning, introduced as mistress of the plain brown house that stood at the entrance of the village of Redfield.

"It is capable of being made a lovely little place," she observed to her husband, after a quick survey of the yard, fence and exterior generally. "A bonesuckle trained over that window, and a coat of paint on the portico, would help it wonderfully. Oh! Phil, I shall take such pleasure in making our home attractive and pretty! I have an old white dimity dress that belonged to mother—made before they gored the skirts, you know,—and I mean to make curtains out of it for the up-stairs chambers."

"Don't be tearing up your clothes, Kate, to furnish the house. I'm afraid there wouldn't be much economy in that," was Philip's laughing reply as he led the way into the house.

Kate flitted from one room to another, chatting gaily of her plans as she found something desirable and convenient in each apartment—a cosy corner here to sew in, a well-placed shelf there, that cupboard for the dishes, and this one for the table linen—to all of which her husband listened with a pleased smile.

"Yes, I shall so much enjoy keeping it tidy and orderly," she said again and again, as the tour of the rooms was finished. And the next day the pretty bride began housekeeping in earnest. The furniture was cheap and plain, but it was marvelous how cherry the rooms looked after Kate, with a few graceful touches, had disposed of numerous small ornamental articles taken from her trunk, which her nimble fingers had fashioned before leaving the home roof. It was wonderful, too, how much that trunk contained. Almost every day Philip was called on to admire some new thing brought up from its depths to add brightness and beauty to the little house, until it became quite a matter of course to inquire, whenever a new tin pan or other kitchen utensil was added to their stock, if it, too, came out of the trunk.

As time sped by, our young housekeeper found full occupation for hands and heart, and although her increasing household duties, and the charge of the little ones that were born to them, left their traces on her pale face and bowed shoulders, she lost none of the enthusiasm and genuine delight in keeping the house neat and pretty, which had characterized the beginning of her wifely career. The lawn was dotted with shrubbery, planted and cared for by her own hands. The well-kept strawberry patch, the thrifty grape vines and choice young fruits were also the result of her industry, unaided save by the occasional help of the little ones who were far oftener a hindrance than an assistance. And all this had been accomplished at a disadvantage, for Mr. Birney was a man who cared little for these things, or at least did not value them at their real worth. He relished the fine cherries and berries that added so much to their bill of fare during the season of fruit, quite as much as any one, but he had only a vague idea of the labor and care they cost his wife. He enjoyed coming home in the evening to his clean, orderly domicile, where he knew always that a palatable meal awaited him; he realized dimly that the dooryard, with its borders of sweet alyssum and bright phlox, was one of the prettiest sights in the village, but he accepted it all as a matter of course.

His wife was a model woman in his eyes, and when he sometimes noticed, as the truth does force itself on every mind, that she looked care-worn and too old for her years, it never occurred to him that a little thoughtfulness on his part would ease her many weary steps. He had not learned that lesson so many husbands need to learn, that by exercising a little care, a wife's labors may be materially lightened.

Philip Birney would have resented the imputation fiercely, had any one said he was cruel to poor Kate, and yet the habit of carrying in a rim of mud on his boots, to be ground into the sitting-room carpet, for his weak-backed wife to sweep out again, deserved no milder term.

A hat-rack was a part of the hall furniture, but so far as Mr. Birney was concerned it might

as well have been in Jamaica. A coat thrown over the back of a chair, or a hat tossed on the floor was the invariable rule with the head of the house, and the fact that the orderly Kate would immediately leave her work to put them in their proper places, did not cause Mr. Birney to mend his ways.

"Oh, Philip, how could you?" she said one day on returning from a visit, and finding her husband had been making his toilet in the parlor, leaving as a delicate souvenir of his presence, his soiled linen and a pair of socks in the middle of the floor. "Did this room look this way when Mrs. Jamison was here? The children told me she called this afternoon while I was gone."

"Oh, I give you my word for it, Mrs. Jamison never saw those clothes. She only staid a few minutes, and she looked out of the window all the time," said Mr. Birney, half reluctantly, when he saw how distressed his wife was at his carelessness.

"Of course she saw them; let a woman alone for that," sobbed the poor wife, utterly broken down with the thought that a stranger had witnessed the disorder, "and what a dreadful opinion she will have of me."

"But it wasn't your doings, Kate. Of course she would understand that," eagerly put in Mr. Birney, anxious to say something consoling.

"No, no; that wouldn't make any difference; a woman always gets the blame if her house is disorderly," answered Mrs. Birney, mournfully shaking her head. "And it isn't pleasant when one has worked hard to have things neat and clean, to have strangers get the impression that one is a sloven."

"You are nervous to-day," said Mr. Birney, all at once comprehending that his wife did not look well. "Does your head ache?"

"Oh! I ache all over; I'm clear tired out," she replied, wearily, putting her hands to her throbbing temples.

"You must go to bed right away, and I will go for Dr. Carson," said the now alarmed husband, almost carrying her in his arms as he laid her on her own bed.

In the long, dreary weeks that followed while the sick woman lay prostrate, the husband had ample time to discover that his own want of thought and blindness to her failing strength had largely contributed to her illness. The hats and coats were allowed to lie undisturbed now where he happened to throw them; the dust was left unmolested on the furniture, and had it not been that Mr. Birney's thoughts were so much occupied with his wife's recovery, the dirt and disorder prevailing in the once tidy household would have been intolerable. A rattling, noisy girl, wholly untrained in domestic duties, had been employed to do the work for the family during Mrs. Birney's illness, and with her crude ideas of cleanliness and indifference to her employer's interests, the whole home atmosphere seemed changed. The children, knowing no motherly restraint, ran wild, with unkempt hair and dirty frocks, from morning till night, presenting so different an appearance that the poor invalid herself scarcely recognized them when they were permitted occasionally to visit the sick chamber—the whole eadly-transformed household being a forcible answer to the question in the old song, "What is home without a mother?"

"La, sakes! Where on airth did so many flies come from?" one day queried Mrs. Clayson, a kind old lady living in the neighborhood, who often came to relieve Mr. Birney by sitting a few hours with his wife, while he attended to his outside duties.

"I've been fearful to keep the blinds down and the room cool and comfortable every time I've been here, and now here is the poor creature just about eaten up with flies that are a buzz in and out like a swarm o' bees," pursued the old lady as she went beating about the room with a fly brush, in the endeavor to get the troublesome creatures out. Going to the window and looking out, she started back, exclaiming, "Well, if that don't beat all. Somebody has gone and set an empty sugar bowl right under this very window, as sure as my name's Samantha Clayson, just to draw all the flies in this end of town and pester this sick woman's life out of her. Who could 'a done such a silly trick?"

Mr. Birney rushed from the room, and seizing the barrel, from which issued a cloud of flies at his approach, kicked it vigorously down to the bottom of the lot, soliloquizing as he went, "What a confounded fool I am, to set this barrel in that place! I declare, I ought to be flayed alive; just as if poor Kate hadn't had enough suffering and misery already!" Then, as the remembrance of the numberless daily inconsiderate acts of which he had been guilty, and of which his patient wife had been the victim, rose up before him, the unhappy man groaned aloud, "If Kate ever gets well, she shan't wash any more dirty petticoats for me. It's an awful mean job for a man to impose on any woman, and I might have saved her lots of scrubbing of oil cloths and washing of fenders if I'd been particular never to spit on 'em. I've sometimes thought she was a trifle too nice, but I see now how unhappy and miserable I'd be if I was compelled to live with a slatternly woman who hadn't pride enough to keep things tidy. Home wouldn't be home to me if Kate had been a dirty, careless woman like Norah. And yet, all these years I've been making labor for her by my confounded carelessness. I suppose it is a mortification, just as she says, to have strangers look on her as a careless and slovenly housekeeper, when she tries very hard to have things nice. Many's the time she's

lugged in heavy buckets of water when her back was aching terribly, while I've been sitting by, reading. She never could bear to see the yard littered up, and I shouldn't wonder if her sickness wasn't partly brought on by carrying those heavy planks that I'd been promising her for two months to take to the barn. I always intended to do it, but somehow I've forgotten, though I'd rather have got up out of bed at midnight and done it than let her strain her poor weak back by carrying 'em herself. That's the way it was with fixing up the ash hopper when she wanted to make soap. She asked me at least a dozen times to do it for her, but somehow I never got at it, and so at last she got discouraged and did it herself. When a man's got an ambitious, energetic wife who takes pride in her home and surroundings, he can't do her greater wrong than to throw cold water on her efforts and be a millstone in the way."

The approach of an old farmer friend living a short distance down the road, who stopped his horse at this moment to inquire after Mrs. Birney, put an end to the husband's bitter reflections.

"You have a nice place here," observed Farmer Doyle, as he glanced at the vines and rows of bushes in the yard at the rear of the house. "Your wife took a sight of comfort in cultivating this little patch of ground before she got sick. I neded to expect to see her nearly every time I passed in the morning just as regularly as I expected to see the house itself standing there. Sometimes she was digging around the vines and shrubs, and sometimes carrying basketfuls of earth, or maybe she would be working with her bees up there in the hives under the trees, or making new beds for her flowers, or trimming off the grass with her sickle. I used often to tell her it was too hard work for her to be bending over that way to cut the grass, but she never seemed to mind it particularly; I suppose it was just her energy and determination to have things complete that kept her up. Yes, you've got a nice place, Birney. It don't look much as it did when you moved here. I remember I used to think it would take a good deal of money to fix it up and make it salable, but here your wife's just gone ahead and, without any expense, has made it blossom as the rose, and to-day it would bring double as much as you paid for it. I tell you, neighbor Birney, just these little improvements that cost only labor and care, are the best investments a man can make and the kind that adds to the value of property more than costly buildings. I'd rather have your little home with its cheerful porch, covered with that Queen of the Prairie, and your shady front yard and choice small fruits, than Mr. Buckland's big, bald-looking house over there, with its mansard roof and colored glass, and not a vine or a flower to be seen, and weeds as high as a man's waist. If they had your improvements, it would be the most desirable place in this part of the country, but they've lived there seven years, and so far as I can see, they haven't much else but mustard stocks and burdock to show for it."

Every word that the farmer spoke in eulogy of his property was a stab to the conscience-smitten Birney, for he realized, what he had never done before, that to his stricken, suffering wife he was indebted for it all, and as he watched the retreating figure of Farmer Doyle as he rode away, he made a new resolution that if poor Kate was spared to him he would endeavor in future not to add to, but to save her every step he could. Let us hope that he kept his resolution.—Garry Owen Gaines, in Country Gentleman.

### Mountain Top Letters.—No. 16.

[Written for the RURAL PRESS by JEWELL.]

How many of your farmers' wives and girls know anything about rustic home decoration as a fine art, or, indeed, believe it easy to accomplish in their out-of-the-way farmhouses or mountain cabins? And yet the woods are filled with the most exquisite mosses, ferns and trailing vines, while the fields wave with lovely dry grasses and everlasting plants which, gathered and put in a wall basket, makes the sitting-room look more cheery; while the hanging up of branches of moss-covered boughs over pictures or doorways is a pleasant way of bringing the woods into our homes, and making us acquainted with the beauties of nature. Not until we begin to seek new varieties of mosses and lichens for home decoration, do we fully appreciate their great variety and truly exquisite growth. This season we have found two new varieties, one of which seems to be a fretted silver lace work, that covers the dead fir branches until they form a coronet to lay across a picture frame, in workmanship not possible to imitate. A lichen which grows like leather rosettes of all shades of wood-brown, is quite wonderful to contemplate, and grows upon our mountain oaks. Then the trailing dry mosses of pale green are in plenty, while the brilliant yellow color so abundant in the high Sierras, we find traces of here. My "gude mon" made some cornices for the lace curtains, of the madrone tree limbs—a pleasing orange color at this season—cut in the proper shape, and a few stray branches left sticking out, upon which he hung trailing moss, to hide the ropes which held them to the wall; very pretty they are, too. Then some pictures that had no frames (and everybody has some) he tacked to the wall and

made frames of different varieties of lichens and moss about them, and all admit that no black walnut or gilt frame can compare with them. A pair of deer antlers surmount the clock, with branches of oak over them entirely covered with mosses and lichens of five or more kinds.

Then there is such a variety of brilliant butterflies that are easily preserved to pin up among among your grasses and mosses, which add much to the decorations. A little later we will find charming bright sprays of poison oak, or ivy and many-tinted blackberry vines and grape vine, also, of brilliant hue, which, if dipped in melted white wax, will retain their shape and color for months, and keep one's rooms gay all winter. Pressed ferns, too, are a modest decoration. Two, of different colors, laid across one another upon a white wall, is very effective as a relief between pictures and brackets. The cost of these decorations is only a little time and labor, which would be a pleasure if all helped, and the "men folk" would find it quite as pleasant a task as the "women folk," and all would enjoy the pretty appearance of the rooms when done—more if each had contributed a share in the gathering and putting in place. More effort is needed in the cultivation of the esthetic nature of our farmers' boys and girls. So much rough work, and so continual, is very apt to dissatisfy those of finer natures with farm life, and make still coarser those who care little for beauty of surroundings. So it becomes a positive duty for the home makers to surround their growing sons and daughters with refining influences, and so teach an ardent love of the beautiful both in nature and art, always encouraging the little wees ones even to bring home every pretty flower, twig, moss or butterfly to pin or tuck up.

Choose such pictures as are of real merit to hang before their eyes, a simple wood engraving, cut from an illustrated paper, often being more worthy a place on your wall than many a highly-colored chromo of bad proportion or too gaudy in color, thus educating a critical eye while young.

One day, in a drive among the farmhouses of Santa Clara valley, we came upon a snug little cottage, surrounded by a young orchard, cornfield and melon patch, quite away from a traveled road. Though strangers, we made bold to stop and rest and ask for a glass of water. A most cordial invitation to come in and rest made us feel like accepting their hospitality, and we found the cool shade of the vine-covered piazza most grateful. They brought us refreshments, were polite, refined and intelligent, treating us as if old, expected friends. And all was so charming. The host, in his snowy shirt, clean pants and boots, looked more like a guest than the farmer. His wife, too, seemed quite at ease, in clean wrapper, rocking the year-old baby, instead of the usually overheated, tired mother, fresh from kitchen duties one expects to see. No city home could have been prettier; carpets, curtains, pictures, piano, and books and papers, showed that the farmer and wife were both capable of enjoying, and believed in having, a beautiful home with food for mind, soul, and body, too.

We thought they were, perhaps, independent farmers, who could afford to hire the rough work done, but we found it quite the contrary; only the love of cleanliness and order, and the cultivation of the beauty of farming brought about the sweet noon-day rest, or chat, or nap, or book, or song. The following summer, while visiting a friend in the town, the lady invited in to drive with us a young farmer, of whom she had been hying corn and melons; and lo! I beheld my ideal farmer once more. Though a stranger to her, his gentlemanly presence, and modest prices, had won him a rest and a dinner. Long may he live to set a living example of a beautiful farm life made possible!

Deer Ridge Farm, Aug. 9th.

THE AMENDE HONORABLE—From the proceedings of the Lime Kiln Club. Giveadarn Jones here secured the floor and stated that he desired to render justice to an innocent man who had been dwelling under a cloud of suspicion for the past week. It has been hinted around that the Hon. Burdock Cantalope, acting as janitor during the absence of Samuel Shinn at Long Branch, had embezzled a large sum of money. His account, as handed to the secretary, read as follows:

	1881
1 qt. oil.....	10
1 lamp wick.....	1
1 cup.....	6
Total.....	1,881 16

It appears from the above that the Hon. Cantalope had used up \$1881 for which he could render no account, and the committee on finance was ordered to investigate and empowered to send for persons and papers. After a long wrestle with the mystery it was discovered that the janitor had added the year to his expense account and thus made himself a seeming embezzler. The investigation had cleared his character as white as bleached cotton at 15 cents a yard, and the finance committee had given him a vote of confidence.—N. C. Item.

WHEN Benjamin Franklin proposed marriage, his intended mother-in-law hesitated about giving her consent, on the ground that there were already two printing offices in the United States, and she was not sure that a third would be successful, and that was young Ben's only means of support.



## Chaff.

BLIND TOM can play 7,000 pieces by ear, but one piece was all we ever wanted to play by the ear.

"Barber, cut my hair, please." "Close, sir?" "No; you can leave the roots!" and he left them—nothing more.

A YOUNG lady yesterday evening remarked that her dress resembled the little engine. "Why?" asked her escort. "Because it has a train." He whistled, and they ran into the garden for a depot.

A LISPING boy was out in the back yard pounding on a tin pan. The father came in tired and sullen, and being disturbed by the noise cried out: "What is that turned loose in the back yard, a wild animal?" The little fellow replied: "Yeth, thir; it's a pan-thir."

A GLASGOW minister was recently called to see a man who was very ill. After finishing his visit, as he was leaving the house, he said to the man's wife: "My good woman, do you not go to any church at all?" "Oh, yes, sir; we go to the Barony Kirk." "Then why in the world did you send for me? Why didn't you send for Dr. Macleod?" "Na—na; 'deed no; we wad na risk him. Do ye know it's a dangerous case of typhus?"

## Influence of Sensible Women.

It is a wondrous advantage to a man in every pursuit or vocation to secure an adviser in a sensible woman. In woman there is at once a subtle delicacy of tact and a plain soundness of judgment which are rarely combined to an equal degree in man. A woman, if she be really your friend, will have a sensitive regard for your character, honor and repute. She will seldom counsel you to do a shabby thing, for a woman-friend always desires to be proud of you. At the same time, her constitutional timidity makes her more cautious than your male friend. She, therefore, seldom counsels you to do an imprudent thing. By female friendships I mean pure friendships—those in which there is no admixture of the passion of love, except in the married state. A man's best female friend is a wife of good sense and good heart, whom he loves and who loves him. If he have that he need not seek elsewhere. But supposing the man to be without such a help-mate, female friendships he must still have, or his intellect will be without a garden, and there will be many an unheeded gap even in its strongest sense. Better and safer, of course, such friendships where disparities of years or circumstances put the idea of love out of question. Middle life has rarely this advantage; youth and old age have. We may have female friendships with those much older and those much younger than ourselves. Moliere's old housekeeper was a great help to his genius; and Montaigne's philosophy takes both a gentler and loftier character of wisdom from the date in which he finds, in Marie de Gournay, an adopted daughter, "certainly beloved by me," says the Horace of essayists, "with more than paternal love, and involved in my solitude and retirement, as one of the best parts of my being." Female friendship, indeed, is to man "*providum et dulce decus*"—bulwark, sweetener, ornament of his existence. To his mental culture it is invaluable; without it all his knowledge of books will never give him knowledge of the world.—*Bulwer*.

THE TRUE WIFE.—Oftentimes I have seen a tall ship glide by against the tide as if drawn by some invisible tow-line, with a hundred strong arms pulling it. Her sails were unfurled, her streamers were drooping, she had neither side-wheel nor stern-wheel; still she moved on stately in serene triumph, as with her own life. But I knew that on the other side of the ship, hidden beneath the great hull that swam so majestically, there was a little toilsome steam-tug, with a heart of fire and arms of iron, that was tugging it bravely on; and I knew that if the little steam-tug untwined her arms and left the ship, it would wallow and roll about and drift hither, thither, and go off with the influent tide no man knows where. And so I have known more than one genius, high-decked, full-freighted, wide-sailed, gay-pennoned, but for the bare, toiling arms and brave, warm-beating heart of the faithful little wife that nestled close to him so that wind nor wave could part them, he would have gone down with the stream and have been heard of no more.—O. W. HOLMES.

A WORD OF ADVICE.—Why are girls so injudicious in their toleration of dissipated young men? It is very often the case that a thoroughly good girl will deliberately marry a man who makes no secret of his bad habits. What can she expect but misery to ensue? A life partnership should not be entered into without at least as much caution as men display in making business combinations for limited periods. No man selects his business partner from among men who drink much liquor or have other bad habits. As for mere manners and the ability to make one's self agreeable, they have not themselves influence enough among men to secure a dollar's worth of credit or to justify any one in believing their possessor on oath. A girl who is not old enough or shrewd enough to have learned what are the standards by which men are tested would be far surer of a happy life if she were to let her parents select a husband in the prosiest manner imaginable, than if she were to make her own selection in the manner peculiar to girls. A life partnership it not easily dissolved.

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of nine letters.  
My 2, 1, 2, 9 was a man of ancient days, a gardener by trade.  
My 9, 7, 0, 2 is a feminine name.  
My 5, 3, 4, 7, 9 is a masculine name.  
My 4, 5, 6, 8 conquers.  
My whole is one of the leading questions of modern times.

NETTIE.

## Buried Trees.

[One tree is concealed in each sentence.]  
One day during my vacation, I was hurrying across the fields and meadows of our farm to see our neighbor, Mrs. Brown. My ewer was upon my head, and I sang joyously. In the dell I met a poor, little, homeless orphan, forlorn, ragged and hungry. "A cruel man left me here," said he, piteously. He was pensive and sad, and had apparently wandered many a weary mile without food or rest. "I will give him a pleasant home," thought I, and took him by the hand and led him away. And since darling Johnny has been with me have I been truly happy. Now the boy has grown to manhood, and is the blessing of my declining years, as blessing he would be to a king.

MELANTHON.

## Cross-Word Enigma.

My first is in peat but not in wood;  
My second is not in bad, but in good;  
My third is in rat, but not in mouse;  
My fourth is in cot, but not in house;  
My fifth is in sea, but not in hear;  
My sixth is in mouth, but not in ear;  
My seventh is in you but not in me;  
My eighth is in run, but not in flee;  
My ninth is in ten, but not in eight;  
My tenth is not in love, but in hate;  
My whole is a New Hampshire city.

VERONE.

## Problem.

A man having a certain number of apples in his basket passes through three gates. At the first gate he left one-half the lot of apples, and half an apple more; at the second he left half the remainder, and half an apple more; at the third gate he left half the second remainder, less half an apple. What is the least number he could have had, and how many had he left?

## Decapitations.

1. Behead a kind of bird and leave a riot.
2. Behead a conflagration and leave anger.
3. Behead an article of dress and leave an animal.
4. Behead a metal and leave aged.

JENNIE.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—Circumstantial evidence.  
GEOGRAPHICAL NAMES.—1. Su-eez. 2. Columbia (colum-bee-ah). 3. Sand-wi(t)ch. 4. Merrimac (Merry-Mack). 5. Minot (my-knot). 6. Gilmanton (Gill-mantown). 7. Port-land. 8. Europe (You-rope). 9. Ire-land.

CHARADE.—A theist.

DECAPITATIONS.—1. Never, ever. 2. Limp, imp. 3. Mart, art. 4. Bear, ear.

CROSS-WORD ENIGMA.—"Know thyself."

## Taking His Place.

"Oh Charlie! Why did you do it? On my birthday too! I am so sorry, for now you will miss all the fun of the Fourth." And as she spoke, Mary sat down, dangling her broad hat by one string, and looked disconsolately at her brother, who had been sent to bed as a punishment.

"How was I to know that just a little bunch of fire-crackers like that was going to smash the goblet? I did not think it would do anything but lift it up some."

"Who told you to do such a thing, Charlie?" "Nobody; I thought of it myself. Oh dear! I wish I had a grandma, or an aunt, or somebody like that!"

"What for, Charlie? I am sure nobody could be half so good as mamma."

"I like grandmas and aunts. Eddie Bates has a grandma, and she always gets him out of scrapes; and Tom Taylor has an aunt that does lots of things for him. People ought not to get married if they don't have mothers and sisters to make grandmas and aunts for fellows who are always getting blamed for nothing at all."

"But, Charlie, you did break the glass."

"No, I didn't either; the fire crackers broke it. Oh dear! dear! I wish there wasn't any Fourth of July, nor fire-crackers, nor nothing! What's the use of fire-crackers if a fellow can't fire them off? It was real mean to let me spend all my money on fire-crackers, and then not let me have any fun with them. There's my pin-wheel, too. I promised Bates to fasten it to the top of the highest clothes-pole in his back yard to-night."

"I am so sorry, Charlie dear!"

"And, Mary, I am so dreadfully hot. I have got a raging fever; I know I have."

"Why do you not say you are sorry?" suggested Mary.

"Didn't I say so?—over, and over, and over and father just said he thought bed was the best place for boys who exploded fire-crackers under goblets. If I was a father, and wanted to kill a boy, I'd do it out and out, and not roast him to death in bed on a Fourth of July. I wouldn't for millions of dollars send a poor boy to bed on his sister's eighth birthday." But what particular attention was due to his sister's eighth birthday Charlie did not explain.

"You knew the crackers would break the goblet."

"No I didn't; I never saw them smash one. Didn't they bang, though?" And at the recollection Charlie's eyes grew bright, and a delighted expression illumined his sombre little face. The next moment, however, he was crying bitterly; and Mary, having watched him a moment, ran down stairs just in time to stop her father as he was going out.

"Papa, please forgive Charlie. He is so sorry, and he wants to go out so much!"

"He must have a lesson, Mary, that will teach him not to be so destructive." But he added, smilingly, "If you choose to take his place, Charlie may go out."

Mary bounded away to her brother's room. "Papa says you may go out, Charlie. Get up, dear."

Charlie needed no second bidding, and he asked no questions. Five minutes later he was explaining to Eddie Bates the principles upon which he had blown a goblet all to smithereens in his back yard.

What a glorious Fourth it was! Charlie did not go home until tea-time. He would not have gone then, but that his pin-wheel and the rockets were under his clean shirts in the bottom drawer of his bureau, and must be gone for.

Up stairs he ran, as gay as a cricket, and burst into his room. "Let me see; they are in this one. Bother! Where did I put them?"

"What are you looking for, Charlie?"

"What are you doing in bed?"

"Taking your place."

"What?"

"Papa said if I would take your place, you might go out; and girls do not care much about the Fourth of July," said Mary, cheerily.

"And you have been in bed all day?"

"Of course; papa said you were to stay in bed all day, and I am taking your place."

"But you are not me."

"But I am your substitute."

"Oh, Mary, you dear, dear, darling sister! You are better than all the grandmothers and aunts in the world. Catch them going to bed a whole day for a fellow?" cried Charlie, kissing her proudly.

"I am very, very glad I took your place Charlie."

"You get up now, Mary, and I'll give you my pin-wheel and my rockets, and you and Ella Bates can fire them all off. I wouldn't be so mean as to let you lie there any longer," said Charlie, beginning to remove his coat.

"That will do Charlie," said papa, coming into the room. "Get up, my little daughter. Charlie has learned his lesson, I am sure."

"Indeed I have, papa, and I am real sorry." That same evening Eddie Bates was boasting to a crowd of boys about his grandmother having saved him from an evening of sorrow in his own room, when Charlie spoke up:

"Grandmas and aunts are all well enough, boys, but sisters are a heap better. You just listen."

And in a voice of pride and love he related his sister's generous act.

And the gay little crowd gave Mary three cheers and a tiger, besides firing nine starry rockets simultaneously in her honor.—*Lillie E. Barr*.

## GOOD HEALTH.

## Infantile Catarrh.

EDITORS PRESS:—A lady subscriber asks for a simple cure for "cold in the head" affecting babies. The old-fashioned remedy of onion syrup has proved very useful in my family. Slice one large onion, or more, and place it in a basin with coarse brown sugar between the slices. The syrup will soon accumulate at the bottom of the basin, and the child may be given an occasional teaspoonful with very beneficial results. Of course, the child must be kept warm and out of "drafts."

E. B.

Carmel, Cal.

## Another Prescription.

EDITORS PRESS:—I find the free use of sweet-oil most beneficial for colds in young children. I rub their throat, nose and inside their ears with it, and have never known it fail to give relief. It is very simple; but I would not be without my oil bottle with my young children. When the cold is on the chest, rub well and let the child wear a piece of flannel till the cold is better.

G. P. H.

Santa Cruz.

FATAL PLAYTHING.—A Baltimore paper of July 11th says: A number of children have died here during the past few days from lock-jaw, superinduced by slight burns received in the hands from the exploding of paper caps in toy pistols on the Fourth of July. In every instance where these accidents have occurred the dread disease has followed like a strange fatality. The physicians are unable to account for the singular appearance of the disease. The injuries have been so slight in some cases that only the skin of the hand was slightly burned. It is thought the caps contain a poison never before used in their manufacture, and the health authorities are about to investigate the matter. Eight deaths have been reported within the past twenty-four hours, and a number of new cases have been reported to-night. The sufferings of those afflicted have been terrible and beyond all medical assistance.

DIRECTIONS FOR PREVENTING SUDDEN DEATH. Anoxchango offers the following as the best known means of preventing sudden death: 1. Keep the head cool by taking the world easy. 2. Keep the lungs breathing deeply and fully about 17 times a minute, by cultivating alacrity in all the bodily movements. 3. Keep the heart beating about 68 times a minute (that is, let the pulse beat four times while the lungs breathe once) by eating temperately, sleeping fully and soundly, exercising moderately, and avoiding all temporary excitants, mental or liquid.

## DOMESTIC ECONOMY.

## How to Cook a Rabbit.

[Written for RURAL PRESS by I. H.]

Many persons have a prejudice against eating rabbits, from a certain cattiness in their appearance, which is not destroyed by the common method of cooking. A friend who was visiting us lately lately prepared one in a way which quite disguised it and made a very appetizing dish. I give the receipt for the benefit of all the mothers whose boys delight in shooting and trapping the little pretty but mischievous "cotton-tails." Cut the rabbit in pieces and lay it in salt and water for two or three hours, to extract the blood. Then lay the pieces in the bottom of an earthenware jar and add a few whole peppers, allspice and cloves, a single bit of garlic, an onion cut in slices, a sprig of thyme and summer savory or any herb you may prefer. Pour over it enough vinegar to cover the meat, and turn it every day. In two or three days it will be ready for use.

Put the whole over the fire in a sauce pan and stew till tender. Then put a piece of butter into the frying pan and lay in it the pieces of rabbit over a hot fire, turning them until nicely browned. Remove them and brown a spoonful of flour in the pan, strain into it the gravy in which the rabbit was stewed, adding a little boiling water if needed, to make the gravy of the proper consistency. Put back the pieces of rabbit, boil up once and serve.

N. B.—A piece of beef taken from the rump and prepared in the same way makes an excellent dish. It will be better if kept in the vinegar and spices four or five days.

Walnut Creek, Cal.

MOTH PREVENTIVE.—A correspondent of the *Furniture Gazette* recommends the following remedy for exterminating moths in carpets and furniture: After some years of experience with the troublesome pests, says the writer, I found a sure preventive of moths in pitch paper, the same as roofers use. The moth will live and grow on cayenne pepper and tobacco, while I never could see that the use of these articles kept the moth miller out. The plan is to cut the paper in slips and place about the room under and behind sofas, chairs, etc. This should be done as early as the middle of April, and in warm climates earlier. To make parlor seats moth-proof, place on the inside of backs of chairs and seats small strips of pitch paper and rest assured the miller will not select these places to deposit eggs. It is the miller that is the foundation of all the mischief.

BOILED SALAD DRESSING.—To make boiled salad dressing, put one tablespoonful of oil, one of salt, one of mustard and one of sugar into a bowl, stir until perfectly smooth, then add three eggs, and beat well; add one teacup of vinegar, then one of milk; place the bowl in a basin of boiling water, and stir until it thickens like soft custard. The time of cooking depends upon the thickness of the bowl. If it is a common white bowl and the water is boiling when it is placed in it and kept boiling all the time it will take from eight to ten minutes, but if the bowl be very thick it will take from twelve to fifteen minutes. This will keep two weeks if bottled tight and kept in a cool place.

STRAWBERRY CUSTARD.—Make a boiled custard of a quart of milk and the yolks of four eggs, properly sweetened. Boil it in a double kettle till it thickens to the right consistency. Take a gill of sugar and a pint of ripe berries; crush them together and pass through a fine strainer. Take the whites of the eggs, and while beating them to a stiff froth add a gill of sugar, a little at a time. To the sugar and egg add the sweetened strawberry juice, beating all the time to keep it stiff. This makes a handsome pink float, which is to be placed on the top of the custard.

ANDALUSIAN SALAD.—To make it, fine cucumbers, ripe tomatoes, with solid, rosy flesh, and Spanish onions large and succulent, are required. The onions and cucumbers are peeled and minced, and the tomatoes peeled and sliced; the vegetables are arranged in layers, lightly sprinkled with fresh bread crumbs, and dressed with salt, pepper, oil and vinegar. The salad thus prepared is kept in a very cold place for an hour before using.

SPONGE CAKE.—Two eggs, whites and yolks beaten separately, one cup powdered sugar, one cup flour with one teaspoon baking powder sifted with it, flavoring, lastly a scant half cup boiling water stirred in. Bake slowly in tins four by eight inches and two inches high. Frost when done. Cut off into squares, stick the half of an English walnut on each block, and you have a pretty basket of cake.

COCOANUT CAKES.—Take half a cup of butter a cup of sugar, two eggs, half a cup of milk, half a teaspoonful of soda, a cup of cream of tartar, two scanty cups of flour. Bake in three jelly cake tins. Ice the cakes, and while the icing is still soft, cover thickly with grated cocoanut.

POTATOES WITH WHITE SAUCE.—Slice some cold boiled potatoes, put them in a saucepan with a piece of butter, add a little hot water, pepper and salt and minced parsley. As soon as they are quite hot stir in, off the fire, the yolk of an egg beaten up with the juice of a lemon and strained.





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W. B. EWER.

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A. T. DEWEY.

W. B. EWER.

G. H. ETRONG

SAN FRANCISCO:  
Saturday, August 20, 1881.

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Nash & Curtis' Grain Cleaner—H. D. Nash & Co., Sac'to.  
Pannock's Patent Road Machine—S. Pannock & Sons.  
Ranch for Sale—S. W. Knowles, Boonville, Cal.  
Vine Lands—John Middleton & Son, S. F.

## The Week.

The life of the week agriculturally has been in the produce markets, and that is an excellent place for animation. Wheat and barley have been rivals in the advance and the gain has been about the same for each. Transactions have been large and the turn from produce to money will make affairs easier in the country. Oats have sold more freely than for a long time and rye is being sought for wherever there is hope of finding it. It is good to have a little activity in the cereals. It is better than to have the fruit men do all the shouting. But the horticulturalists have not lost ground, their fruits have sold well and the retail fruit sellers are wondering whether the canners are going to cut up tin all summer. It is an important question to retailers, for their stock costs them about twice as much money as usual this year, and their margins are materially reduced. The overland shipment of fruit is continuing in full amount and large contracts are being made for shipping grapes—a thousand tons from a single vineyard. So it goes; the year is one of general activity and encouragement.

It has been a week full of anxiety for those who long for the recovery of President Garfield. For the last few days he has hung between life and death, and on Tuesday his situation was well nigh hopeless. To-day (Wednesday) he is having a better day and hope revives in the hearts of the people—but none can tell what a day may bring forth.

COLONEL CLOUGH, who defrauded the English government out of £10,000 by forging stamps, has been sentenced to 10 years' penal servitude.

## A Conclusion Jumped At.

Won't wait! California fruit at a discount. A friend writes us from San Francisco, June 21st: "I saw to-day oranges quoted at 50 cents to \$1 per box, the letter for extra fruit. So I went through the fruit-dealing district of the town and found it true; one man actually offered them at 40 cents per box, containing from 115 to 118 oranges in a box. Thus is dissipated one of the golden dreams of the fondly-anticipating orange growers."—*Gardeners Monthly, Philadelphia.*

We are getting generous punishment for that unfortunate June glut in the orange market of San Francisco. Few readers of the above paragraph will know the causes which led to the low rates mentioned above, and few will hear, perhaps, that within a week, or, at most, two weeks, the value of oranges increased 150%.

It is well understood by those who are informed on the fruit trade of the city that the orange has been unfortunate in 1881 for reasons not attributable to the fruit nor to the public appreciation of it. Through the northern and central portion of the State we had a winter of unusual floods which seriously interfered with some of the main avenues of transportation and made country roads for a time impassable. These disturbances came just at a time when the oranges arrive in greatest quantities from the southern counties and the distribution of the fruit to the small towns all over the coast, where large quantities are usually consumed, was seriously interfered with. This did not hurt the oranges for they are durable, but it deferred their use and made the season for their consumption so short that the demand did not catch up with the supply. When the oranges came along in spring, having been deferred by the slow market during the winter, they found them in competition with the early cherries, apricots, peaches and the flood of berries, and as people naturally rushed for these new comers the oranges were neglected, and for one week fell to ruinously low rates. Just at this moment the San Francisco correspondent stalked abroad and caught the information which impelled the editor of the *Gardeners Monthly* to leap at his conclusions. He begins his paragraph: "Won't wait." We hardly see what it was which would not wait unless it was the editor or the correspondent.

Orange growing in California has had to awaken from many dreams, but it never had such a nightmare as our Philadelphia contemporary foists upon it. Trees have been put in wrong places; they have been wrongly treated when they were rightly placed. Some have thought, apparently, that people would haste to buy anything that was round and yellow for a good orange, without a thought to its size or quality. But these and similar mistakes which have cost growers much time and money, were not greater nor more expensive than mistakes which have attended the beginnings of almost all lines of production. Much as they have cost, they have been valuable experiences, though dearly bought.

It is well that we have all these experiences while we were, as one may say, shut off by ourselves in one corner of the world. Now that the outlets for our products are multiplying we find ourselves quite well educated as to what a good article is, and how to produce it. This is especially true with the orange growing industry of our State. We have now several most excellent varieties of the orange, both seedling and budded, widely distributed. We have many orchards of these improved sorts just coming into bearing and the fruit will soon bear a fair proportion to the general orange product of the State. The few thousands of these fine varieties which have so far reached the market have brought large figures here, while the ordinary fruit was almost neglected. Hereafter we shall have abundance of this kind of fruit, and it will command the admiration and the money of the vast Eastern population to whom it will ere long come. We have also learned that the fruit must be selected and graded according to size to bring the best results in the market, and it is fair to expect more skillful marketing of the fruit than has hitherto prevailed. We will admit that many golden dreams have been dissipated, but the golden efforts which have been zealously and intelligently put forth during the last few years, have a truly golden prospect.

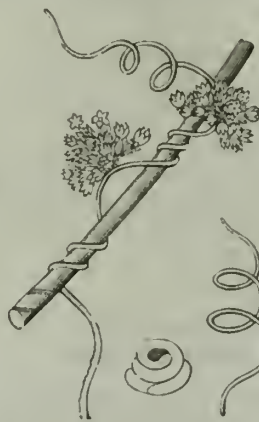
AMERICAN POMOLOGICAL SOCIETY.—Any California fruit growers who may desire to submit their fruit for exhibition at the meeting of the American Pomological Society in Boston, September 14th to September 16th, will be interested in the following announcement by the society: The sense of the last meeting of the society was that the exhibition of large collections of fruit is not desirable, but that the show of fruits should be confined mainly to new or rare varieties and remarkable specimens, or such as, being peculiar to any locality or for any other reason, possess special interest. Intending contributors—whether as States, societies or individuals—will oblige by giving immediate notice what quantity they propose to exhibit. Three specimens of a variety will be sufficient, except in fruits of special interest. Each contributor is requested to prepare a complete list of his fruits, that a report of all the varieties entered may be submitted to the meeting as early as practicable. A limited number of Wilder medals will be awarded to objects of special merit. Packages of fruits, with the names of the contributors, may be addressed as follows: "American Pomological Society, Boston, care of Massachusetts Horticultural Society." Freight and express charges should be prepaid.

## QUERIES AND REPLIES.

## Alfalfa Dodder.

EDITORS PRESS:—There is a yellow vine which is commonly known as the "Love Entangle," which grows without root and entwines itself around the alfalfa stock so as to choke and destroy the latter—absolutely chokes it to death. This result is considerable loss to that grass hereabouts. To remove it by hand would be an endless job, and is impracticable.—D. HANSON, East Lake.

The plant is "dodder," a parasitic plant, the seeds of which have been sown with foul alfalfa seed all over the State. We have had several illustrations of the plant, and treatment proposed for its extermination, but as the alfalfa region is constantly extending, and the parasite is reported as something new to our newer readers, we reproduce the little engraving in this column. The large figure in the cut is the dodder as it appears entwined about the foster plant. The figure A is the coiled embryo taken from the seed, magnified, and B is the same in germination. Although the seed of the dodder germinates in the soil, the young plant soon fastens upon any congenial growth which may be within reach and becomes a true parasite. Its root-like suckers penetrate the substance of its victim, and it lives on the juices already prepared for it. There being no use for the root of the dodder, that part dies and the plant is left clinging to its new support. With the strong roots of the alfalfa to feed it, the dodder grows with wonderful rapidity, and soon makes unsightly gaps in the field. If taken at the right time, after the original root has died, and before the seed has been dropped, a moderate fire should destroy every vestige of dodder. A forkful of straw in a place, worked in with the dodder and alfalfa as they stand, so that the flame will have full play on it as it rises, should make



Common Dodder—Cuscuta Gronovii.

clean work without injuring seriously so hardy a thing as alfalfa root.

Some readers have told us that they despaired of destroying the dodder, and have plowed up their alfalfa, resowing after a while with clean seed. Has anyone successful experience with dodder to describe?

## Twelve-Spotted Diabrotica.

EDITORS PRESS:—That which is known as the "fady-bug," or an insect very similar to it, infests my garden, and is fast destroying everything green and growing. These bugs are innumerable, and have resisted the ordinary mode of destroying them, such as sprinkling them with ashes, etc.—D. HANSON, East Lake.

This is the 12-spotted diabrotica, a near relation of the yellow striped cucumber bug, a pest of the first water, which has eaten its way through the central portion of the State, destroying fruit, vegetables and flowers, and defying ordinary treatments as our correspondent says. We don't know what to do with it. The only good thing about it is that it comes in waves. A region which is badly infested this year may have fewer next year. We are not sure but giant powder would destroy it, but earthquakes and other milder washes have no visible effect. We listen for the experience of others who have more patience and better success than we have had with it.

## Carp Culture.

EDITORS PRESS:—I wish to get a little information about carp culture that would probably also be of use to some others of your readers, so I would ask through your journal of those who have had experience, if where one has an old slough in which water stands from one to three ft. deep, with large patches of tule growing in it, also some cat-tail, if it will be best to clean them all out before putting in the fish? Will not the fish eat them? If the water does not appear to change much, but keeps fresh enough for cattle and horses to drink, is it good for carp? In a well 6 ft. in diameter, with water 18 inches deep, could any fish be kept by feeding, and how many? There are many old sloughs here that I think might be made available for carp culture, and would like to know the requisite conditions—that is, if any more need be done except turning in a few breeders. We have an old slough 100 yards long, stopped up at both ends, some trees growing in it, the water kept fresh by seepage. On getting three or four breeders would it be safe and best to turn them in among the weeds, tules, etc., or should a small pond be partitioned off?—L. B. RUMFORD, Bakersfield.

We should like to have some of our carp-growing readers give us their experience and observations on these points.

## A Call for Cotswolds.

EDITORS PRESS:—I have watched for some time for an advertisement of some pure-blood Cotswold sheep in the columns of the *RURAL*, but it seems there is not demand enough to justify the outlay. I would be glad to learn of some responsible breeder as near me as possible, as I am desirous of purchasing a trio.—COLUMBUS HATCHER, Yolo, Yolo county.

The Cotswolds should certainly be represented in our advertising columns.

## The Short Horn Society and the State Fair.

We have been requested by some of the Short Horn breeders who are members of the Cattle Breeders' Society, to state certain facts in reference to the exhibition of Short Horn cattle at this year's State fair, that the public may know why some breeders who usually show their herds, will not bring them upon the grounds this year. It seems that the Board of Agriculture, when preparing this year's premium list, materially reduced the cattle premiums, against the protests of the Breeders' Society. All second premiums were stricken out, both for herds and for individual animals, and the milch cow premium was also withdrawn. The only addition made to the list was a separate award for Jersey herds, thus allowing the Jerseys to compete for a herd premium in their own class, which was a good movement. The Cattle Breeders' Society, at its meeting in San Jose last spring, passed resolutions binding members not to exhibit their cattle unless the old premiums were restored by the Board. Of those present at the meeting all agreed to these conditions except one. Another, a prominent member of the society—Moses Wick, of Butte county—was not present, but he has written his intention to abide by the decision of the majority in a letter, from which we are requested to quote as follows:

I do not intend to exhibit this season. If I should get all the premiums they offer, it would not amount to much, as they have no second premiums and have reduced the first premiums. It is worth \$300 to fit my herd for the fair, besides the risks one has to assume. My stock stands about the top notch, and I can do better to keep it at home.

It is a matter for regret that this issue should arise between the Board of Agriculture and the Short Horn breeders. It is especially noticeable now that the leading State societies at the East are increasing their cattle premiums instead of diminishing them as our society has done. The great fair at Minneapolis offers \$500 as a first herd premium, \$250 for second and \$150 for third. Premiums for single animals are also large and there are three premiums in each class. The same is true of the great fair to be held at Chicago, and the Kansas State fair, and perhaps others which have not come under our notice. As Mr. Wick remarks in his letter above, it costs no little to get a herd into show condition, and breeders will not assume the expense of preparation and the risk of transportation and strange surroundings, unless the premiums offered are liberal.

## Moving Scabby Sheep.

Flock owners in Nevada are said to be complaining because large flocks of sheep from California, some of which are affected with scab, are being driven through their ranges to Montana and Colorado, and the laws of the State afford them no protection. They say the scab in sheep is a disease something similar to the itch, and is very contagious, one sheep frequently contaminating a whole flock. Affected sheep driven over a range sometimes leave the germs of the disease behind them, as a lock of wool left on a sagebrush will communicate the disease to sheep coming in contact with it. Over 80,000 sheep have been driven across the head of Paradise valley this summer, some of whom were scabby, as the owners purchased remedies at Paradise, knowing that there are stringent laws in Colorado against driving affected sheep into the State. Local sheep owners justly claim that the wool business is getting to be quite an industry in northern Nevada, and that they ought to be protected by law from contagious and infectious sheep diseases, by making it a criminal offense, punishable by fine or imprisonment, to drive diseased sheep through the State.

The plaint of the Nevada flock owners is a just one. There should not be any movement of scabby sheep along the highways or across the range of other flocks. For the preservation of health in the flocks of our own State the evil should be arrested, for no matter at what pains or expense some of our flock owners assume to eradicate the parasite from their flocks, there may come along a strolling band of infested sheep and replant the disease on every post and tree for hundreds of miles. Now that the wool interest is encouraged and is increasing, this scab abomination should be stamped out by vigorous enactments carefully enforced.

SIXTH DISTRICT FAIR.—The second annual fair of District Agricultural Association No. 6, will be held in Los Angeles, commencing Oct. 31st, 1881, and ending Nov. 5th. For the purpose of a Horticultural hall, the building known as Turn Verein hall, in the heart of Los Angeles, has been leased by the Association and will be filled with exhibits of agricultural and horticultural products. It is the intention of the Board of Agriculture to make this fair excel any former exhibition.

ANTI-DEBRIS ASSOCIATION.—The annual meeting of the Anti-Debris Association of the Sacramento valley, will be held in Yuba City on Saturday, August 27th, at 1 o'clock P. M. The election of officers and the transaction of other important business will take place.



## Good and Bad Water.

We notice that an effort is apparently being made in some quarters to prove that the Oakland city water is relatively good, that it is not so bad as it might be. This seems rather a feeble defense of it, but we suppose it is the best which can be set up. Like the chap in the play who had received a fatal wound and cried: "Tis not so deep as a well; nor so wide as a barn door, but 'tis enough"—so this water is not so fragrant as an overstocked duck pond, but it is bad enough. To show that there is a worse fluid in existence may be news to some Oakland people, no doubt, but it is true. The water might be worse.

We notice that there seems to be a desire to cast reproach upon artesian water by reason of the evil quality of some water drawn from surface wells. Thus a paragraph is printed purporting to be an extract from a report of the city health officer, referring to samples of well water taken for examination, as follows:

The purest water came from the corner of Twelfth and Washington streets. The sanitary appointments here and in the neighborhood were apparently good. This well is 56 ft. deep and is well bricked and cemented to a depth of 45 ft., but its water, though not sufficiently impure to be particularly hurtful, showed evidences of slight organic pollution—evidences that surface filth had permeated the ground outside to a depth of 45 ft. Hence, it is obvious that the purity of our artesian well water—about which we hear so much—should not be taken for granted. From our observations we are convinced that the feeling of security entertained by those who use artesian well water is unfounded, and, in this connection, we refer to the report of Prof. Lattimore on the water supply of the City of Rochester (1878), in which, among other matters bearing upon this subject, it is clearly shown that water at the bottom of a tube well, in "solid rock," is liable to become polluted by surface drainage.

There is an inference that artesian well water is dangerous because there was had water found in a well, bricked up and cemented to a depth of 45 ft. The inference is unfair, because such a well is not an artesian well at all. It is merely a well-made surface well, and surface wells are of course dangerous in a thickly-settled district, no matter how well made. The quotation from Prof. Lattimore, of Rochester, merely shows that the tubing of the well he examined was defective, and that is, of course, a point to be guarded against, and it is well to have attention called to this danger. But the evident intent to throw suspicion upon true artesian water which flows from below impervious strata, and which, if well piped, cannot yield anything but pure water, is a point in favor of the water company, but not in the popular interest.

This water question is a far-reaching one and should be thoroughly discussed both by country and city people, for often in the country fatal diseases spring from contaminated water supply, and all the fresh air of the country cannot save the victims of bad water. The smaller cities of the State are always more or less vexed by the quality of the water supply. Petaluma seems now to be as badly affected as Oakland, and the people are proportionately excited. Let the commotion continue—still people will get stagnant water.

**CALIFORNIA CREAM OF TARTAR.**—The making of a market for argols is of importance to our wine makers, and the gaining of money, of what has hitherto been refuse, will perhaps add another point to the value of grapes. The *Grocer*, of this city, says the business of the Pacific Cream of-Tartar Works is to be carried on at the corner of Bryant and Seventh streets, where a two-story building, 40 ft. front by 67 ft. in depth, is being erected for its use. The manufacturing department of the works will be in charge of M. Bousquet, who has had a long experience in the business in France, and the workmen to be employed were formerly engaged in the same business in New York and Europe. The daily output of the establishment will be about 1,000 lbs., and it is the intention of the proprietor to use argols produced in this State so far as they can be had. It is thought that within two years a sufficient quantity can be got from this source to meet all requirements. The importance of this enterprise to our wine producers can hardly be overestimated. Heretofore there has been no market on this coast for argols, they having been considered only as refuse. For this reason large sums have been lost to California vinticulturists. With this new factory in operation will come a constant and steady demand at from 15 to 18 cents per lb., for an article, which, up to this time, has been without commercial value on this coast.

## Polled Cattle for Hawaiian Islands.

The Sandwich Island farmers seem to have taken the lead of us in the establishment of a herd of Polled cattle. These hornless beauties have advanced notably in popular esteem during the last few years, and many fine animals have been brought from England to the Eastern States, and they may now be classed among fashionable cattle of this country. The idea of gaining a share in the polled fashion seems to have jumped over this coast and alighted in the middle of the Pacific ocean. The *Mark Lane Express* makes the following notice of the purchase and shipment:

We learn from the *Banffshire Journal* that on Wednesday week eight Polled cattle, purchased in the Strathmore district, were shipped in one of the Allan line steamers from Glasgow, bound for the Waiwai ranch in the Sandwich Islands. The animals were purchased by Mr. Hugh A. Ferguson, partner with the Hon. James J. Dowsett, of Honolulu. They consist of one two-year-old bull and three yearling bulls, and four two-year-old heifers of excellent pedigree, and they have been acquired at high prices. The Earl of Southesk's herd at Kinnaird Castle supplied the two-year-old bull, "His Grace" (1721), bred by Mr. Hamilton, of Skene. Two yearling bulls and two two-year-old heifers were obtained from Mr. Thomas Smith, Powrie, near Dundee. The other pair of two-year-old heifers and a yearling bull were bought from the old established herd belonging to Mr. Ferguson, Kinnochry, near Cupar-Angus. The bull from Kinnochry is "Baron de Waini," of the Baroness family of the Keillor tribe, and the heifers are "Merry Peal" (4334) and "Maidenhair" (4340), of the Mina tribe, descended from the Crathes herd which was dispersed in 1856, "Mina" having been the winner of the challenge cup at the Royal Northern show in 1867, and of the first prize for cows at the Highland

## Warehouse Sweepings.

We had an article last February, giving some startling figures of the amount of sweepings cleaned for a single warehouse, and the method in which sacks of grain were handled so as to precipitate as much grain as possible upon the wharf, and thus add to the "sweepings." The same practices are now being observed by others, and it will be well if all grain growers have their eyes opened to this leakage. The *Stockton Independent* of recent date says:

In conversing with a gentleman, yesterday, who is a close observer of passing events, we elicited the following remarks about Port Costa, the rather prominent shipping point for grain at the present time: "Yes, I was at Port Costa most of the day, waiting for the train. I tell you, sir, that is a lively place, but there should be some keen old farmer there to gather up grain. I've seen your Stockton warehouses, Rincon Point, Sacramento, Woodland, Colusa and Chico warehouses also, but Port Costa beats all for wastage I ever saw. Why, sir, cars are unloaded there almost at one motion. You ought to see that gang of men. And you ought to see the wheat strung along and over the wharf. You ought to see them unload the cars. Suppose a sack has a rent in it. Away it goes with the wheat spinning out as it is carted from the cars to be weighed, and thence to the ship's hold. I tell you, sir, there is more grain to the acre on the Port Costa wharves than has been grown on the best land in San Joaquin county this season. Yes, sir, there you'll see grain handled."

This matter does not affect producers when the grain is bought in the country, as much of it has been during the last month or two, but when they warehouse at an establishment where grain is handled in this way, they lose no little by weight. The "observer" quoted by the

## "Black Beauty Tenth."

The rotund figure upon this page is the portrait of one of the most famous Poland-China sows of the Prairie States, and as some of her strain of blood has been imported into this State, her form and record become of local interest.

"Black Beauty 10th," bred and owned by John Gilmore, Vinton, Iowa, was farrowed April 24, 1878, and now weighs 610 lbs. Gilmore's "Black Beauty" strain has been most successful as prize winners wherever exhibited. "Black Beauty 10th" was one of the litter, with her sire and dam, which took the sweepstakes diploma at the Iowa State fair as the best herd over all breeds in the fall of 1878. Her dam "Black Beauty 4th" took first and sweepstakes of \$70 at the great fair held at St. Paul in 1878. Her brother, "Grand Duke Alexis 5th," took first and sweepstakes of \$95 over all breeds, competing with animals from Ohio, Illinois, Michigan, Iowa, Wisconsin and Minnesota. "Black Beauty 10th" took first cash premium, and headed the herd that took the silver medal sweepstakes premium for all breeds at the great Northwestern fair, held at Minneapolis in 1879. She and her daughter took first and second premiums at the Benton County fair, Iowa, 1879, and her daughter took first honors at Iowa State fair in 1880.

The "Black Beauty" strain possesses a record said to be unsurpassed by any of this breed.

They excel in heavy bone, short legs, very short nose, long body, fine, drooping ears, broad, straight back, heavy quarters, and are nearly black in color. Mr. John Gilmore is Secretary of the American Poland-China Record Company, and is to be congratulated on having such a superior strain.

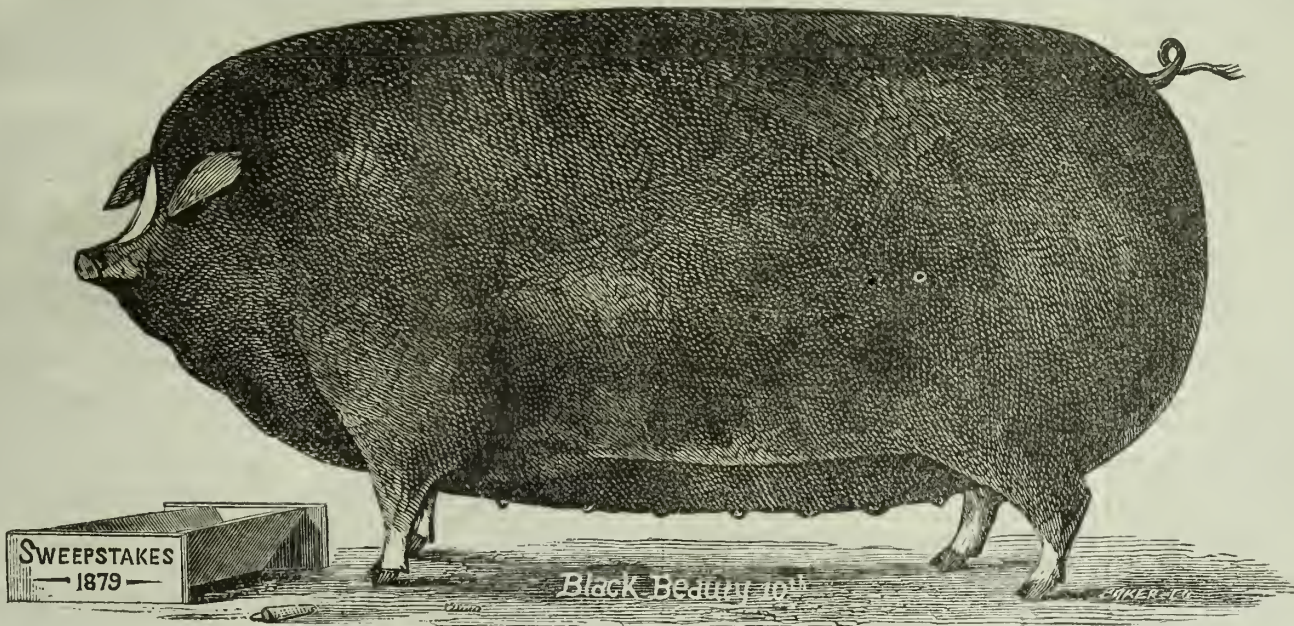
Elias Gallup, a Poland-China breeder, of Hanford, Cal., writes us that he has imported a boar pig of the celebrated "Black Beauty" strain, and intends to exhibit him at the State fair in September. He considers him the best bred Poland-China pig of his age in California. His dam is "Black Beauty 15th," 1244; grand dam, "Black Beauty 5th," 426; great grand dam, "Black Beauty," 1240, the mother of the "Black Beauty" strain. "Black

Beauty" was a premium and show sow, took many first premiums, was a very prolific and good mother, raised 76 pigs at 8 litters, and weighed 700 lbs. in breeding order. The sire of the pig is "Gen. Jackson," 555; grand sire, "Stonewall Jackson," 31—a famous show hog owned by W. H. Hood, Lock, Ohio, and weighed, at three years old, 1,030 lbs.

## What a Mulch Can Do.

We have had discussions of the value of a mulch, and in a State where so much depends upon the retention of water in the soil, there can hardly be too much said about it. Prof. S. A. Knapp, of the Iowa Agricultural College, gives this summary of the science of mulching: The value of covering the soil has been known so long and so commonly as to become a proverb. "Snow is the poor man's manure." Science and experiment have shown that covering the ground is even more advantageous in summer, and that few things can be more harmful than to denude the soil and allow it thus to remain for a length of time. They have demonstrated that the soil is increased in fertility by covering much more than the amount of material placed upon the ground as a mulch. 1. A large amount of atmospheric ammonia deposited by the rains is retained. 2. A certain proportion of water in the soil is necessary to the best conditions for chemical action, to make the largest amount of plant food available and to enable the fibrous roots of plants to feed to the best advantage; mulching retards evaporation. 3. Our torrid suns acting upon the black, prairie soil, produces an amount of heat injurious to the fibrous roots of many plants; mulching cools and equalizes the temperature near the surface. 4. Sudden extremes of temperature affects plants, as animals, unfavorably; mulching equalizes conditions, retards the action of frosting and allows the plant to adapt itself to the change. 5. Mechanically; it breaks the force of the rains and prevents them from compacting the soil. Other advantages might be named.

**CO-OPERATIVE HEN'S NEST.**—A Santa Rosa reader informs us that a neighbor of his lately found under his barn a hen's nest with 84 eggs in it, all good but three. That barn is a good egg trap; better set it again.



POLAND-CHINA SOW BLACK BEAUTY 10TH—BRED BY JOHN GILMORE, VINTON, IOWA.

Society's show the same year. Mr. Ferguson also wished to buy the Kinnochry bull, "Prince of the Realm" (1095), the first prize two-year-old at Kelso, but an offer of £200 failed to induce his owner to part with him.

These cattle were purchased last January and shipped about that time. They arrived at our eastern coast just in time to come under the quarantine enactment and were consequently detained about three months. After release they were started westward by short journeys, being held in Chicago to accommodate some of the cows in calving. The course was then taken up across the country toward San Francisco where they will ship for the Islands. They are now expected here, and some of our fine stock breeders are on the lookout to set eyes and hand upon them.

## Fighting Adulterations.

The Empire State is taking the lead in efforts to stamp out the adulteration of foods, drugs, etc., and we trust the measures now adopted will prove adequate. Other States as well as New York have begun to do something to bring the anti-adulteration laws into force, and the outlook is hopeful for a commotion at least. Adulteration laws are harmless after they have been carefully embalmed in the statute books, with no especial inducement for anyone to prosecute under them, unless he is a pure philanthropist who enjoys pursuing evil on his own account, and at his own expense. In New York the matter has been placed in charge of the State Board of Health. Inspectors have been appointed to collect and analyze samples of butter, beer, baking powders, bakers' chemicals, cocoa, cordials, canned food, confections, cereals, cheese, meat extracts, fish and fish extracts, fruit essences, ether, gelatine, honey, ice cream, milk, molasses, lard oil, olive oil, quinine, sugar, syrups, soda water, spices, spirits, tea, wine, and also all pharmaceutical preparations. The object of this analysis is to carry into execution the law enacted by the Legislature at its last session, to prevent the adulteration of food and drugs. Judging from similar investigations already made in New York and other States, startling results can be looked for from these examinations. When this evidence has been gained, it is to be hoped that the pursuit of the adulterators will be unyielding.

Stockton paper says Porta Costa is the worst place for wastage. We had no idea that it was worse than other shipping points. There is, no doubt, enough of the evil everywhere. We might here mention that last Sunday six boys were having a fine time at the Washington street wharf gathering handfuls of grain from torn sacks and throwing it at each other. One who saw them assures us that a cental of grain must have been thrown away during the 15 minutes that he stood there. All such wastes should be stopped.

**THE NECTARINE.**—In our haste to plant fruits for canning, the nectarine should not be overlooked in places where it will grow and fruit well. There are nectarine trees in almost every neighborhood, so that the local points of growth and bearing can be learned, and where favorable, the plantation increased. It will not be safe to plant largely in untried locations, because the nectarine is a coy fruit. San Bernardino county produces it to perfection, and so do other regions here and there over the State. A correspondent of the *San Bernardino Index*, urging the planting of the nectarine, says that with care in picking and packing, it can be shipped fresh to the Eastern markets, and on account of its rarity, beautiful wax-like appearance, as well as quality, will, he thinks, command much higher prices than the apricot. As a canning fruit it has no superior, and for this purpose alone, the superintendent of the cannery at Riverside last season stated that 40,000 bearing trees now would be "but a drop in the bucket" toward supplying the demand.

**THAT FRUIT PRESERVATIVE SWINDLE.**—We learn from the *Fresno Republican* that that old fraud, the "chemical fruit preservation compound," is again on its legs and is lightening the purses of the valley people. If it is the old swindle, it is a black powder, which is to be burned and the fruit preserved by the fumes. The fruit is utterly spoiled by the "compound," and the whole scheme of its preparation and sale is one of the most bare-faced swindles imaginable. The composition of the compound and its uselessness were fully shown up in the *RURAL PRESS* two years ago, and we hope no reader of the *RURAL* will lose his money by the fraud.



### The Comet—Scientific Observations.

When the comet, which has just now passed out of sight in the northern heavens, first made its appearance, much confidence was felt that so large and conspicuous an object would afford an opportunity of adding much to our knowledge of those wandering bodies, by applying to it the new means of research, which have recently been devised in improvements in photography and in the use of the spectroscope. It was hoped that by the united action of these two devices many peculiarities might be obtained, invisible to the eye by any of the ordinary aids hitherto employed. But, owing to various causes, the result has not been very satisfactory.

Prof. Henry Draper, of New York, who has of late made stellar spectroscopy a specialty, and who has achieved so much success in this direction, that, in his recent photographs of the nebula of Orion, he has depicted details so minute as to equal in faintness stars of the 14.7 magnitude, has made persistent efforts to secure the best possible photographs of the comet's spectrum. His efforts were much impeded by unfavorable weather; but he has nevertheless succeeded in accomplishing something.

On an exposure of 162 minutes, the tail of the comet impressed itself to the length of nearly 10°—fully as long as it was visible to the sharpest unaided eye.

Three photographs of the spectrum of the nucleus under exposures of 180, 196 and 228 minutes were also obtained. It will require some considerable time before the results and discussion of these photographs can be fully determined. But enough has already been ascertained to lead to the conclusion that a large proportion of the light from the tail is reflected light, and that carbon constitutes an important element in the constitution of the nucleus. Other elements are also undoubtedly present.

The observations by Professor C. A. Young at Princeton were made under a very tantalizing state of weather, and, with only one exception, none of them exceeded sixty continuous minutes. Professor Young appears to have paid particular attention to a study of the jets which issued from the nucleus, the spectrum of which, when isolated—a very difficult thing to attain—was found to be continuous, indicating that the body under examination is an incandescent solid, although it may be a liquid or gas under a high degree of compression. The spectrum of the tail was also continuous, but overlaid by a banded spectrum, and corresponded to the spectrum of the coma—the bands indicating the presence of gases in a condition of great heat and tenuity.

Mr. William Harkness, of the Naval Observatory at Washington, examined the comet for polarization with very unsatisfactory results. The same observer remarks that notwithstanding the brightness of the nucleus, it gave a spectrum very ill-defined and difficult to measure. Mr. Harkness also remarks, in his report, that it is a matter of interest to note that on or about the 20th of June, two or three days before the comet became visible, the earth must have been in the immediate vicinity of the comet's tail; but his calculations have not yet been determined with sufficient accuracy to enable him to state definitely as to whether our orb actually passed through the tail, as it did on a similar occasion some thirty years ago.

Professors Wilson and Stone, of the Cincinnati Observatory, have announced that on the evening of July 8th the comet was seen to divide into two bodies, as Biela's comet did some years ago, the new and smaller comet appearing directly over the old one, but invisible to the naked eye. Two days after, on the 10th of July, Professor Hall, of the Washington Observatory, examined the comet with the large 26-inch refractor, and Professor Eastman at the same time using the 9-inch instrument, but neither of those gentlemen were able to see any indication of the reported division of the nucleus.

In this connection it may be well to note, as a possible explanation of the above, some observations made by an English astronomer June 29th, and reported in *Nature* of July 7th. It appears from the report, as above, that on June 29th the comet passed over a star of the eighth magnitude. We quote: "Definition very good and tranquil. As the star became involved in the jet it gradually increased in size, and, when seen through the brightest part of the jet traversed, resembled an ill-defined planetary disk about 3" in diameter. At this moment the comet seemed to have two nuclei similar in aspect and brightness."

If a similar phenomena happened at the moment the Cincinnati astronomers were observing, they might possibly have been led into the error of a supposed division of the nucleus.

**INVERSE ELECTRO-MOTIVE FORCE.**—LeRoux has published a simple process for showing an inverse electro-motive force in the voltaic arc. It consists in extinguishing the arc by opening the circuit and immediately re-establishing, by hand, the communication between the two carbons through a galvanometer. This shows the existence of a current going from the negative to the positive pole between the heated carbon points, and in the contrary direction in the galvanometer. Hence arises the difficulty of illuminating two or more arcs in a continuous current, since it is necessary to overcome the same inverse force for each arc. Magneto-electric machines, with alternating currents, profit by the existence of this inverse current, and this is one source of their great advantage over ordinary batteries.—*Comptes Rendus*.

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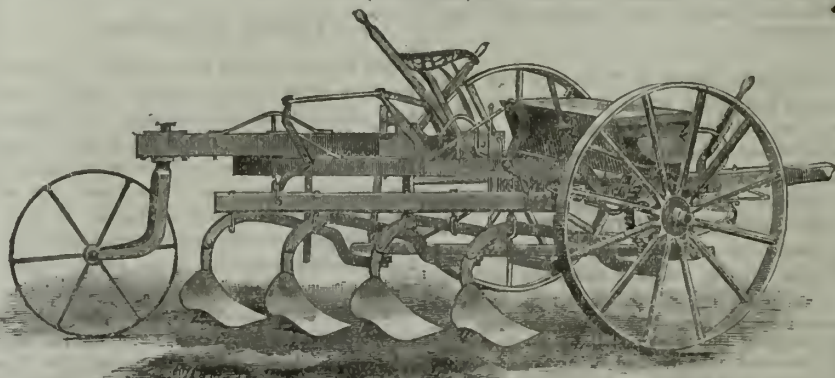
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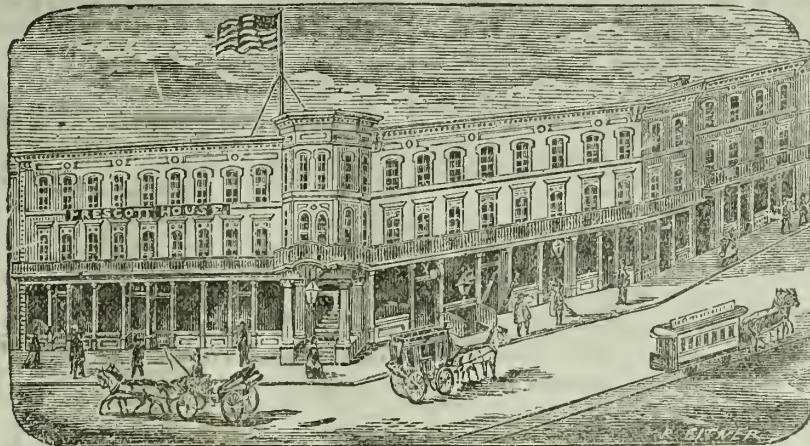
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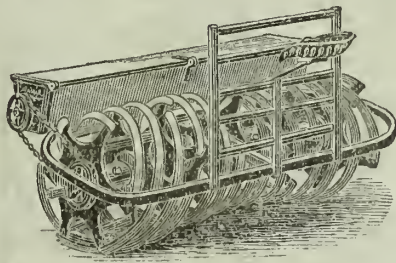
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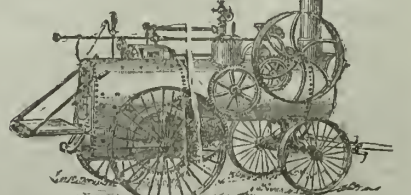
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Wanted, from TWENTY to FORTY GOOD DAIRY COWS that will come in between August and October.

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## S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 17, 1881.

The Grain trade has been active and prices, both for Wheat and Barley, have scored a gratifying advance. The situation looks quite healthy, as reports from abroad, which we print below, show that crop yields in other regions have been over-estimated and the available supply of Wheat for the coming twelve months is not excessive. The wheat from the English markets is as follows:

LIVERPOOL, Aug. 16.—Good to choice California Wheat, 10s 6d @ 10s 9d. Off coast and nearly due cargoes, 6s 6d; just shipped cargoes, 5s 6d. The spot market is strong. The harvest in the north is suffering from wet, and opinions of the yield are growing worse. Receipts for the past three days, 109,000 cts, including 133,000 American.

## Freights and Charters.

The following are reported: Ship *Rosie Welt*, 1,436 tons, Wheat to Liverpool, Havre or Bristol, 24; Norwegian ship *Professor Mohr*, 955 tons, Wheat to Cork, U. K., Havre or Antwerp, 24 2s 6d—re-chartered.

## The Foreign Review.

LONDON, Aug. 15.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Rains have everywhere delayed the harvest. Where crops are still standing ripening was changed, and mildew, which had generally appeared, thereby increased. Early crops, however, are free from mildew and are the cleanest since 1863. The first threshing results were disappointing on account of the thinness. A feeling of doubt and mistrust as to the harvest has given to trade a tone of excitement. Samples of native Wheat have been growing scarce, the supply in London the past week having been only 886 quarters, and the rates advanced 2 to 3s per quarter, with early and large deliveries of the new crop. A glut was expected at this time, but the change in the weather stopping threshing from fields and the altering condition of grain has prevented a glut during August. Foreign trade in off-coast stands was altogether in favor of sellers. White Wheat advanced 2s and other kinds 1s 6d per quarter. The supply has been moderate. The off-coast supply was 21 cargoes, of which 14 were sold. The forward trade is brisk and reasonable, offerings being readily taken in all positions. The floating bulk is slowly diminishing. In flour the best makes were 12s 2d dearer. The foreign supply was very small, and rates improved 2s on Friday. The Barley crop will probably be fair. Grinding samples improved at 6d, in sympathy with foreign feeding stuffs. Foreign is also improved at 6d. Native Oats are scarcely quotable. Foreign are 9d dearer. For a margin buyers offered an advance of 6d, but sellers wanted 9d. Sales of English Wheat during the week were 10,952 quarters, at 48s 9d per quarter, against 13,902 quarters, at 44s 4d per quarter, for the corresponding week of last year.

LONDON, Aug. 16.—The *Daily Telegraph*, in an editorial review of the English crops, says: The flood crop prospects are slightly overcast. The process of ripening has been arrested over a large extent of country, and reaping was interrupted early in the farming districts by chilling showers and a low temperature. In some parts of England the rain was little less than a deluge. Over a large extent of the best wheat-growing countries it has fallen within unbecomingly copiousness. The paper thinks that no reliable estimate can be made, and thinks the Wheat crop will be 10% under the average, but about a million quarters over that of last year. If the next few weeks are rainy, chilly and unsettled the cereal crop will be under these figures, and they will sink with every day of adverse weather, which throws back the harvest to a later period of autumn. It hopes that the country will be able to get along with an import of 13,000,000 quarters of wheat.

## Eastern Grain and Provision Markets.

CHICAGO, Aug. 15.—There was a wild excitement on 'Change at the opening this morning, which has continued unabated until this hour—noon. It was believed that reports of rain in the Western States would have sent the markets down, but they had no effect, and prices started with an advance which has progressed almost without a break, and every article has shared in the rise. September and October Wheat opened at \$1.20; October Corn at 59c; October Oats at 45c; September Pork at \$17.75, and September Lard at \$11.62. At this time prices are jumping rapidly up, and Wheat is selling at \$1.30 for cash, and \$1.20 for October. Corn is higher and excited, having gone up to 60c for August, 67c for October, and 62c for November. Oats sold for 36c for September. Pork sold at \$17.05 for September. Lard at \$11.72. The unusual excitement on 'Change which characterized the early part of the day began to gradually lessen in the afternoon, and on the call, although the activity continued, prices were, as a rule, much weaker toward the close. Amidst all the excitement there were no failures, as far as known to night, but a calling of marginals strained a few firms, and a great advance or break would perhaps shake out a few of the weaker dealers. There have been very heavy for two days past, to-day's trading being estimated at 30,000,000 bushels of grain. The fluctuations on the call were not great but the sales were large, being about 3,500,000 bushels. Provisions

have been active and unsettled throughout the day, but without wide fluctuations.

NEW YORK, Aug. 13.—Wheat has been active and excited, and the visible fluctuations have been violent, the result of speculative influences. High prices have prevented most shippers from executing their orders, and the business for export has been limited. Most of the Wheat going forward to Europe was purchased some time since.

## Illinois' Poor Crops.

SPRINGFIELD, Aug. 13.—Partial returns received at the Department of Agriculture to date concerning the fall Wheat crop confirm previous reports published by Secretary Fisher. The results of threshing have reduced the average prospective yield in some counties and increased it in others. Sixty counties heard from produced in 1880, 32,642,055 bushels of fall Wheat against 13,448,565 bushels this season, a reduction of 59% when compared with the yield of the previous year. The 40 remaining counties produced last season 21,233,450 bushels, and if these and the previous crop counties have the same proportions yield this season the crop here will make 8,705,714 bushels, making the entire winter Wheat crop of the State for 1881 about 22,164,279 bushels, against 54,000,000 last year. The past severe winter damaged a large proportion of the Wheat, and the Hessian fly and chinch bug in some localities destroyed most of the Wheat that was not winter killed, leaving hardly enough in some counties for bread and seed. The quality is generally inferior and the grain much shrunken. The crop in quality, as well as in quantity, is the poorest produced in the State for over 20 years. This exceptional year will not dishearten Illinois farmers from seeding a large area this season.

## Iowa Crops.

FAIRFIELD (Iowa), Aug. 13.—The Secretary of the Iowa Agricultural Society reports that in winter Wheat the average yield this year, as estimated by returns from 93 counties, is eight bushels per acre. In spring Wheat the average yield is a fraction over eight bushels, but, according to the last estimate, it will not be over six bushels per acre. In spring Barley the average is 79. In corn, the average condition is 76. There is a little decrease from July reports. In Oats, the average crop is 36 bushels per acre.

## Eastern Wool Markets.

BOSTON, Aug. 13.—For Wool there is a steady demand at unchanged prices. The sales of the week foot up 2,100,000 lbs of all kinds, but mostly of different grades of domestic. Buyers fail to influence prices, and holders are firm and confident that current rates will be sustained; consequently there is no pressure to sell, unless the former pay full current rates. Sales of Ohio, Pennsylvania and West Virginia fleeces have been made at 40¢ for X and XX. Most of the XX on the market is held at the latter figure, although some few lots could be bought at a shade under the XX and above. The latter sold at 42¢ @ 43¢. Michigan No. 1 fleeces are steady at 39¢ @ 40¢ with sales mostly at 39¢ and firm. At this price considerable business was done. Of unwashed fleeces some 750,000 lbs have been sold, including considerable Territory Wools at 15¢ @ 22¢ for low and Carpet, 25¢ @ 27¢ for fine, 25¢ @ 30¢ for medium, with some very choice at an advance on the latter price; Georgia, 34¢; Kentucky, 33¢; Western Oregon, 20¢ @ 33¢, and some large lines of Westerns at 25¢ @ 31¢ for fine, 27¢ @ 33¢ for medium. Combing and delaine fleeces continue in lively demand, with sales of fine delaine at 43¢ @ 45¢ for fine and No. 1. Combing is quoted at 46¢ @ 48¢ and unwashed combing, 30¢ @ 33¢. California Wool is quiet, with sales 267,000 lbs at 25¢ @ 32¢ for Spring. Pulled Wools are steady and firm, with a fair demand. Foreign Wool is quiet, but firm; sales are noted of 99,000 lbs Australia, 42¢ @ 44¢, and 250,000 lbs Montevideo at 36¢.

## New York Dried Fruit Markets.

NEW YORK, Aug. 13.—Foreign Fruits are in moderate demand at full prices.

BAGS—The market is weak and prices at a low mark, jobbing having declined during the week 1¢ per sack. Auction sale Tuesday of 150,000 standard Calcutta at \$7.80 @ 7.97, chiefly at the lower figure. A lot of jute was put up, but was withdrawn, only 7¢ being bid.

BARLEY—Barley has experienced a sharp advance. It began last week and showed first in feed barley; now all descriptions are put upward until a general improvement of 10¢ per cwt has been reached. Standard chaffal is nominal. We quote sales: 500 sds choice feed, \$1.10; 500 sds do, \$1.05; 3,000 and 400 sds good do, \$1.07; and 500 sds poor to good, \$1.05 @ 1.07, 1¢ per cwt.

BEANS—There is no change this week.

CORN—Corn is quiet and holds last week's advance. Sales of small round have been made at \$1.15, and large yellow and white at \$1.10 per cwt.

DAIRY PRODUCE—Butter has started upward again; the fancy brands leading and having reached 35¢ in some cases. The amount of ordinary choice butter is, however, larger, and does not advance although the feeling is firm. Cheese is unchanged.

EGGS—There have been occasional sales of fancy lots of fresh Californias at 29¢, but the bulk go lower, 27¢ being the ruling figure. There are plenty of Eastern eggs now in.

FEED—An advance in Bran and Middlings is talked of, and may be expected in sympathy with the rise in Wheat. Hay is unchanged, the following being the schedule of rates: Wheat, \$9 @ \$12.50; Barley, \$7 @ \$10; Wild Oat, \$8 @ \$12.50; stock, \$7 @ \$8; atple, \$8 @ \$10.50 per ton.

FRUIT—Prices have held up well, and there is hardly a change in last week's list. Receipts are, as a rule, taken out of sight early in the morning, and the fruit market presents a slim appearance most of the day.

FRESH MEAT—Dressed Hogs are 1¢ cheaper per lb; other Meats are unchanged. The live stock market is quiet, and supplies ample at present.

HOPS—There is nothing new in this market. Emmet Wells, in his New York circular of August 6th, says:

The usual summer demand from brewers prevails at unchanged prices. Exporters have entirely withdrawn from the market, and are not expected to come on again until after the new season opens, unless in the meantime something should happen to the incoming crop, causing speculation. Advances from the interior are conflicting this week. Estimates of the yield are quite in order, and are freely indulged in by our exchanges, most of which count on a smaller production than last year by from 10% to 20%. It should be remembered that last year's crop was not less than 150,000 bales. If the decrease this fall is only 10%, we believe this will be nearly made up by the new acreage. The 150 bales of imports noted below are returned Americans.

OATS—Sales of Feed Oats have been quite free—a slight break from the monotony of oat business in this market. We note the following sales: 221 sds choice, \$1.62; 200 sds good Humboldt, \$1.35; 450 sds Feed, \$1.45; 300 sds do, \$1.42; 600 sds do, \$1.37, and 300 sds do, \$1.35 per cwt.

ONIONS—There is no change in Onions.

POTATOES—Prices are a little more liberal and the range of varieties is wider.

PROVISIONS—The trade is active and prices for medium and light Bacon and for Eastern Hams are advanced.

POULTRY—There have been some fluctuations and a somewhat irregular market. Turkeys are 3¢ lower than last week. Broilers and ducks are a shade higher.

RYE—Rye is higher and in request. Sales have been made at \$1.47 per cwt.

VEGETABLES—Cucumbers are a drug and many are thrown in the bay. Tomatoes and Marrowfat Squash are lower.

WHEAT—Sales have been large at the advance. Holders are courageous and buyers are forced up. We note sales: 100 tons choice shipping, \$1.60 (Port Costa delivery); equivalent to \$1.62; here; 1,000, 500 (Vallejo delivery); 400 and 200 tons and 700 sds No. 1 shipping, \$1.57; 2,300 sds No. 2, \$1.56; 1,000 sds (Port Costa delivery) and 100 tons No. 2, \$1.55; 250 tons and 400 sds do, \$1.52; 400 tons do and 600 sds Odessa, \$1.50, and 400 tons No. 1, private. Sale on Saturday, 1,000 tons shipping (Port Costa), \$1.60.

WOOL—The market is quiet and rates have shaded down all around a little. A few sales of lamb's Wool and southern fall clip have been made at the prices in our list.

## Domestic Produce.

WHOLESALE.

WEDNESDAY M., August 17, 1881.

BEANS & PEAS. Silver Skin..... 80 @ 85

Bayo, cti..... 90 @ 120

Butter..... 10 @ 130

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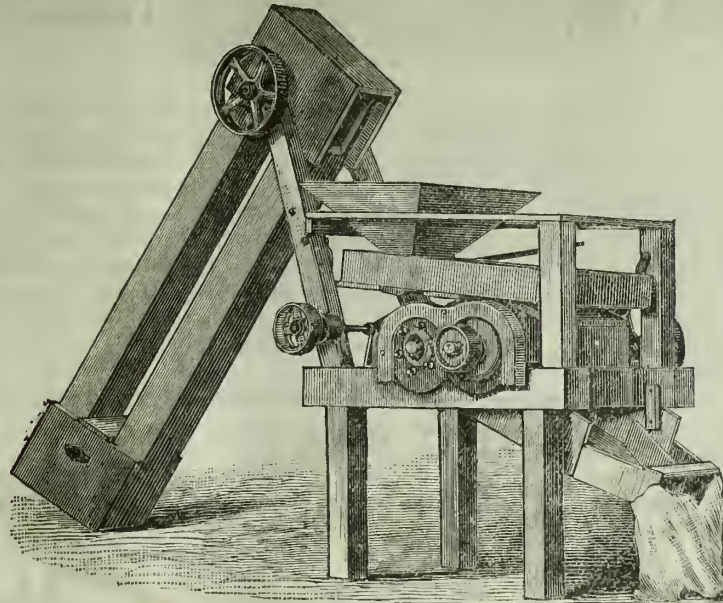
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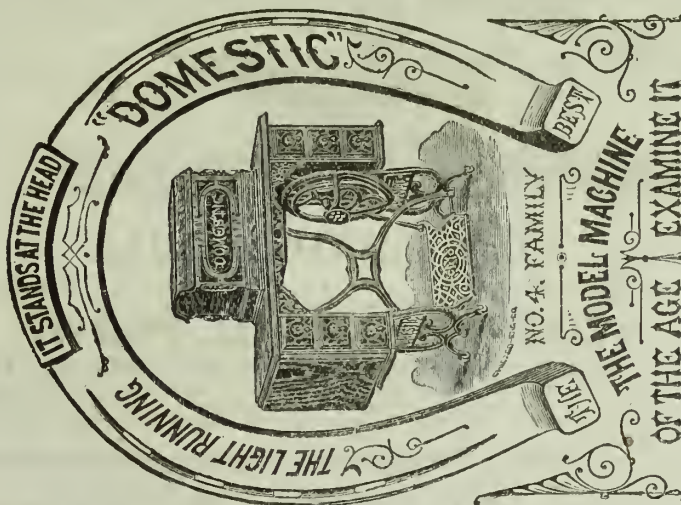
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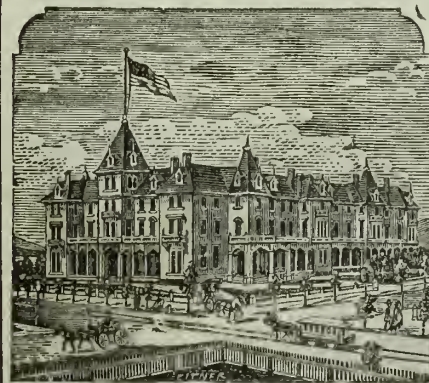


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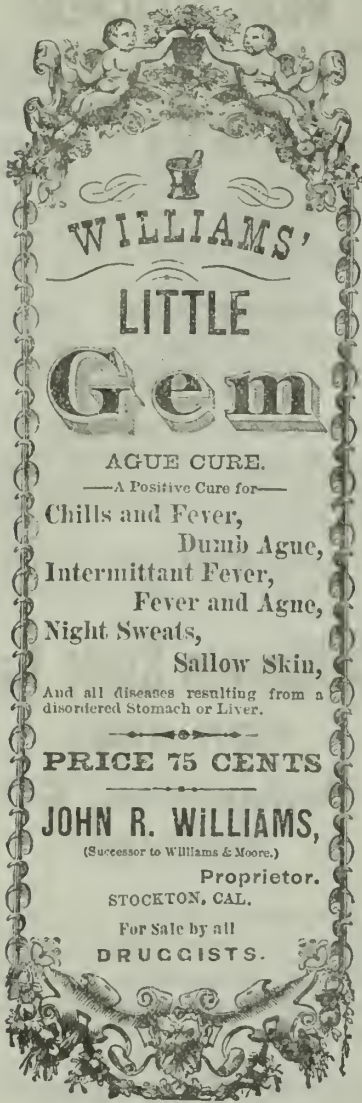
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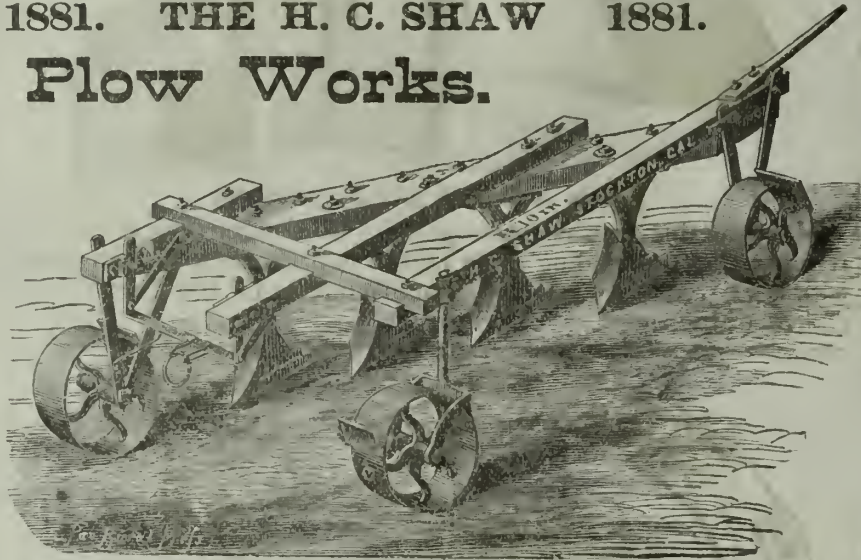
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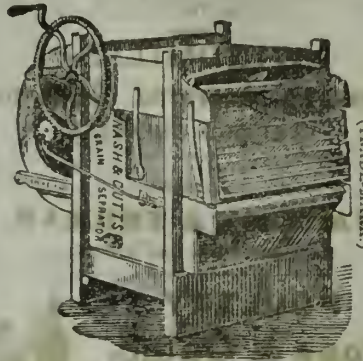
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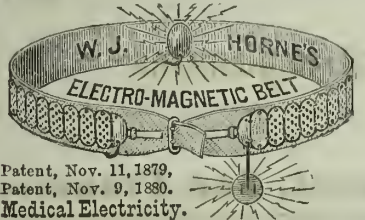


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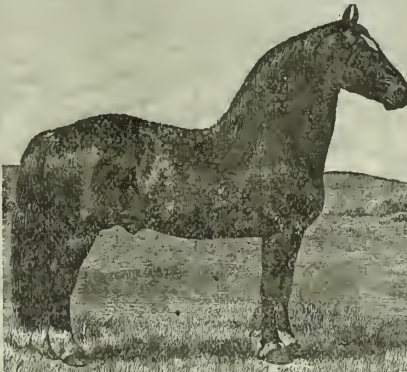
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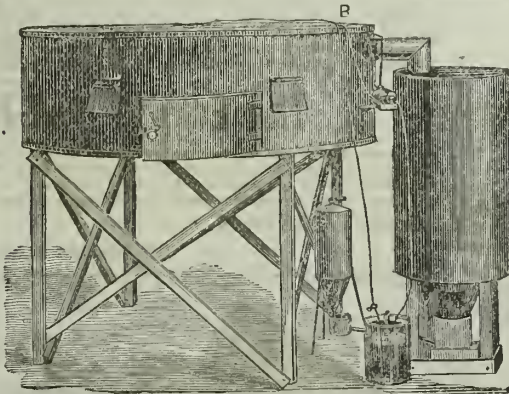
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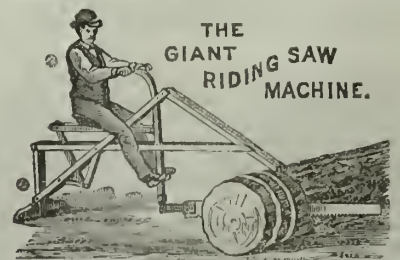
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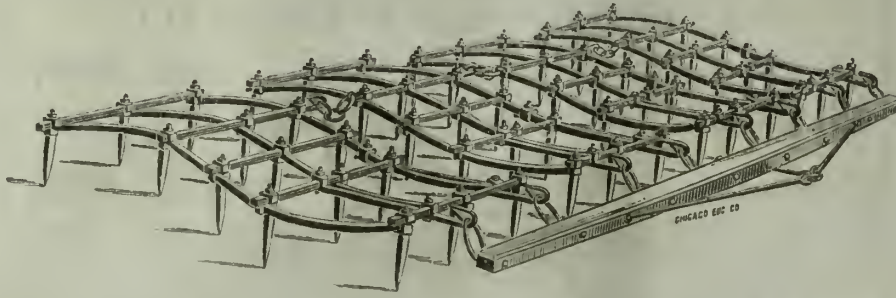
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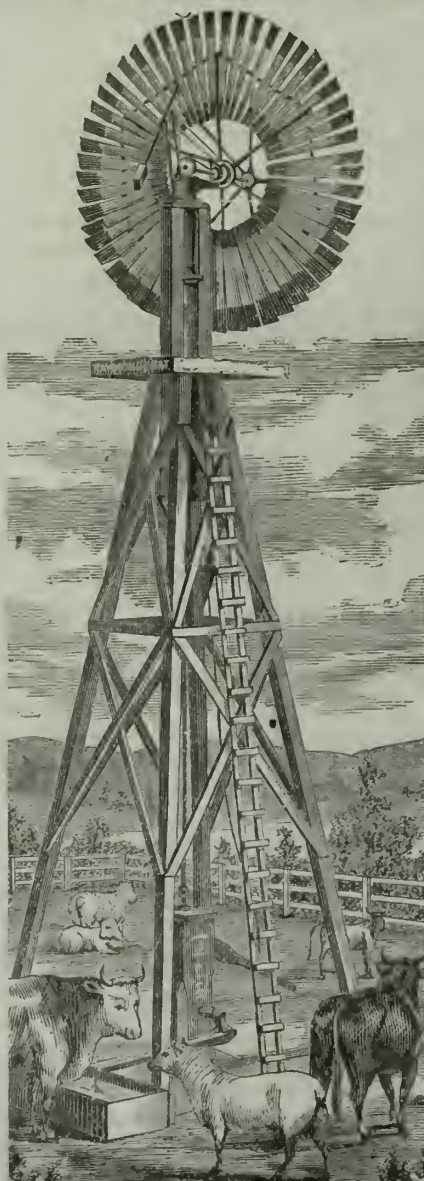
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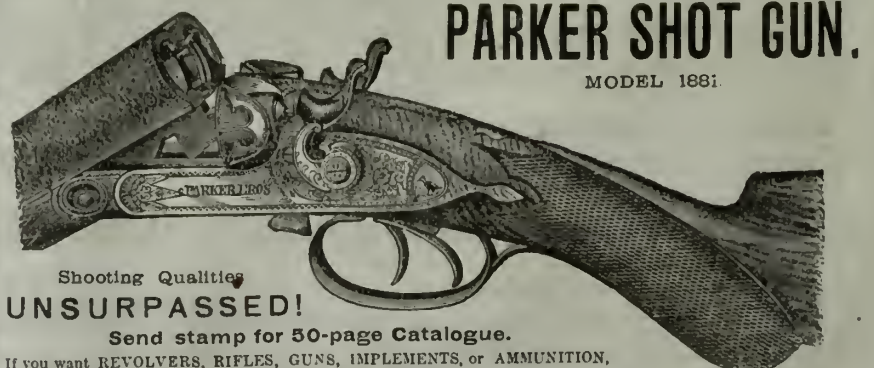
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possibly do without it, for it furnishes the Nourishing and Stimulating Diet which they so need, but  
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ONE OF MANY TESTIMONIALS.

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fact, one of the best preparations we have ever used in our poultry yards. We take pleasure in recommending it to  
Poultry Raisers.”—Signed: J. K. Alexander, Superior Judge; H. C. Tuttle, Poultry Breeder; J. P. Stanley, C. John-  
son, J. B. Tucker, S. P. Carter, S. Childers, Harry V. Morehouse and W. M. R. Parker.Price List.—Sample packages by mail, 50c. and \$1, post paid. One pound packages, 50c., two and one half  
pound packages, \$1, six pound box, \$2, 25 pound keg, \$6.25.**The Eclipse Self-Regulating Incubator,**Successful in the past; again greatly improved, and as now offered, the most Complete, Simple and Reliable Self  
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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, AUGUST 27, 1881.

Number 9

## Hunting the Sea Otters.

The sea otters are, according to Scammon in his "Marine Mammals of the Northwest Coast," the most valuable fur-bearing animals inhabiting our ocean. They are caught as far south as 28° north latitude and northward to the Aleutian islands. The full-grown animal may be five ft. in length, including the tail. The head resembles that of a fur seal. The fur is black or dark brown. Otters have been secured along the California coast for many years, but now there are but few secured. Of late they have been shot from the shore by hunters who have wandered up and down in search of them.

The mode of capturing the sea otters between Point Greenville and the Aleutian islands varies with the different native tribes inhabiting that coast. The Aleutians, dressed in their waterproof garments, made from the intestines of the seals, wedge themselves into their *baidarkas* (which are constructed with a light, wooden frame, and covered with walrus or seal skin), and, donning their hunting caps, plunge through the surf that dashes high among the crags, and, with almost instinctive skill, reach the less turbulent ground-

ENEMIES OF THE CARP.—Our carp farmers have already learned that they must guard their stock against the attack of several enemies or else their enterprises may not yield up to their expectations. Turtles, other reptiles, pike and some other carnivorous fish have made havoc in the ponds and must be removed. A carp grower in Sonoma county has a plank anchored in the middle of his pond as a turtle trap. These shell backs have a special liking for a sunny exposure, and when they mount the plank they are treated with a load of shot from the bank. In this way the turtles are made to show themselves and then depart hence. George S. Ladd, a Stockton carp grower, has detected aquatic birds preying upon his carp. The Stockton Independent in giving his observations, says that cranes and those ungainly birds that are sometimes called "squawks," and sometimes by a less pretty name, have got into the habit of visiting the reservoirs that he has stocked with carp, and standing in the edge of the water, apparently in abstract thought or absent-minded, they snatch up the carp as they come out of the depths to feed, and fly away uttering yells of triumph. They have got to coming in such

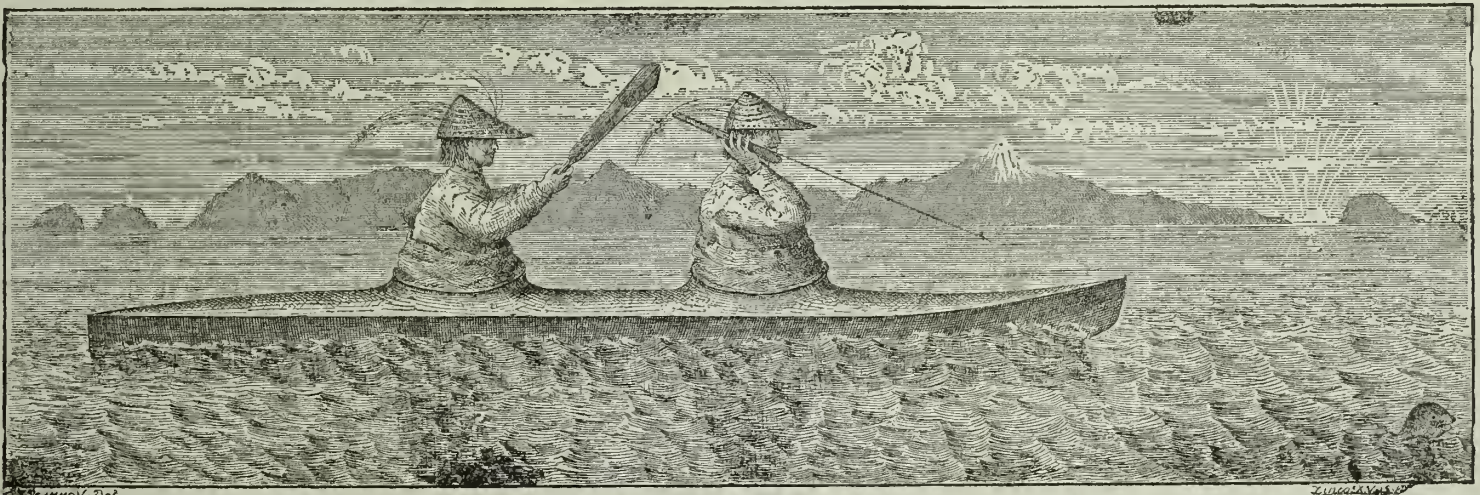
TOBACCO EXHIBITS AT THE STATE FAIR.—There promises to be unusual interest in the exhibits of tobacco at the State fair in Sacramento next month. The production of the weed in this State has been attended with many difficulties, and tobacco manufacturers in this city are prone to look with much suspicion upon samples of the home grown article. Still, experiments have continued, and growers here and there over the State have from time to time announced that they have solved the difficult problem of curing in our dry air which is apt to make the leaf brittle and rebellious in the hands of the cigar maker. The latest claimant for success in California tobacco production is a Sacramento grower, of whose work mention may be found in our "Agricultural Notes" in this issue. He proposes to show samples at the State fair, and it is announced that a large tobacco manufacturer from Virginia will be at the fair, for the purpose of examining any California tobacco which may be shown. It will be a good opportunity for all growers and curers to bring forward specimens for comparison. If it should be found that California grown tobacco pleases the Virginian, it may open a better market for

## Canned Butter.

We have drummed upon an imaginary California butter can upon several occasions, and yet there does not seem to be any immediate prospect of seeing a real one. Our canners are learning to handle nearly every commodity which they can squeeze into a can, but butter is not heard of. And yet two great facts remain. One is that a good part of the world eats canned butter, and thus enriches European dairy farmers. Another fact is that California is undoubtedly one of the best butter countries in the world, and has no outlet for a surplus product which could be easily produced if there were a call for it.

To show the market which butter finds south of the Equator, we give some notes on the butter imports of a single South American country, Brazil, drawing them from a German dairy journal, the *Milch Zeitung*:

The province of Santos consumes about 20,000 lbs. of butter per month, and is supplied principally from France. It is sent mostly in tins of 1, 2, 4, 20 and 60 lbs. In Rio Grande the small consumption is supplied mostly from France. Porto Alegre, which consumes some 6,000 lbs. monthly, was formerly supplied by the English; but the French and Danish mer-



SEA OTTER HUNTING ON THE PACIFIC—THE ALEUTIAN ISLANDER'S CANOE OR BAIDARKA.

as well that heaves in every direction. These aquatic men are so closely confined by the narrow build of their boats, and keeping motion with them, too, that their appearance suggests the idea that some undescribed marine monster had just emerged from the depths below. Once clear of the rocks, however, the hunters watch diligently for the otters. The first man that gets near one, darts his spear, then throws up his paddles by way of signal; all the other boats forming around him, at some distance. The wounded animal dives deeply, but soon returns to the surface, near some one of the *baidarkas* forming the circle. Again, the hunter that is near enough hurls his spear and hovers his paddle, and again the ring is formed as before. In this way the chase is continued until the capture is made. As soon as the animal is brought on shore, the two oldest hunters examine it, and the one whose spear is found nearest its head is entitled to the prize.

The number of sea otter skins taken annually is not definitely known, but from the most authentic information we can obtain, the aggregate for the past three years has been 5,000, 1,000 of which came from the Kurile islands; and, valuing each skin at \$50, amounts to the sum of \$250,000.

At Los Angeles a deed was filed from William Alvord and E. J. Baldwin, conveying to Charles Crocker 18,000 acres of the Rancho La Puente, in Los Angeles county, for \$210,000.

HOPS FOR AUSTRALIA.—We learn from the *Bee* that R. J. Merkeley, of Sacramento, in response to a direct order, has shipped 40 bales of hops to Australian brewers.

numbers, nights and mornings, that it is one man's business, at those times to interview them with shot guns, and discourage their visits. A day or two ago a large blue crane tried to snap up a carp that Mr. Ladd had put in the reservoir a year ago, but the fish was so large that the crane could not get away with the fish after it was struck. The fish was found floating some hours afterward, and on dissection it was ascertained that the crane had driven its bill into the fish's back, two or three inches.

DRIED FRUIT AND DRIERS.—It is fitting that an especial effort should be made by those who manage our agricultural fairs to draw out exhibits of dried fruit. There are always awards for dried fruit, but they are small and no special prominence has been given to the exhibits. As fruit drying is now at the basis of many orchard enterprises, it is timely to promote popular knowledge of excellence in dried fruit, and special premiums for this material are wise. The directors of the Contra Costa county fair this year, will probably at their next meeting, determine to offer a special premium for the largest and best exhibit made at the coming fair, of marketable fruit, cured by artificial evaporation process. It seems to us that it would also be wise to offer a premium for fruit driers when shown in full operation. People could then not only get a comparative idea of the different driers, but would gain something of an insight into their working. It strikes us that a group of driers at work would be among the most interesting features of any fair.

the weed than it has hitherto enjoyed in this State.

AN AUSTRALIAN SHEARING.—As the fall shearing is now in the California wool growers' thoughts, a few statements of an Australian shearer may be of interest: Messrs. Edols, at one of their stations, Burrawang, near Forbes, New South Wales, took the fleeces of 251,000 sheep in November and December last. The shearing occupied eight weeks, and afforded employment for 101 shearers, 50 "rouseabouts," and some 20 "musterers." Shearers being paid a sovereign for every 100 sheep, "rouseabouts" about an equal sum per week, and "musterers" six shillings a day, the total expense of the shearing may be roughly calculated as \$10,000. The yield was a wonderfully good one, averaging nearly five pounds weight of wool to every sheep, lambs included. The gross weight of this monster clip was estimated at 1,180,804 lbs., made up into 2,811 bales, and, as the wool was of a first-rate quality, the gross value of the yield of the Burrawang run for the year may be reckoned at \$30,000. This work of a single "station" of a firm of flock owners may give the wool growers of the United States a hint of the force which would wipe out their industry if Australian wool was admitted duty free to this country. Our growers could not compete with the boundless and cheap ranges which Australian sheep owners have at their command.

It is said that in the redwoods of Humboldt county are numbers of San Francisco men looking for mill sites.

chants have supplanted them. The price of butter in tins is 67 to 77 cents per pound. The butter market of Bahia is of considerable extent. The annual importation is something over 1,200,000 lbs. The larger part of this is French butter, a small part English, some Danish, and some American. In Rio de Janeiro the market amounts to 2,000,000 lbs. per year, which was formerly supplied almost wholly by England; but France now has the largest share—about 1,200,000 lbs.; Denmark 600 lbs.; and the United States and other countries 200,000 lbs. Para consumes about some 400,000 lbs., and was formerly supplied by Ireland with butter too much salted; but Denmark sent a better article in tins; and during the past few years Normandy has sent a considerable proportion of it in tins. The United States have sent a few thousand pounds.

If South American countries on the Atlantic side belong to Europe and our Eastern States, we have the countries on the Pacific ocean, and we are in full belief that at some future time California will be shipping them butter in some form which will protect it from injury by climatic peculiarities.

PERSONAL.—We had a call on Tuesday from George Ertel, of Quincy, Ill., the inventor and manufacturer of the Economy hay press, which many of our readers are using. Mr. Ertel has passed the summer thus far in California, and is so well pleased with the country and with the success of his press, that he proposes to go now to Illinois and return to California in February, perhaps to stay. Mr. Ertel is a stirring man, and we shall be glad to have him for a Californian.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Eastern Washington.—No. 1.

#### Lights and Shadows of a New Country.

EDITORS PRESS:—It is not easy to get just and fair reports of a new country. The fault lies, perhaps, more in the men who spy out the land and send or bring back reports than in the country itself. But even the country would doubtless impress the same mind differently in various localities or at different seasons of the year. So many conflicting reports are received from men who have been there, concerning the desirability of eastern Washington as a place of residence, that many have come to the conclusion that the only way to be satisfied on the subject is to make the trip and see the country for themselves. When practicable, this is perhaps the most satisfactory way; but many, anxious for new homes, must either take the words of others or themselves stay where they are. It is a case of "wood chuck or no meat" with them. Neighbor A. goes up there in June and returns enthusiastic over the country and its resources. He has seen the country clad in its floral robes and blushing with the promises of the harvest. Neighbor B. makes his trip after he has finished his summer and fall work, and gets there in time to see the hills as brown and dry and roads as dusty as in our own California. Perhaps he gets his ears pinched by an early frost, or his rheumatics twinged by a premature but frigid flurry of snow, which sends him skurrying back home with disgust written all over his features. Again, one of these observers may have taken but a hurried, superficial run through this country, and gotten impressions which a more thorough acquaintance would have removed. The other may have traveled over the ground systematically and intelligently, making it a point to secure all the knowledge possible from impartial and posted citizens, and depending on his senses for the rest. Your disgruntled citizen may, and probably did, have his ideas exalted to a high pitch by enthusiastic and, mayhap, interested reports published in the newspapers, which only rehearsed the favorable points of the country, and omitted as immaterial and irrelevant the gloomier sides of the picture. For such a one the transition from the ideal to the real was too abrupt, and his idol was shattered on its lofty pedestal. He had read that there was land of marvelous richness, occasional belts of timber, natural waterways to market, grand and beautiful scenery, good hunting and fishing, etc., all to be had for the taking, all of which was as probably true as is apt to be the case in a larger stretch of territory. But when he could not find a section of land of unvarying richness, with a grove of good timber in one corner, a shipping point half a mile distant, a lovely meadow with a romantic lake bordering it on his rear outskirts, and all the rest of the "chicken fixins" thrown in, and all reserved for his benefit, and to await his coming to have it for the taking, he felt like an injured and misinformed man, "led astray by the hired eminaaries of base corporations, who wanted to get him up there to bleed him of his coin, and to that end had been assisted in their nefarious scheme by a corrupt and subsidized press." The other man, who did not expect to have the first choice of everything, and who did expect to find a new country, unsettled society and a prospect of roughing it for a few years before retiring to independent ease, was not disappointed, for he found it in some respects, perhaps, even more favorable than he had anticipated. This exordium has been spun out to show through what different mediums different men will view the same country.

It is the purpose of your correspondent in this instance to deliver

#### A Round, Unvarnished Tale

Of how he was impressed by a recent trip through eastern Washington. After the ride up the Columbia river, a person's fancy is apt to be so wrought up by the beauty and grandeur of the scenery that, by contrast, the appearance of the country after leaving The Dalles is peculiarly desolate, and it is perhaps as well for the traveler's feelings that the journey through it by rail is taken mostly in the night. All along the southern bank of the Columbia river is a region of sand, which stretches away to Wallula. Here the soil is arid and full of alkali, the scenery desolate, and the most of life confined to lizards and reptiles. The drifting sand gathers upon the track and a force of men is kept constantly at work clearing a passage for the train. All this can be spanned very comfortably, however, as, for a consideration of \$2, one can get a first-class berth in the Pullman palace sleeping car which accompanies each train. About daylight, which occurs very early now in this latitude, the State boundary line is crossed, and one finds himself in Washington.

At Wallula junction a change is made, and the passenger is whirled back 12 miles toward the river, until on its banks he comes to a station which some disgusted traveler has dubbed "Hades," and which sulphurous title has so recommended itself to railroad employees and the traveling public in general, as appropriate, that it is accepted and promises to stick. A ferryage is here effected, and one finds himself in the

new railroad town of Ainsworth, located at the fork of the Columbia and Snake rivers. Ainsworth is a mushroom growth, roughly and irregularly built town of about 30 houses, and is the present terminus of the branch of the Northern Pacific railroad, which is expected to connect with the road now building from Portland to The Dalles. Stopping there long enough to get a 7 o'clock breakfast, we board the train, having for its destination Spokane Falls, 150 miles distant—fare nine dollars. This makes a total of \$42, expended for boat and railroad fare in the ride of over 1,000 miles from San Francisco, exclusive of board and lodging. If the traveler relies upon what he sees from the windows of the immense box or wheels (dubbed by courtesy a passenger coach) for his impressions of eastern Washington in to-day's travel, as he is trundled along at a 15-mile-an-hour gait, he will certainly have very

#### Gloomy Impressions.

Soon after leaving the sage brush and sand of Ainsworth the train plunges into the Providence Coulee, an ancient river bed, whose course is followed up for over 30 miles. In this portion of the ride, hemmed in on each side by high banks, there is little or nothing to be seen of the outlying country, and the interest centers in occasional patches of curious geological formation projecting from the banks. The occasional spots of alluvial deposit in the river bed support rank growths of wild rye and bunch grass. Before noon the train emerges on an arid undulating plain whose predominating characteristics are alkali and sage brush, without a tree in sight to relieve the monotony or alleviate the heat. A fellow passenger seemed to echo the sentiments of those present when he remarked: "I don't see what the North Pacific company were thinking about, to build a railroad through this god-forsaken country." But as the day wore on, it became evident that the company knew what they were about, and did not intend to lose any money by the operation, either.

At 3 P. M. we reached Sprague—another new town, about 110 miles from Ainsworth. From here, the face of the country begins to improve, the land being better, trees more plentiful, and occasional springs of water are seen. Twenty miles more brings us to Cheney, the county-seat of the newly-made county of Spokane. This, like the other towns, is a product of the railroad, and bears evidence of its youth in the glaring newness of the white pine-boards of which all its buildings are constructed. Many predict quite a future for Cheney, but the cursory impression received by your correspondent was, that if it did grow much, it would have to rely upon something more than its natural advantages. From here on to the end of the trip the country improved right along. The line of the road was blotted with thrifty farms, an occasional pretty little lake is seen, and, as the train rushes through a range of hills, pine timber becomes plentiful. Tired and dusty as after a long stage ride (for the road is rough and new, and has but recently been completed to this point), in time for dinner we arrived at

#### The Lively Town of Spokane Falls.

A stay of several days here enabled me to become quite familiar with the town and its surroundings. Young as it is, it is plain to see that this town is designed by nature and location to be an important city, if not the metropolis of the northwest. At present it contains about 600 inhabitants, active, energetic and alive to the interests of the town. The population has doubled in less than a year, and will repeat the operation the coming year. Located on the banks of the Spokane river, on a level, gravelly prairie, surrounded by scattering forest trees, it forms a charming picture. There are seven general merchandise stores, two hardware stores, saw and grist mills, four hotels, three church organizations, two newspapers, and other accompaniments of civilization in proportion. Of the newspapers, the *Times*, published by F. H. Cook, is daily and weekly. The *Chronicle*, a hebdomadal recently established by C. B. Carlisle, an experienced journalist and ready writer, already has a fast hold on popular favor. The U. S. Signal Service has a station here, and a Government telegraph line. Before this writing, the Western Union will have had its lines completed this far also. The railroad company has valuable interests in and about Spokane Falls, and as the location is an available one, it is expected that they will establish their machine shops here. The industries tributary to the town are farming, mining, lumbering and stock raising, aside from those already noted. It is the basis of supplies for three military posts within 60 miles.

#### Railway Projects.

From recent developments it looks as though the Oregon Rail and Navigation Co. intended making a junction with the Northern Pacific at this place, and then push on through the Port Colville country to the upper Columbia, where there are 300 miles of navigable waters which reach far enough north to tap the Canada Pacific. The Northern Pacific is being rapidly pushed from this point to Pend d'Oreille lake in Idaho, the present terminus of this division, and in less than three months it is expected that the remainder of the line to Bismarck, in Dakota, will be finished. The modern railway builder is simply irresistible. The spirit of enterprise that is accomplishing the wonderful feat of placing a network of steel throughout the great basin of the Columbia, that has overcome countless difficulties and expended millions of dollars in reaching a country which cannot for years yield the returns flowing into the coffers of the Central or Union Pacific, is marvelous,

even in this age of railway building. It is now only a question of time, and not a long time at that, before the other fork of the Northern Pacific will be completed across the Cascade mountains to Puget Sound, the natural entrepot of this country. W. B. TURNER.

[TO BE CONTINUED.]

### Alameda County Notes.

EDITORS PRESS:—Considerable of the country around Haywards is devoted to fruit culture, but still a large portion is used for grain-raising. Chevalier barley seems to take the lead among the cereals. Crops, as well as prices, are below the average. The climate here is a little warmer than at San Leandro, though distant only about six miles. The same kinds of fruit are grown with about the same success, except that the climate is a little better for the peach and almond, both of which are doing well this year.

W. J. Bolce sold 155 boxes of peaches of 30 lbs. each, from 18 trees, at 75 cents per box. Fifteen cherry trees netted \$120 over freight, or \$3 per tree. These were of three different varieties.

Joel Russel rents out some of his fruit lands. Twenty acres of currants have netted him \$2,000 per annum for the last three years. This is more than is usually realized from 160 acres of grain. Farmers are beginning to realize that fruit pays better than grain where the climate, soil and nearness to market are favorable.

W. H. Jessup got 55,000 lbs. of cherries from about 13 acres. He sold 22,500 lbs. of red cherries to a canning factory at \$100 per ton. Year before last, some of his apricot trees paid as high as \$45 to the tree. He recommends the Shipley or peach apricot, as nearly as large as the Moorpark, and of a beautiful color all through, and while it does not bear quite as well as the Royal Golden it is a better fruit.

Rev. W. W. Brier, whose orchard is near Centerville, realized \$24.40 per tree last year from his apricots, which he sold at five cents per lb. He has an orchard of 50 acres of choice varieties of all kinds of fruit. This he is now renting for \$3,000 per annum, reserving five acres, and his dwelling house and barn. His fruit is well known in market, and commands the highest price, on account of its superior quality. The soil of his orchard is a rich loam, and yet he finds it profitable to irrigate occasionally, using several artesian wells for the purpose. The water is carried in a furrow midway between the rows, supplying the smaller roots at some distance from the trees. The canker worm, called by some the inch worm, did considerable damage to his apple orchard this year. He thinks their depredations are not to be permanent, and that they will disappear in a year or two; or, that if they do not, methods will be found to exterminate them. He is inclined to the opinion that the coming of most insect pests are periodical. They suddenly appear, and in a short time as suddenly disappear. Petroleum, if properly applied, will kill them.

C. Winton, near Haywards, has a fine place, and is largely engaged in fruit culture. He set out 3,500 young trees this year, mostly plums, and will bud 12,000 this year of different varieties—all for his own use. He has strong faith in the future of the fruit business.

Mr. Blackwood whose orchard adjoins that of Mr. Jessup near the depot, has a good sized orchard which has been profitable of late years. As already reported he realized \$13,000 from 12 acres of apricots last year. He is putting up a fruit drier for his own use. Mr. Blackwood set out his apricot trees about seven years ago, when they were a drug in the market. He, however, had faith in the future of the apricot, which has been justified by recent results. Two years after Mr. Blackwood set out his trees (as I am informed), Dr. Kimball pulled up and burned 700 apricot trees out of his nursery, there being no demand for them. Such are the changes in the demand for California products. The establishing of canneries has given a wider market for fruit, and given life to the business. With these and the patent fruit driers, no more fruit goes to waste. All is saved and utilized. All that the fruit grower needs is to select the right kind of soil in a suitable climate, plant only the best varieties which are in demand, guard carefully against insect pests, cultivate well and he is sure to reap a fair return for his labor. Present prices may not continue, but at half the present rates fruit will pay better than grain, where the conditions are suitable.

Nearly the whole country lying between the range of hills and the bay between San Leandro and Washington Corners (except a strip along the borders of the salt marsh embracing the country around Newark), is well adapted to fruit. This latter portion is low and strongly impregnated with alkali, and trees will not flourish in it. Some grain is raised, but the crops are small, and the land—much of it—is a tough alkali sort of cement, difficult to work, and will make any man poor that tries to farm it. This strip of land is fortunately not very wide; a short distance from it the land produces very well. There are numerous other orchards around Haywards, of which I have not time to speak. I will only mention those of Dr. Kimball, Mr. Crowell, Mr. Knox and Mr. Webb—all successful fruit growers.

J. H. Strobidge has his stock farm in this vicinity, and pays considerable attention to thoroughbred merino sheep, of which he has a

good-sized flock, bred with great care, which have obtained premiums at the State fair for several years.

Some attention is paid to raising vegetables in this neighborhood. Mr. Graham planted 150 acres of cucumbers, which were twice destroyed by the so-called squash bug, so that he had to plant the crop three times. From the last planting he will have a fair crop, the bugs having mostly disappeared. It took 700 days' work to replant, at one dollar per day, and 800 lbs. of seed was used altogether.

The country around Haywards is pleasant and the climate mild and delightful. It has good hotels, and is quite a resort for summer boarders from San Francisco. The village is about a mile from the depot. Stages carry passengers to and fro for 15 cents each. It is well supplied with schools and churches, and the morals of the place will compare favorably with those of other towns around the bay.

In a former letter I spoke of the gum tree forest planted about ten years ago. The types made me say two years ago, which was an error. To be exact, it was a little less than ten years ago, or about eight years ago. Twenty-two acres produced in that time 1,200 cords of wood. C. E. W.

### Tuolumne County Notes.

EDITORS PRESS:—I write with the warmest of your friends in pronouncing your paper indispensable to the farmer or horticulturist who has a desire to keep abreast with the march of progress. I am amazed at the extent of apathy and ignorance around me, and every where which limits your circulation, when it ought to be tens of thousands in California alone.

Tell the dealers and consumers in the lower country, that they will not see much fruit this season from this portion of the foothills. Not but what the yield and quality and quantity (except apples which are generally given up to worms) have failed, but that John Chinaman has monopolized all the orchards far and near, leaving the growers to purchase their own winter supplies, and for current use. Not a box of fruit will be shipped this fall where hundreds have been in past years.

No move has been made in this county, so far as I know, to combat the ravages of the orchard insect pests. What can one do with a couple of acres, alongside of a neighbor who has a dozen or more acres of fruit trees? It would be pouring water in a sieve to attempt to check the scourge that intensifies year after year; including the thieving and destructive linnetts.

It is some time ahead to make the announcement, but I propose next year to be an exhibitor of the famous, or to be famous new pears, "Kieffer" and "Leconte." Of the former you may expect to receive a sample in due time of the fruitage of a year-old graft. Not a word has been said by Eastern papers or the *RURAL* in praise of Kieffer that its beauty does not merit; and I am glad that a hundred young trees are in a vigorous state of growth, from last spring's grafting, for transplanting, in addition to some 30 or 40 old trees, grafted the year previous, which will come into bearing next season. Already my little nursery has been raided upon by those who share my faith in the coming "Kieffer" boom. J. WINCHESTER.

Columbia, Aug. 15, 1881.

#### From Another Contributor.

EDITORS PRESS:—We are so busy drying and attending to fruit that time cannot be spared for attending to the duties of the pen. We regret being compelled to dry fruits which would grace the table of a lord. We have not the facilities which we ought to have to send our products to market. Hence, we cultivate the peaches which are easiest handled in drying. We find natural fruit the best for that purpose.

Pears are abundant and of good quality. The moth does not seem to be so destructive this season as usual. We hope they will gradually wear away to other climes or cease to be altogether.

We find that the mildew on grapes is more extensive than expected. Gardens are affected which have hitherto been free. "Bad atmosphere," was the Frenchman's exclamation, as the cause. Even the Mission variety is badly smitten with the blight. Some of the foreign varieties are entirely destroyed.

Farmers find no market for wheat in Tuolumne county this season, owing to the large stock on hand—millers offering \$1.45 and \$1.50, which will not pay farmers from the plains, as it is worth as much at Modesto and Oakdale.

"Only half a crop!" is the general complaint. Many renters are selling off and going into more remunerative business. It is very discouraging to work hard a whole year and come out even, or even at a loss. The very best crops this season will leave a small margin for profits after satisfying the owners of the land. Farming ought to pay well. The isolated life of toil should be so rewarded, that each year should give a season of rest and recuperation for both body and mind. The mind, especially, should have an opportunity for improvement, mingling amongst the educated and refined, so as to give life and spice to their monotony of physical labor, and life amongst the solitudes of the country. The *RURAL PRESS* is doing a noble work morally and intellectually, but does it reach every home in all sorts of highways and byways? We fear not. Some are deterred from being subscribers by the pinchings of hard times, others



from penurionsness. But the latter class is small in California; the very atmosphere is averse to the spirit of the miser. In most of our rural homes the RURAL is a welcome weekly visitor. A choice bit is found for all tastes and fancies, without that literary contamination which is found in most of our papers and journals.

The mercury ranges from 103° down to 80° in the shade. Nights are pleasant and cool. We have a pleasant breeze by day and night, and one of the best climates for invalids the world can produce, but a poor one for making invalids of those who are fortunate enough to make it their home.

JOHN TAYLOR.  
Mt. Pleasant, August 14, 1881.

### Short Horns at the State Fair.

EDITORS PRESS:—I noticed an editorial in this week's issue, headed "The Short Horn Society and the State Fair," in which you jump at a conclusion without being posted as to the facts. You say: "The Cattle Breeders' Association, at its meeting in San Jose last spring, passed resolutions binding themselves not to exhibit unless the old premiums were restored." They did nothing of the kind. Mr. Sturgis attempted to get an amendment in to that effect, but after bandying of words, it was voted down. The following is the resolution that was passed:

Resolved, That the President and Secretary of this association be requested to confer with the Short Horn breeders of this State in reference to the propriety of refusing to exhibit at the ensuing State fair, if the Directors of the State Board should not restore the premiums as they were last year.

And I state, without fear of contradiction, that with the exception of Robert Ashburner and Mr. Wick, every prominent Short Horn breeder will exhibit at the next State fair, as I have their assurance by their selection of stalls at this early date. You have done the society a gross injustice by publishing an article tending to place them in a false position, and giving incorrect information to those who intend to visit the State fair to purchase cattle. Over 150 stalls are already engaged for the exhibit of cattle by the different breeders in this State, of Short Horn, Jersey, Ayrshire, and other breeds. I hope that you will lose no time in correcting an error which I am satisfied you would not intentionally make.

EDWIN F. SMITH, Secretary.

Sacramento, Aug. 19th.

[This is not a matter in which we mingled of our own accord. As we stated in the article to which Mr. Smith alludes, the statements regarding the action of the Breeders' Society were made by request of a leading officer of that society, and the explanation was made merely with reference to members thereof, to show why some breeders, who usually show cattle, refused to attend this year. We are glad to know the prospects for a stock show in general are good. If there should be anything further on the part of the Cattle Breeders' Society, it had better come from some one authorized to speak for that organization.—EDS. PRESS.]

## THE VINEYARD.

### American Vineyards Which Resist the Phylloxera.

[Written for the RURAL PRESS by J. I. BLEASDALE.]

#### The *Æstivalis* Class—Varieties Promising Well.

Cunningham.—Synonym, Long. Much like the foregoing in bunch and berry, belonging to the southern branch of the *æstivalis* class. Bunch very compact, heavy-shouldered; berry smaller than Herbeumont, brownish red, with blue bloom; skin tougher and thicker, ripening about the same time. Not so good for the table, but will make a very heavy wine of a Sherry character, while the Herbeumont is more like Rhenish wine. The must is very rich in sugar, but also in acid, and the grape very high-flavored. A very strong, short-jointed, late grower, ripening not even as well as the Herbeumont, and should, therefore, be cultivated only in the South. It succeeds splendidly in France, and is very highly esteemed there for its fruit, as well as its total resistance to phylloxera. It has heart-shaped leaves, not lobed. Specific gravity of must 110°.

Lenoir.—Synonyms, Devereaux, Black Spanish, Jacques, Jack Grape. There has been a great deal of confusion about this grape, and it has even been confounded with the Ohio, or Cigar Box, but I think the above is its true name. It is the same which the French have cultivated as Black Spanish, or Jacques, and value so highly, owing to its success in France, its entire freedom from phylloxera, and the excellent red wine it makes.

Hermann.—A seedling of the Norton, grown by Mr. Francis Langendoerfer, Hermann, Mo. Bunch long, shouldered, moderately compact; berry smaller than Norton's, black, with blue bloom, not very juicy, but very high-flavored, juice not so dark, and will make a fine golden Sherry wine, if properly handled. It ripens later than Norton's, and as it is a strong grower and very productive, is certainly worthy of extensive trial here and further south. Specific gravity of must 110°.

Rulander.—This is not the German grape of this name, but also one of the Southern *æstivalis* class. It also makes a very fine wine, of a Sherry character, but has, of late, become rather unproductive. Bunch small, compact, shouldered; berry small, brownish black, with blue bloom, very sweet and high-flavored. Specific gravity of must 112°. It is a stocky, short-jointed grower, with grayish wood, heart-shaped, shining leaves, and sometimes very productive, but rather fickle and variable. The same may be said of the Louisiana, which so closely resembles it that it has been confounded with it, but the wine of the Louisiana resembles a very fine Hock, while the Rulander has a Sherry character.

Alvey, or Hagar.—An exquisite little grape, earliest of that class; so good that the birds will generally take it all. Bunch medium, shouldered, loose; berry small, shining black; skin thin, very juicy, sweet and luscious, one of the best in quality I know, and makes a fine red wine. Specific gravity of must 90°. A stocky, short-jointed grower, with heart-shaped leaves, and about the only one of its class which propagates readily from cuttings.

Cordifolia Class (or Riparia, according to Engelmann).

This class, so far only represented by varieties of either indifferent quality, such as Clinton, Anghwick, Blue Dyer, Burroughs, Franklin, Huntingdon, Kitchen, Newark, Marion, Oporto, or such as are rather unproductive or subject to disease, as the Autuchon, Brant, Canada, Cornucopia, Golden Clinton and Taylor, also has taken a new departure, with the seedlings from Taylor, raised by Mr. Jacob Rommel, and now promises to furnish us the leading white wine grapes of the country, and likewise valuable market grapes. Had their originator produced nothing but the Elvira, he would be remembered by generations to come, but he is confident that he can still surpass it in quality, if not in productiveness and hardiness, for the latter would be impossible. Guided by the idea that the Taylor need only be improved in size and productiveness, as its wine was good enough, he sowed the seed of the best Taylor grapes he could find, and now, after nine years of trial with the Elvira, in which it has never missed an abundant crop, and after careful tests of the wine, I do not hesitate to call it the most useful, and in that sense, the best white grape we have, and were I restricted to one variety only, would unhesitatingly choose this. As it is not near as well known as it deserves to be, I will give a full description of it, and I think I can do the grape growers of our country no greater service, than in prevailing upon them all to try it.

Elvira.—Originated with Mr. Jacob Rommel, of Morrison, Mo., from seed of the Taylor, and fruited first in 1869, but has since improved every year in size of bunch and berry, until, from a very small but compact bunch, it has now become as large as Catawba in berry, and almost as large in bunch. Everyone should plant it for the following seven reasons:

1. Its extreme hardiness. It has withstood the extremely cold winters of 1872-73 and 1874-75, without the slightest injury; when even the Concord suffered more or less everywhere throughout the State, the Elvira produced a full crop.

2. Its freedom from disease. It has proved singularly healthy and produced full crops for 10 years in succession; when nearly all varieties rotted badly (except Ives, Norton's, Cynthia, and some other seedlings of Mr. Rommel, of whom I shall speak hereafter, the Elvira produced a full crop, averaging, in Mr. Rommel's vineyard, from 20 to 25 lbs. to the vine.

3. Its immense productiveness. All the fruit-bearing branches produce from four to six bunches, and a piece of a bearing cane with clusters about a foot long, weighed eight pounds.

4. Its handsome and vigorous growth. It is a stocky, short-jointed grower, not rambling, like the Taylor and Clinton, but a perfect picture of a vine, having thick, light green and abundant foliage, with pale gray, short-jointed wood, and is, therefore, well adapted to vineyard and arbor culture.

5. Its handsome bunch and berry. This has improved very much since it first fruited, and may still improve. Bunch medium, shouldered, very compact; berry about the size of the Catawba, round, light green in the shade, pale yellow where more exposed, transparent; skin thin, pulp tender, very juicy and sweet; flavor fine, pure, without foxiness, ripening a few days later than Concord.

6. Its fine quality for wine. The must of the Elvira is about as heavy as good Catawba, if well ripened. Specific gravity 85°. Makes a beautiful greenish-yellow wine, without foxiness, and a delicate and full aroma, resembling Riesling. In this respect it will satisfy even the most fastidious fancier of Rhenish wines, and as it can be produced cheaply, we shall have in it what we have been seeking so long, a true wine grape within the reach of all.

7. Easy propagation. It grows readily from cuttings, and being a Taylor seedling, is likely to be phylloxera-proof, and remain healthy.

We are, however, in justice, compelled to say, that it has one fault, which has proved a serious drawback to it in the East during the season of 1879. The bunch is so compact that the berries crowd each other, and being very thin-skinned, they are liable to crack after a drouth, succeeded by a shower of rain. Otherwise, it has proved a complete success, even at the East.

[CONCLUDED.]

## HORTICULTURE.

### Fruit Growing and Drying.

EDITORS PRESS:—Your card of the 14th inst. is at hand, and contents noted. This county is almost wholly interested in fruits and mines. The San Bernardino valley is probably freer from noxious insects than any part of the State, and the fruit interest is very largely increasing. There is a very great desire on the part of landowners, farmers, and such, to know what varieties to grow, and many are budding whole orchards to better kinds. Nursery stock is very scarce, Mr. W. R. Ingham, of City Creek bench, Mr. T. W. Cover, of Riverside, and Mr. E. G. Judson, of Lugonia, having the only stock grown in the county that the writer knows of, and Mr. Judson does not offer his for sale. There are, however, some thousands of trees budded this year, grown by Messrs. Cunningham & Turner, that will make a fair growth by fall, and will be for sale. Messrs. Ingham and Judson have about 7,000 one-year apricots and 2,000 peach trees.

The Lugonia Fruit Packing Co. have received this season about 120 tons of peaches, and the seedlings are but just coming in. They use the Alden evaporator and report the Smock as the best peach they have yet found for their purpose. This peach is a general favorite with the fruit dealers on the Delaware peninsula.

It is a very heavy bearer; its fruit is large and fine; easily freed from the stone; is an extra keeper and shipper; ripens late when other choice varieties are out of market; dries up little compared with other budded kinds, and makes better looking dried fruit than any other handled by the above establishment the last season. It is valuable for canning as well as drying; and if the writer could put out but one kind of peach, it would be Smock.

For succession of good fruit to dry and can, I recommend the following: Early Crawford, Foster, Early York, Late Crawford, Oakland Seedling, Susquehanna, Smock, Lemon Cling, White Heath Cling—the third and fifth being valuable only for drying, and the clings being principally valuable for canning.

The Hardwicke nectarine seems to be a success here, and it is a question if under proper treatment the Stanwick will not be as well—one of the very finest nectarines ever grown in this county or any other. We hope it may thrive, as it must always command high figures.

#### Proportion of Fresh and Dried Fruit.

Fresh fruit tested here made the following:

700 lbs Smock gave 105 lbs; dried proportion, 1 to 6 2/3  
500 lbs Early York gave 66 2/3 lbs; dried proportion, 1 to 7 1/2  
130 lbs Late Crawford gave 16 1/2 lbs; dried proportion, 1 to 7 1/2  
78 lbs Hard'k. Nect. gave 12 lbs; dried proportion, 1 to 6 1/2

There has been an absurd statement going the rounds of the papers, published in the San Francisco Bulletin, and copied by the Riverside Press and other papers that ought to have known better, to the effect that the proportion of dried to fresh fruit is about one-third greater than as shown in the foregoing statement. I make the above table to counteract any impressions that may have been gained from reading the item.

LUGONIA.

San Bernardino, Cal.

## THE FIELD.

### Chicory Growing in California.

A correspondent of the Stockton Independent has been looking up the chicory plantations on Roberts island, and, as the crop is one of which farmers generally know but little, we shall present the following condensed account of the industry and the matters affecting it: Chicory is grown by Bachman & Brandt, who occupy some very fine property lying along the river bank. Fine dwellings, with well cultivated grounds, good barns, mills and outbuildings, show a high degree of present prosperity or past success. Mr. Brandt was absent, but from C. A. Bachman, the head of the firm, and a most pleasant and agreeable gentleman, I learned many things in connection with the peculiar business for which these ranches are justly celebrated, which will be of interest to the public. Aside from the factory of Bachman & Brandt, I know of only one other of any importance in the State, and I am unaware of the existence of any chicory manufactories, outside of California, within the limits of the United States. There may be others, but I have not or do not at this time remember of learning of their location. A number of years since Messrs. Palm & Horne planted a chicory farm and erected a manufactory in Yolo county, on the Sacramento river, a few miles below Sacramento. For a few years, when chicory brought a good price, they realized a handsome profit on the venture, though much of their land cost \$100 per acre for "grubbing" and preparing it for the first crop. Of late years the occupation has not been profitable, for reasons which will be explained by and by, and which reasons apply with equal force to Messrs. Bachman & Brandt in their business venture.

The Start of the Business Ten Years Ago Was undertaken by Mr. Bachman, who imported the chicory seed from Magdenburg,

Prussia, and, by the way, still continues the practice. The planting and growing of a crop of chicory, with its manufacture for market, includes a heavy outlay for mills and the peculiar machinery employed. Such machinery must be imported from Europe, because none is manufactured in the Union. The great valley and delta of the river Elbe is the center of beet sugar and chicory manufactures, and the best and most improved machinery is made at Magdenburg, the central and chief city of this territory. In this place Mr. Bachman learned the mysteries of manufacturing beet sugar and chicory, and has utilized the knowledge thus obtained by successful operations on the low lands of the San Joaquin river.

From a small beginning, made several years ago, the firm have now 180 acres of chicory, a large mill and machinery for its manufacture. The seed is planted in drills, on land which, if not moist enough for the purpose, must be prepared for irrigation. The seed is planted in February, the roots gathered from the middle of August to the middle of October. Early gathering is necessary, as sun-dried chicory is better than that cured by artificial heat. When ready for gathering a plow is run along each side of the plants with subsoil cutter and lifter attached, which loosens the roots so that they can be easily lifted from the soil by the hand clean and ready for the cutting machine. This machine was imported from Europe, and is the only one of its kind in the United States. When the tops have been removed, the roots are placed in the machine, which cuts them into square blocks three-fourths of an inch in size. This accomplished, the drying platform comes in use next, and when the chicory has been dried as far as sun power will dry it, it is placed in the roasters, of which there are six, each holding two barrels, where it is roasted as coffee is before being ground. From the roasters it goes to the mill, where it is ground, put in barrels, and thus becomes the chicory of commerce, a favorite, and with many, a necessary substitute for and an ingredient and component parts of coffee. The product of the land is from four to ten tons per acre, green roots, though exceptional cases are reported, as high as 23 1/2 tons per acre having been grown under the most favorable circumstances. It requires 4 1/2 tons of green roots to make one ton of chicory. An engine of 40-horse power furnishes power for the manufactory, and the business, including the ranch work, gives employment to about 50 men. There is considerable chicory grown on the island, which is purchased at \$10 per ton at the mill, and there manufactured.

#### Protection Needed.

Chicory, like all marketable products, is subject to fluctuation in prices. That, the producers expect and can contend with. But it has been demonstrated by experiment that we cannot here compete with European producers for various reasons, chief of which is the advantage they possess in having cheap labor. The duty on the imported article is one cent per pound, which is but a trifling bar to its introduction. Were the duty two or three cents per pound, the chicory growers of this State would soon supply the markets of the Union with the product of home industry, and with an article equal to that imported. There is waste land lying along our large rivers—which would be utilized at once, under a protective tariff—to furnish all the market demands, and this tariff would permit of good wages being paid the employees and leave a fair margin for the producer.

At present there is no profit in the producing or manufacturing of chicory in this State. Its low price in the market, the high price of labor here, and low priced labor in Europe, all are against the California producer, though all could be changed by the addition of one or two cents per pound duty on the imported article. The wholesale price of the article is not half now what it was ten years ago. At that time there was money in the business. Now there is none, and soon the work must be discontinued, and the land devoted to other and more profitable use.

ANOTHER PREHISTORIC MAN.—Some human remains, evidently of great antiquity, says the Academy, were discovered a few months ago at Carabacel, near Nice, and have been reported upon by a local scientific committee, as well as examined by M. de Quatrefages. The bones had not been artificially interred, but were found embedded in a deposit of calcareous clay, at a depth of about nine ft. from the surface. This deposit was irregularly stratified, and contained a mixture of pliocene and eocene shells, showing that it had been formed by the reconstruction of the pre-existing strata. Of the bones the most remarkable is the lower jaw. This is sufficiently characteristic to enable De Quatrefages to refer it to the Cro-Magnon type. The fossil man of Nice, therefore, belongs to the same race as M. Riviere's skeleton from Mentone, both being probably of Paleolithic age.

A MECHANICAL COTTON PICKER.—This new invention, the appearance of which has for some time been foreshadowed—the combination cotton picker, with fingers of iron—will no doubt work a revolution in cotton-growing. It will, it is claimed, make a reduction in the price of growing of two cents per lb. The machine, by means of beaters and fans, takes the fiber from the boll, removes the seeds and all impurities, finally delivering it straightened and ready for the bale. Efforts are making to develop the machine in time for the exhibition at Atlanta.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Co-operation.

The subject of co-operation, is, in my judgment, more important as regards the future of England than nine-tenths of those which are discussed in Parliament, and around which political controversy gathers. \* \* \* These, as it seems to me, are the three substantial and indisputable gains of the co-operative movement—no motive for fraud, no liability to debt, no room for dispute between employer and employed. \* \* \*

If you accomplish these things, you will have done more for the world, or rather for that portion of it which adopts your ideas, than has been done, or is likely to be done, by any other agency with which I am acquainted.—Lord Derby.

For more than 30 years I have been testifying year by year, in all co-operative meetings, that this great movement has its foundation in religion, and therefore in Christianity. It is my view that there is no reasonable ground for co-operative organizations at all, unless as the root of their principles, and as the end of all their efforts, is the actual bringing home of the profits of work to those who do the work.—Thomas Hughes.

Co-operation, I am forced to believe, will bring men together in a living brotherhood, will beget mutual confidence and self-respect among the classes now too often suspicious of each other, may possibly check the rapidly increasing and remorseless materialism of the times, and may do something to arrest the growing alienation of classes, so observable by wise, thoughtful men, while even our downy Christianity may be possibly taught that the true way to win workingmen back to faith and reverence, is not by talking impracticable sentimentalities from pulpits, nor, in times of distress, throwing them crumbs from well-fed tables, but by bearing a hand in all sensible, practical measures, in teaching workingmen how they may best help themselves, and by demanding, with a steady voice and emphasis, that the chief producers of wealth shall have fairer opportunity than now in sharing in the general joy which your wealth produces.—J. H. Rylands, D. D.

I believe co-operation can place an effectual check upon monopoly; that it can render poverty unnecessary; that it is an educator in the best methods for applying moral rules to business affairs; that it is a practical teacher of associative action; that it is the best means for causing the mass of people to understand business processes, their duties and responsibilities toward each other, their rights and powers as citizens of the State. The next step of progress for America, is, in the propagation of the principles of co-operation.—Allen R. Foote.

### What Co-operation has Accomplished.

Between 30 and 40 years ago there began in England and Philadelphia two movements—in England, what is known as co-operative stores, and in Philadelphia, building associations, both of which have had the most remarkable success. They are both co-operative. One undertakes to procure and distribute ordinary family and personal wants by buying at wholesale, and as much as possible in the first markets, at net cost, and to save the profit to the consumer. The other undertakes to help families to use their rent, and a little more, for the purchase of their own homes. The man of family, who earns from \$1 to \$2 a day, who lives from hand to mouth, must buy his daily wants in smallest quantities—tea by the ounce, coal by the bushel, potatoes by the small measure, and so on. The poorer he is, the greater price he has to pay for all he buys. He who can afford to pay the least, must pay the most. This is a wretched and a shameful wrong, and it is just here that the co-operative store comes in with its beneficent proposition, and says to 1,000 or 10,000 of these men: "Cluh your dollar a day together, and buy your coal and flour, your tea, potatoes and bacon, your milk, meat and fish, at wholesale, and thus add 10% to 20% to your daily wages. Or what you could do just as well—save that 10% or 20%, and live just as well as before." It is not a new notion, nor a speculative scheme. It is a proved success. Hundreds of thousands of workingmen in England have accepted the proposition, and are realizing its benign advantages.

The first society of this kind in England was called the Rochdale Equitable Pioneers. It began with 28 members and \$140 capital, in 1844—36 years ago. Now it has 10,430 members, and it has accumulated a capital of \$1,600,000. It has had no windfalls of luck. It has had nothing more than intelligent and honest business management. Its example has been followed by over 1,500 other communities who have organized into co-operative societies, and to-day the membership of those 1,500 societies numbers over 500,000, their joint capital over \$30,000,000, and their net profits last year were between \$9,000,000 and \$10,000,000. There is one wholesale co-operative society in Manchester, supported wholly by these retail societies in the north of England, and its sales last year amounted to \$15,000,000. This society keeps its buyers in all the best markets in the world. It has one in New York to buy cheese, lard, etc., and his purchases last year amounted to about \$1,300,000.—The Co-operator.

### Death of G. W. Colby.

The sudden death, in this city, of G. W. Colby, President of the Grangers' bank, has deeply grieved his many friends. The prominent position he has held in Grange councils has given him wide acquaintance in the Order, and his absence will be deeply regretted. The *Sacramento Bee* gives a sketch of Mr. Colby's life and the incidents of his death, which will be of deep interest to his friends. We shall have hereafter tributes to his memory from his Grange associates. The *Bee* of Saturday says:

Telegrams received in Sacramento to-day from [San Francisco announce the death of George W. Colby, at the latter place, at an early hour this morning. On Wednesday the *Bee* made mention of Mr. Colby having passed through this city on the way to the Bay, also of the fact that he was at that time suffering from an attack of brain disease, for which he was treated by a resident physician of Sacramento. He continued on his journey, was taken worse on arriving below, and, in response to a telegram, the doctor who had attended him here went to San Francisco on Thursday afternoon. Human skill, however, proved powerless to aid him, and this morning he died, as before stated. The deceased was perhaps as well known throughout the State as any resident in central California. He was a pioneer, having come to the country in 1849, and held membership in the Sacramento Association. In early days he located in the vicinity of what is known as Colby's Landing, on the upper Sacramento, where he maintained a ferry and became well known. Subsequently he engaged in merchandising and farming, and accumulated considerable means. He was latterly agent for the Central Pacific Railroad Co. at Nord, Butte county, in which locality he owned considerable real estate. He was also a prominent member of the Masonic fraternity, and of other organizations. His age was about 55 years, and he was at all times in apparent good health. He was twice a widower and leaves four children, who reside at Benicia. When his first wife died she requested that he give the raising of them to a schoolmate of hers, who was at that time engaged in missionary service in India. Mr. Colby, in response to his dying wife's request, at once communicated with this lady missionary, with a view of having her come to California and take charge of the children. In response she notified him that she was about \$1,000 in debt there—in connection with her labors—and that she could not leave till that indebtedness had been paid. Mr. Colby at once supplied the necessary money, and the lady came to this State. Shortly after he married her, and about three months thereafter she contracted a severe cold, on a trip up the river, which culminated in her death before she had been many months a bride. He leaves considerable property in various portions of the State. He will be buried at Benicia to-morrow, under the auspices of the Masonic fraternity and California Pioneers at that place.

### The Railroad Commission.

The following resolutions were adopted by Walnut Creek Grange, No. 119, Patrons of Husbandry, July 29, 1881:

WHEREAS, in the adoption of the new Constitution for the State of California all honest men who voted for its adoption believed that it offered a sure and speedy relief for many of the oppressions under which the productive and material interests of the State were laboring, one of the most aggravating of which was the high rates of freight and fares charged by the railroad companies of the State; and believing, as they evidently did, that no man with sufficient standing and influence to be elected to the high and responsible position of Railroad Commissioner could be found unreliable enough to evade the one great object before him, and base enough to betray the solemn trust committed to him by too confiding a people, yet have found their hopes in vain; therefore

Resolved, That, while we fully agree with St. Helena Grange in awarding to Gen. Stoneman, one of the Railroad Commissioners, the full measure of praise due to an honest, upright and faithful servant of the people in the discharge of an onerous trust, we at the same time condemn in the same unmeasured terms the action of Commissioners Cone and Beerstecher in refusing to join with Gen. Stoneman in granting to the people the relief so justly due, by removing from the productive and mercantile interests of the State an unjust and oppressive burden.

Resolved, That if the newspaper reports be true that Commissioners Cone and Beerstecher have purchased large tracts of land from the railroad companies or others, it is our opinion that justice to themselves, as well as the people, demands that they show that the means to make such purchases were not corruptly obtained, and, failing in this, it is hoped that their ill-gotten gains may produce the same effect as did the 30 pieces of silver on Judas.

Resolved, That we request each subordinate Grange in this jurisdiction to express its opinion on the subject.

Resolved, That the Secretary be instructed to send a copy of these resolutions to each of the Railroad Commissioners, and to the *RURAL PRESS* and California Patron for publication.

W. K. DALRY,  
Secretary Walnut Creek Grange.

### WALNUT CREEK GRANGE AND THE INSECTS.

The *Contra Costa Gazette* says the prevalence of the joint worm this season was a subject of discussion at the last meeting of the Walnut Creek Grange, when a committee was appointed to collect specimens of the grubs and eggs for identification by the agricultural department of the State University, and its advice as to the practicability of their extermination. It is doubtful, however, if anything but a burning of all the infected straw and stubble will destroy the annual seed stocks of the flies that produce the joint worm, Hessian and stem-fly grubs. So far as we can definitely learn, it is only the joint worm fly from which the wheat in our vicinity has suffered to any appreciable measure as yet, and this we have had with us for a dozen years or more, but never to such extent as this year. The fly of this grub punctures the stalk near some of the lower joints, deposits an egg in each puncture, and the grubs, when hatched, feed and grow upon the juices of the plant, which are thus diverted from their proper functions of forming grain. The stem and Hessian flies lay their eggs under a leaf sheath, upon the surface of the stem, and the grubs when developed feed upon its juices, with the same effect of robbing the head of its due portion of food, and remain upon, or in, the straw until the period of moth development is again reached; and the only practical mode of destroying them is by burning the infected straw and stubble, as for the joint worm fly.

### Adjourned Wheat Growers' Meeting.

It will be remembered that the wheat growers of the State held a meeting in Grange hall, in this city, on the 14th and 15th of April last, for the purpose of devising ways and means to improve the quality and decrease the expenses of handling and shipping wheat to foreign ports. After two days' discussion of the subject, in conjunction with its many bearings, it was finally agreed that the time was not propitious for final action, when the following resolutions were adopted for the original report of the Committee on Organization:

WHEREAS, As it appears from circumstances that no immediate action can be taken which will materially alter the present depressed condition of the wheat market; therefore,

Resolved, First, that we recommend that the matter of organization be deferred to a future meeting of grain growers, to be held in San Francisco on the first Monday in September next, at 2 p. m., at the Grangers' hall, and that in the meantime we respectfully solicit the assistance of the Grangers' Business Association of California in acquiring the necessary information upon which intelligent business action may be taken in the matter of selling and shipping grain.

The committee which made this report, and to whom was assigned the duty of preparing a plan of organization to be presented at the wheat growers' meeting, called for the first Monday in September, is composed of the following named gentlemen: Messrs. Hugh M. Larue, Wood, Moulton, Dudley, Ostrander, Murphy, Pansell, Thompson and Mr. Vinson, of Stanislaus. It will certainly be to the interest of every grain grower in the State to attend the meeting called for the first Monday in September, for there are involved matters of vital importance to all concerned, and it is hoped that every farmer who can, possibly, will be in attendance.—Patron.

COME CLOSER TOGETHER.—The Grange is the best agency the farmers ever had to bring them close together, teaching them to depend on each other, learn from each other, and help each other. It exemplifies the advantages and blessings of a united community. By coming closer together men know each other better and have more confidence in their neighbors. It breaks down party spirit, and eradicates party prejudice; makes us feel that our interests are one, and that "in union there is strength." Safety is only found in truth and right. If all of the best farmers in the neighborhood would unite in a live Grange, it would pave the way for great intellectual and moral advancements. In a country governed by the people, liberty alone will be perpetuated by the great mass becoming thoroughly imbued with political economy, and prepare to take their part in the government. *Grange Visitor*.

GRANGE RE-UNION AND HARVEST FEAST.—Yuba City Grange will hold a re-union and harvest feast on Saturday, September 3d, 1881. All the neighboring Granges are cordially invited to attend and participate in the good time which is always had on these occasions. The Grange meets at 10 A. M. sharp, for degree work and other exercises, which take place before the feast.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### COLUSA.

FINE PEACHES ON THE PLAINS.—*Sun*, Aug. 20: Jim Danley sent us this week a sample of peaches, as he says, to show us what can be done on the dry plains without water. Some of them were ten inches in circumference, the short way. These peaches were raised without irrigation, at his place west of Maxwell. Danley is a great believer in cultivation. "Plow deep and plow often" is his motto, and he has made it pay, both for fruit and wheat. He thinks every man on the plains ought to have an orchard. He has quite a large one in which is growing almost every variety of fruit. John Sites, of Antelope valley, brought us Thursday, a box of very fine white free-stone peaches from his orchard; a sample of what Antelope could do. These samples of fruit, all very fine, from different portions of the county, show that fruit can be grown in any part of Colusa county with entire success.

#### EL DORADO.

EDITORS PRESS:—While on a visit of observation to Georgetown, my old home, I have noticed, perhaps more closely than those who have remained here, the many changes and the causes that have produced them. In the propagation of shade and fruit trees it is wonderful what strides have been made since 1850, mostly since 1854. A Mr. Jenkins, Mr. Graham and ex-Senator Conness were among the first to introduce fruits, vines and berries, and though considered visionary at the time, soon proved them not only practicable, but profitable. It was found that the soil and climate were just adapted to the production of the finest of fruits, and everyone pronounced in favor of its flavor and size. Now the country abounds with shade trees, almost shutting out the village, and orchards and gardens yielding almost to overabundance, every varieties of fruits, berries and vegetables. The fruits hardly compare with first crops, partly owing to the trees being older and somewhat neglected because of the quantity, and because there is no profitable market in its fresh state. To improve the fruit, let us suggest more pruning and the free use of water, only in the early summer. Speaking of

the necessity of irrigation, causes us to say that too much is as bad as none. Indeed, deep cultivation seems better than too much water. There is a lot of vines growing on a dry red hill, on the east side of the town, that are, perhaps, ten years old, standing the beat without wilting the least, looking green and healthy, having made a sufficient amount of wood, heavily loaded with big bunches of grapes, and with deep cultivation and no irrigation. Other vines, well irrigated, wilt under the hot sun.—Rock, Georgetown.

FRUIT DRIER.—*Republican*, Aug. 19: B. G. Parlow of Placerville, and D. E. Norton of El Dorado, have bought the exclusive right to use, manufacture and sell the Burns patent fruit drier in El Dorado county. Mr. Parlow, we understand, will begin the erection of a factory drier at once at the ranch of Californian Fruit Growers' Association, of which he is superintendent, in order to utilize the immense plum and prune crop now rapidly maturing.

#### KERN.

FINE GRAPES.—*Californian*: Dr. Thornton brought into town on Tuesday last some boxes of grapes from the Stine farm (of which he is now the owner.) They were of a delicious variety known as the "Rose of Peru." One of the smaller bunches, which we had the curiosity to put on the balance, weighed 7½ pounds.

THE SHEEP INTEREST.—The sheep interest, that was on a decline a few years ago, is now assuming larger proportions than ever. This is because it is being found very profitable to raise them on small farms—on alfalfa. This is being done here to a considerable extent, and is a method of utilizing the produce of the soil that is growing in favor. The wool is much superior, and brings a higher price than that shorn from flocks on the outside ranges.

#### LOS ANGELES.

FRUIT CANNING.—*Commercial*, Aug. 19: We have been favored by Mr. A. H. Judson, President of the Southern California Packing Company, with a statement of the amount of goods prepared since the starting of the factory on the 20th of June last. In that time this establishment has turned out 12,840 cans of apricots, 21,600 cans of peaches, 2,640 cans of corn, 2,640 cans of pears, and 4,800 cans of mixed varieties of fruits and jellies, up to Saturday, Aug. 13th, making 44,520 cans.

#### MENDOCINO.

TWO COYOTES KILLED.—*Dispatch*, Aug. 18: For some months past the sheep men in the section of country reaching from Potter valley to Eel river have suffered greatly from the depredations of "varmints" of various kinds, which became so great as to compel them to join together and offer bounties for the scalps of the different animals. Among the rest it was known that several coyotes were ravaging among the sheep, which it was especially desirable should be exterminated, as they are more destructive than any other. To make it an object, a reward of forty dollars per head was offered for the killing of these animals, and the offer had the effect of stimulating our hunters to extra efforts. Among others who have been hunting for these animals, were Alonzo Corder and Thomas Burris, the former of whom succeeded, a few days since, in killing two of the miscreants. It is estimated that these animals alone have killed at least five hundred sheep within the past year, consequently the sheep men are joyous over their death, and have paid the eighty dollars which they had promised with pleasure. [We understand that the depredations of the coyotes is far greater than stated, as one man lost 500 lambs. Probably not less than 2,000 have been killed altogether in Potter Valley neighborhood.—Eds. Press.]

HOP PICKING.—*Press*, Aug. 19: Commenced this week at Luce's, Fine's and Berryhill's yards. The crop is quite promising at each place. Mr. Luce exhibits a sample of blossoms growing on the male hop plant, and very fair blossoms, too. They are of fair size, and in general appearance resemble the Santa Clara Valley hops. Merchantable hops from male vines may be classed as an unusual freak. It may be that the vines under consideration are hermaphrodites, as they show both seed and fruit in close proximity. Bartlett will commence picking next week, and most of the yards will be in condition by that time. The opinion of hop men is that this section will give a two-thirds crop this year. The yield will certainly not go above that estimate.

#### MONTEREY.

COYOTES.—*Democrat*: Sheep-owners of this county say that coyotes and wild cats are committing great depredations upon their flocks. Poison avails little against them, the coyotes especially having become so cunning to take it. The rifle and trap must be resorted to and those employed with method and persistency. Looking to the fact that the property destroyed is of value for taxing purposes, its owners think they can with propriety ask of the Supervisors that they offer a bounty of suitable amount in each case for the scalps of lions, coyotes and wild cats and they are circulating a petition to that end for signatures. Several of the sheep-owners in question have been telling us of the damage they have sustained during the past year from the above mentioned causes, being of almost incredible amount. The policy indicated appears to be equitable and ought to be urged with vigor.

#### NAPA.

THRESHERS' FIGURES.—*Napa Register*: John Errington, with his crew of 17 threshers, re-



turned from the San Joaquin country Monday. They have had a very prosperous season, having earned in 51 days \$4,684. Their outfit was regarded as the best on the San Joaquin, and was ably manned, Lath. Tunnison acting as separator tender and Geo. Errington as engineer. The rates they charged were 10, 11 and 12 cents per hundred. Some days they threshed as high as 1,200 sacks. In the foothills, where the yield was light, they received \$100 per day. They have considerable threshing yet to do in this vicinity, and have already made as many engagements for next season as they can well fill. **SANTA CRUZ.**

**BARLEY.**—*Pajaronian*: From threshers we learn that barley is turning out well at nearly every stand. Five acres of barley on Mulstay's place (the old Casserly island) turned out over 300 cents. A good yield. We saw one place last Sunday where the barley was so short that it was not profitable to cut it. Wheat continues to yield light, though occasionally an exceptional field is found. Some threshers claim, owing to the small acreage in barley, that but little more than enough barley for home use will be produced in the Pajaro valley this year. Owing to the extreme cheapness of barley for several past seasons, our farmers did not put in much barley this year.

#### SAN JOAQUIN.

**THE GRATTAN DOUBLE GANG PLOW.**—Yesterday an examination was made of Dr. Grattan's double gang plow; and it seems destined ere long to take rank with other great labor-saving machines. The machine is too extensive to be described in this item. Those interested in it can easily inform themselves on all points in relation to it. It consists of two parts; the forward part, carrying 12 plows and a shovel for tilling in the dead furrow, being particularly adapted to cross-plowing summer-fallow; and the whole for seeding, plowing in the grain from two to three inches deep. It is mounted on wheels, and a man can utilize the wheels of his wagon to lessen the cost of the plow. The fore part has a cut of eight ft.; the whole twelve ft. T. S. and A. H. Cole used one of these plows this last spring on their ranch. With an eight-ft. cut, they plowed 100 acres in four and one half days with seven horses and one man. With a twelve-ft. cut—the whole machine—and ten horses, a man can plow 30 acres a day. The expense of plowing on the Cole ranch, including the keeping of the team, was 17½ cents per acre.

**GRAIN CLEANER.**—*Independent*, Aug. 18: J. C. Bowden, who manufactures the Golden Gate separators, has been down on Roberts island, running one of the separators—a big one made to be operated by horse or steam power. Some of the crops there were unusually foul, and Mr. Bowden had constructed this separator with a capacity of 50 tons per day. It has on the top, for a receptacle of the grain to be cleaned as it leaves the hopper a rolling screen nine ft. long and four ft. in diameter, constructed to take out cheat. It has also a suction fan which helps to take out cheat, and which removes a great deal of barley and oats, and smut and bits of straw and weeds, and everything lighter than the grain itself. The wheat then goes into rolling screens which take out the broken kernels of wheat and every small substance which has passed the first screen and fan. The grain then falls upon still another screen, made of zinc, and so perforated as to allow the wheat to fall through while it retains and throws off barley, oats, etc. By this time the grain is clean. On Roberts island the man said this separator had been used on 1,000 sacks of wheat that was very smutty. It took out all the smut and increased the market value of the grain \$6 per ton.

**GRAPE PRICES.**—*Independent*: Seeking for information on grape prices the writer went to George West, who is probably the best posted man on the culture of the grape in this section. Mr. West said it was true that all the grapes in considerable quantities had been bought up, especially Tokays, for shipping East. Prices ranged about last year. The crop here was light. In the first place there were not more than about 500 acres in grapes in the whole county. He had contracted his crop at \$20 to \$30 per ton delivered at the depot or to wine-makers. William B. West and two or three others had done the same at from \$18.50 to \$30. All the principal crops had been contracted at like figures, which were about the same as last year and were considered fair prices. The Stockton market amounted to but little. No one sold here who had any amount of grapes. He saw no reason to think there would be a greater demand than usual. The crop elsewhere in the State was abundant. He shipped last year to San Francisco, and when all expenses were paid had but \$20 per ton left for his crop. The light crop here was due partly to mildew and partly to other causes. In many places the early frost of last season—an unusual thing—cut the vines badly. It came when the vines were full of sap and proved to be very destructive. His Black Princes were frozen badly; but they were coming out finely—better than was anticipated—yet, it would take two years to get them to bearing as before. Other varieties suffered too.

#### SAN LUIS OBISPO.

**WHEAT.**—*Cambria Cor. Tribune*: Enough of the wheat crop of this section of the county, has been threshed, to enable your correspondent to form, with some accuracy, an idea of the yield this season, as compared with last. As a general result, it may be stated, that the number of sacks or bushels is, as a general rule, less than

last year, whilst it is also true, that the general weight per sack is heavier, by 5 lbs. to 8 lbs. than it was last season; yet this increase in weight per sack, will not prove sufficient to prevent the yield in this section from being considerably less than it was in the harvest of 1880. Even a slight increase in the acreage sown this year will not prevent the wheat crop from falling short of the standard of last year in quantity. Sacks range this year in weight from 140 lbs. to 145 lbs.

#### SACRAMENTO.

**TOBACCO GROWING IN SACRAMENTO.**—*Record-Union*, Aug. 20: George Spiker yesterday exhibited samples of this year's growth of Havana tobacco raised by him on Lowell's ranch, about three miles from this city. He this year had in five acres. The yield is estimated at from 900 to 1,200 lbs. per acre. The first crop he harvested six weeks ago, and cured it with much success. He gets three crops a year. This is his second year of the experiment in this county. He says he is confident this climate and soil is admirably adapted to tobacco culture. The winter frosts did not affect the plants, which were, of course, properly sheltered, the first of which came up in February. The Havana seed he put in in January; the plants spring up in about three weeks. Late in March, the weather being favorable, they are transplanted. Mr. Spiker was a tobacco-grower in Guatemala, and also in Australia. The climate for tobacco is here, in his estimation, equal to that of Central America, and the soil is just as good, if not better, while the worms that are liable to injure the plants are fewer and less destructive here. Mr. Spiker, being asked concerning his curing process, replied that it was his secret. It is the result of long experience, and therein lies any success to be attained here in the industry. Any process which will cure the leaf after drying, so as to make it properly tough, and prevent it growing brittle before coming to the manufacturer's hands, is to be approved. Thus far, his tobacco growing here has been experimental, but to him successfully so. The plants from the Havana seeds, he says, do not here produce the long rank leaf which proved so disastrous to tobacco-growers on some of the too rich soils of other valleys of California, and which rankness no curing process used by those growers would successfully treat.

#### SAN MATEO.

**ARTESIAN WELL.**—*Redwood Gazette*: H. W. Seal has an artesian well close to his residence at Mayfield, which discharges more water than he knows what to do with. He works a ram with the overflow and pumps all the water needed for domestic purposes, for irrigating his lawn and gardens, for the use of his stock, and then has enough running to waste to keep his large fish pond constantly filled with fresh water. The water is of splendid quality, and rises in a stand-pipe 15 ft. above the surface of the ground. He considers the well worth \$50,000.

#### SONOMA.

**HORSE BREEDING.**—*Petaluma Argus*, Aug. 19: In proof of the fact that it pays to raise good horses, we will mention the sale of a pair of Petaluma horses that came under our observation a few days since. The team was sold in San Francisco by Dan Misner of this city, to W. E. Dean, the well-known broker. One of the horses was six and the other five years old. They were of the prevailing color of their sire, McClellan, sorrel—closely resembling chestnut—of good size, style and action. They had received but little exercise upon the track, yet could step along at a three-and-a-half gait. They brought \$1,500 in gold, which seemed like a large sum for a pair of horses that had received so little in the way of a track education. But these horses had a blood-like, or, if you please, aristocratic appearance.

#### TULARE.

**FAIR ASSOCIATION.**—*Delta*, Aug. 18: Pursuant to the call, a meeting of subscribers to the capital stock of the District Fair Association was held last Saturday afternoon at the City Hall, Visalia. A. J. Scoggins, of Lemoore, was elected Chairman of the meeting, and G. A. Botsford, of Visalia, Secretary. Encouraging reports were made from all parts of the county except Tulare, which was not represented. Those from Tulare and Kern counties were good, although no districts have been thoroughly canvassed. On this account it was decided that it would be best to postpone the organization one week. An executive committee of nine was consequently appointed to canvass for subscribers and make arrangements for organization and for representation at the next meeting. The committee is composed of the following: E. Jacobs, F. J. Walker and E. J. Edwards, Visalia; H. Hamilton, Kaweah; F. G. Jeffers, Farmersville; A. J. Scoggins and E. Giddings, Lemoore; H. W. Hammond, Tulare; E. Gallup, Hanford. Adjournment was then had until tomorrow (Saturday) at 2 P. M. From the interest manifested generally in the enterprise, there can be no doubt that the organization is an assured fact, and that a fair will be held in October.

**CROPS AND PROSPECTS.**—*Editors Press*: The grain yield falls short about one-third of last year, but it makes up in quality, as the grain is all well filled. The apricot and plum crops about a failure this season. Caused by extreme cold spell last November killing the fruit in the bud. Peach crop fine. Apple, about a half crop. All the available teams in the county are engaged in hauling grain to the warehouses and depots. Most of the farmers are selling their grain, as it was a losing speculation in storing

last year. There is a bright future for our county if we can only get a competition railroad; as it is, we are at the mercy of the S. P. R. R., and but little mercy they show us. We pay \$4.35 per 100 from Goshen to Benson, in Arizona, on fruit, and it is only \$2.80 from Sacramento, and \$3.25 from San Jose, while we are 250 miles nearer than either of these points; yet this is not discrimination.—J. H. SHERMAN, Visalia.

#### NEVADA.

**IRRIGATION APPLIANCES.**—*Carson Appeal*: John Asberry, a man who has a little ranch on the suburbs of Carson toward Swift springs, has been unable to secure water to irrigate his land, and has finally solved the problem independent of anybody. He dug a well 13 ft. deep, and struck two veins of pure cold water. He then erected a windmill at an expense of \$40, which pumps 7,000 gallons of water upon his land every 24 hours. The windmill is built on an entirely new plan, and a caveat has already been filed preparatory to securing a patent. The windmill consists of four boards, about seven ft. long, fastened to long arms projecting from an axle. The wind acts on the affair just as water acts on a overshot wheel. The wind only strikes the upper part of the wheel, the lower part being inclosed by a board fence. In a slight breeze the mill revolves about 20 revolutions per minute, but in a good, stiff gale it flies so fast that a sliding board must be raised to shut off the wind. The wheel is connected with the plunger of the pump, and the water flows in a steady stream. The mill was running briskly yesterday when some of the big mills costing \$250 were not moving. The success of this scheme solves the problem of irrigation in Nevada. Any man can sink his well and erect his mill of rough lumber, and have his field irrigated, at an expense of \$50, with his water-flow perpetual.

#### The San Leandro Plow Works Completed.

We are pleased to announce that the new agricultural works at San Leandro are now complete and ready to fill orders for anything in the agricultural line, from a wheelbarrow to a gang-plow.

The works comprise a plowing mill, pattern shop, blacksmith shop, plow shop, machine shop, foundry, paint shop, etc., and is one of the neatest, best arranged and best equipped establishments of its kind in the United States.

Work was begun on the buildings about May 15th, and everything was in place and the machinery running August 20th, a little over three months from the time ground was broken. This may be considered quick work.

The tools are nearly all of the latest styles and are supplied with ample power by an elegant 50-horse power Corliss engine. The cars of the Central Pacific run through the works in such a way as to afford the very best facilities for shipping and receiving freight.

The company will manufacture during the coming fall seed sowers, harrows, gang plows, cultivators, wagon beds, etc.

They write us that they will show us, ready for the public, a new gang plow in a few days, that for simplicity, strength and the ease with which it may be raised and lowered, has not hitherto been equalled.

They are also making a new seed sower for which they claim important advantages over either the Gem or Cahoon, uniting the merits of each in one machine, and obviating the objections to them.

The mechanics in this company are men of long experience, and have been selected with special reference to their skill and fitness for their various duties.

The San Leandro Plow Company is an independent concern and not a branch or part of any wholesale hardware house.

They expect to sell direct to farmers and interior merchants. To the former they offer first-class goods from first hands at as low a figure as a square business will permit; to the latter they allow as large a discount as possible.

Their card in our advertising columns gives further information.

#### The First "Anti-Monopoly Railroad."

Last Monday, the 15th inst., the first mile of the James' Single Track was commenced near Hanford, according to announcement. The first mile was surveyed by E. P. Irwin, with the assistance of several officers and friends of the road. At 3 P. M. the following persons assembled at the starting point to witness and aid in the breaking of ground and the plowing of the first furrows: Dr. A. Bradley, President of the road; F. J. Clark, Secretary; E. P. Irwin, Surveyor; W. W. Barnes, Rev. N. W. Motheral, Judge Courtney Tolbot, Judge W. P. Friend, E. Bonham, A. Shoemaker, James A. Hill, C. M. Coe, I. P. Alcorn, J. M. Purvis, Chas. Wilson of Merced and J. W. A. Wright. The sod was broken by Dr. Bradley, who said: "In the name and in behalf of the monopoly-oppressed of the world, I now break ground on the first anti-monopoly railroad." Mr. Hill then plowed the first furrow along the line to be graded, for the first half mile. The grading was begun Tuesday, and has been progressing steadily throughout the week. The first lumber for the track has already been received. It is the intention of those most directly interested to have the first part of the road completed as soon as possible. A day for trial of speed, etc., will be set in good time, as the road approaches completion.—*Visalia Delta*.

#### News in Brief.

A PETROLEUM spring has been found in Butte county.

The mania for gambling in grain is spreading in the East.

ALBUQUERQUE, N. M., is to be supplied with coal from Arizona.

The Colton cannery pays out \$5,000 a week for fruit and wages.

The Central Pacific railroad is replacing its iron rails by steel ones.

The estimated surplus grain for export this season will reach 300,000 tons.

At Seattle, W. T., the run of salmon has begun, and promises to be very large.

The duty on the railroad iron brought to San Diego by the *Trafalgar* a few days ago was \$71,800.

The Chinese at Modesto have organized among themselves what they claim to be a Lodge of Freemasons.

The subscriptions to the public monument to Beaconsfield amount to only \$5,000, which disappoints the committee.

JOHN EVERETT NILLAIS has been appointed a trustee of the National Portrait Gallery, in place of the late Dean Stanley.

The Almaden Mining Co. are storing 2,700 tons of English stone coal. A number of teams are engaged in hauling it from San Jose.

The worst water famine ever known in Richmond, Va., now prevails. The workshops are closing, and even residents are without water.

A GIGANTIC acid tank was set in place at the Lyon Mill and Miuing Co's. works last week. It holds 2,780 gallons, and took 2,780 pounds of lead to line it.

ENGLAND still watches actively the movements of North Africa. The prompt action of the ship *Monarch* respecting the outrage on the *Susa* is much approved.

A BASKET left at the Midland railway station, in London, by two men who immediately decamped, was found to contain a large quantity of gunpowder and cartridges.

THE pine, oak and cedar forest of Northern Arizona are very extensive, and if placed together they would cover a tract of land 350 miles long by 60 miles in width.

THIRTY-FIVE hundred men are at work on the line of railroad between The Dalles and the Cascades, and it is expected the line will be completed by the end of September.

A VIENNA dispatch says the excessive rains in the last few days have damaged the harvest in many places, and in the districts of Laibach and Corinthia it is entirely destroyed.

THE military authorities have been ordered to prepare flying detachments to proceed to different parts of Limerick county at a moment's notice, as disturbances are anticipated.

A DRUNKEN man at Buffalo fooled with two of the "brushes" in an electric light generator and was picked up dead. Fully a dozen men have been killed about electric lights in the past year.

#### Return to Apache Land.

**EDITORS PRESS:**—It was a delightful surprise to meet Prof. and Mrs. J. G. Lemmon in Los Angeles on their way to Apache Land. They are confident that the confusion of Indian raids, wash-outs, etc., will redound to their botanical interests by securing means of transportation and military escorts to the mountain fastnesses.

We commended them to the Great Bear, "the constellation that never sets," last night, as we waited for the appearance of the new comet, and have no doubt they will return safely, bringing precious sheaves. J. C. C.

Pasadena, Aug. 21st.

**THE INCUBATOR DISPLAY.**—The exhibit of chickens and ducklings hatched by the Eclipse incubator, and the incubators themselves in operation, is voted by all one of the most interesting displays of the Mechanics' fair. The location in the east gallery is an excellent one, and the arrangements of the agent, George Wickson, for the display of the machines and their product are very praiseworthy. There are two incubators, from which birds are coming out from day to day, and three artificial mothers or "brooders," one of them in the form of a miniature tent which is much admired. The vigor of the chicks, although they are kept awake until a late hour every evening for the entertainment of visitors, is generally remarked. Mr. Wickson's show also includes a pyramid of the famous "Imperial Egg Food," which many poultry growers are now using with satisfactory results.

**PRUNES.**—Mr. W. H. Jessup brought to the Mechanics' fair on Saturday a branch of the Hungarian prune, three-fourths of an inch in diameter, loaded with handsome large prunes weighing from three to five ounces each. It had 72 on it when he started from his place in Hayward. Mr. Jessup had also a box of Petite d'Agén prunes, dried with the Plummer dryer, which were exceedingly handsome and finely flavored.

**PROFESSOR STEVENSON**, of the Smithsonian Institute, is organizing at Fort Wingate, his geological and surveying party. The Professor's work for the present will be the establishment of a base line 12 miles in length, to be used in triangulation. A number of naturalists and special scientists are included in the party, and they will explore the western part of New Mexico and the eastern part of Arizona.





### The Heart of the Nation.

I.  
Under the hungry waves that roar  
And chase their pray to the fatal shore,  
Deep down 'neath all this seething strife  
Whelming in ruin treasure and life,  
There throbbeth as surely as swings the tide,  
With pulses stronger than aught beside,  
A heart that mirrors a firmament  
And holds in its clasp the continent.  
Tempests above of pitiless alet  
Reach not to derange its steady beat;  
While echoes that come from an angry sea  
Are softened to strains of harmony.  
Surer than anchors where waves may ride  
It beareth up buoyant while mountains abide,  
And out from its depths earth's throes release  
Into bright verdure the islands of peace.

II.  
Under the greed for silver and gold  
That endeth in ashes, rust and mold,  
The dust and din of the busy mart,  
Is throbbing now the nation's heart.  
It spurneth the fetters of sect and creed  
And all the trammels which bigots heed,  
It will not be bound by sectional lines  
As about its grand Chief it closely twines.  
His burden so wasting it gladly would share  
And for his relief it throbbeth in prayer,  
Young men and maidens, children and old,  
Joining as one him thus to enfold.  
That blow of the miscreant welded the chain  
Closer, and nether to be sundered again,  
Which binds us as brothers in willing thrall  
And brings us nearer to him over all.  
—Springfield Republican.

### Taking Boarders.

Good board in the country, by the riverside, at \$7 a week. Large chambers, broad piazzas, fine views, berries and new milk. One mile from the station. Address, DELIA ROGERSON, Croftsbrough, Maine.

"Cheap enough!" commented an elderly lady, who happened upon it. "Delia Rogerson—an old maid, I suppose, obliged to look out for herself. I've a good mind to try her broad piazzas and new milk. If I don't like it, there'll be no harm done."

And so Delia's first boarder arrived—an old lady with false front hair, brown wrinkled skin, faded eyes, a black alpaca gown and a hair trunk. Delia made her as welcome as if she had been a duchess; lighted a wood fire in Mrs. Clement's room, as the night was damp, and brought out her daintiest cup and saucer, with the fadeless old roses wreathing them.

"Wonderful kind," reflected Mrs. Clement, as she combed out her wisps of gray hair and confided the false front to a box. "Wonderful kindness for \$7 a week! She's new to the trade. She'll learn better. Human nature doesn't change with latitudes. She'll find it doesn't pay to consider the comfort of a poverty-stricken old creature."

But, in spite of her worldly wisdom, Mrs. Clement was forced to confess that Delia had begun as she meant to hold out, though other boarders came to demand her attention, to multiply her cares. The fret and jar of conflicting temperaments under her roof was a new experience to Delia. When Mrs. Gresome complained of the mosquitoes, with an air as if Miss Rogerson were responsible for their creation; of the flies, as they were new acquaintances; of want of appetite, as though Delia had agreed to supply it, along with berries and new milk; of the weather, as if she had pledged herself there would be no sudden changes to annoy her boarders; of the shabby house and antiquated furniture, "too old for comfort, and not old enough for fashion"—then Delia doubted if taking boarders was her mission.

"What makes you keep us, my dear?" asked Mrs. Clement, after a day when everything and everybody had seemed to go wrong. "Why didn't you ever marry? You had a lover, I dare say?"

"Yes; a long, long time ago."

"Tell me about him—it?"

"There isn't much to tell. He asked me to marry him. He was going to Australia. I couldn't leave father and mother, you know (they were both feeble), and he couldn't stay here. That's all."

"And you—you—"

"Now all men beside are to me like shadows."

"And have you never heard of him since?"

"Yes. He wrote; but where was the use? It could never come to anything. It was better for him to forget me, and marry. I was a mill stone about his neck. I didn't answer his letter."

"And supposing he should return some day, would you marry him?"

"I dare say," laughed Delia, gently, as if the idea were familiar, "let the neighbors laugh ever so wisely. I've thought of it sometimes, sitting alone, when the world was barren and commonplace. One must have recreation of some kind, you know. Everybody requires a little romance, a little poetry, to flavor everyday thinking and doing. I'm afraid you think me a silly old maid, Mrs. Clement."

"No. The heart never grows old. The skin shrivels, the color departs, the eyes fade, the features grow pinched; but the soul is heir of eternal youth—it is as beautiful at fourscore as

at 'sweet and twenty.' Time makes amends for the ravages of the body by developing the spirit. You didn't tell me your lover's name. Perhaps you would rather not."

"His name was Stephen Langdon. Sometimes Capt. Seymour runs against him in Melbourne, and brings me word how he looks and what he is doing; though I never ask, and Stephen never asks for me, that I can hear."

Delia's summer boarders were not a success, to be sure. If they took no money out of her pocket, they put none in. She was obliged to eke out her support with copying for Lawyer Dunmore and embroidering for Mrs. Judge Dorr. One by one her boarders dropped away like the autumn leaves; all but old Mrs. Clement.

"I believe I will stay on," she said, "I am getting too old to move often. Perhaps you take winter boarders at reduced rates. Eh?"

"Do you think my terms high?"

"By no means. But when one's purse is low—"

"Yes, I know. Do stay at your price. I can't spare you." She had grown such a fondness for the old lady that to refuse her at her own terms would have seemed like turning her own mother out of doors; besides, one month more would not signify. But she found it hard to make both ends meet, and often went to bed hungry that her mother and Mrs. Clement might enjoy enough, without there appearing to be "just the pattern." At Christmas, however, came a ray of sunshine for Delia, in the shape of a hundred-dollar bill from an unknown friend.

"It can't be meant for me," she cried.

"It's directed to Delia Rogerson," said her mother; "and there's nobody else of that name, now that your Aunt Delia's dead."

"We are not sure that she's dead," objected Delia.

"Horrors! Don't you know whether your own aunt is dead or alive?" asked Mrs. Clement, in a shocked tone.

"It isn't our fault. She is rich and lives abroad. I was named for her. I used to look in the glass and try to believe I'd inherit her beauty with the name, though she was only our great-uncle's wife."

"She ought to be doing something for you."

"How can she, if she's dead? I don't blame her, any way." Her money is her own to use according to her pleasure. Uncle John made it himself and gave it to her."

"But if she should come back to you, having run through with it, you'd divide your last crust with her, I'll be bound."

"I suppose I should," replied Delia.

The winter wore away as winters will, and the miracles of spring began in fields and wayside; and Delia's boarders returned with the June roses, and dropped away again with the falling leaves, and still Mrs. Clement stayed on and on. Just now she had been some weeks in arrears with her reduced board. No money had been forthcoming for some time, and she was growing more feeble daily, needed the luxuries of an invalid and the attention of a nurse, both of which Delia bestowed upon her, without taking thought for the morrow.

"I must hear from my man-of-business to-morrow, Delia; I'm knee-deep in debt to you," she began one night.

"Don't mention it!" cried Delia. "I'd rather never see a cent of it than have you take it to heart. You are welcome to stay and share pot-luck with us; you are such company for mother and me."

"Thank you, my dear. I've grown as fond of you as if you were my own flesh and blood. There, turn down the light, please. Draw the curtain, dear, and put another stick on the fire, please. It grows chilly, doesn't it? You might kiss me just once, if you wouldn't mind. It's a hundred years or so since any one kissed me."

And the next morning, when Delia carried up Mrs. Clement's breakfast, her boarder lay cold and still upon the pillows.

The first shock over, Delia wrote to the lawyer of whom she had heard Mrs. Clement speak as having charge of her affairs, begging him to notify that lady's relatives, if she had any. In reply Mr. Willis wrote: "The late Mrs. Clement appears to have no near relatives. Some distant cousins, who have an abundance of this world's goods, yet served her shabbily when she tested their generosity, as she has tried yours, are all that remain of her family. In the meantime I enclose you a copy of her last will and testament, to peruse at your leisure."

"What interest does he think I take in Mrs. Clement's will," thought Delia; but read, nevertheless:

"Being of sound mind, this 16th day of June, 18—, I, Delia Rogerson Clement, do hereby leave \$100 to each of my cousins; and I bequeath the residue of my property—viz., \$30,000 invested in the Ingot mining company, \$50,000 in United States bonds, \$20,000 in Fortune Flannel Mills, and my jewels, to the beloved niece of my first husband, John Rogerson, Delia Rogerson, of Croftsbrough, Maine.

"For I was a stranger, and ye took me in; hungry, and ye fed me; sick, and ye ministered unto me."

"Goodness alive!" cried the neighbors, when the facts reached their ears. "What a profitable thing it is to take boarders! Everybody in town will be trying it. Of course, Steve Langdon will come and marry her, if she were 40 old maids. You may stick a pin in there!"

Delia did not open her house to boarders the next season. She found enough to do in looking after her money and spending it; in reply-

ing to letters from indigent people, who seemed to increase alarmingly; in receiving old friends, who suddenly found time to remember her existence. And, sure enough, among the rest appeared Steve Langdon, and all the village said, "I told you so."

"It's not my fault that you and I are single yet, Delia," he said.

"And we are too old to think of it now, Steve."

"Nonsense! It's never too late to mend. I'm not rich, Delia, but I've enough for two and to spare."

"I wouldn't be contented not to drive in my carriage and have servants under me now," laughed Delia.

"Indeed! Then perhaps you have a better match in view. Captain Seymour asked me, by the way, if I had come to interfere with Squire Jones' interest."

"Yes. Squire Jones proposed to me last week."

"Now, see here, Delia. Have I come all the way from Melbourne on a fool's errand? There I was growing used to my misery and loneliness, when the mail brings in a letter in a strange hand, which tells me that my dear love, Delia Rogerson, loves and dreams of me still, is poor and alone, and needs me—me? And the letter is signed by her aunt, Mrs. Clement, who ought to know. I packed my household goods and came."

"I'm glad that you did."

"In order that I may congratulate Squire Jones?"

"But I haven't accepted him. In fact I've refused him—because—"

"Because you will marry your old love, like the lass in the song, Delia?"

In Croftsbrough people are not yet tired of telling how a woman made money by taking boarders.—Independent.

### Visiting the House of Sickness.

[Written for the RURAL PRESS by I. H.]

Not long since I went to spend the day with a friend whose aged mother was lying very ill. As a matter of course I wore a calico dress, intending to make myself useful in any way that should offer. I had been in the house but a short time when two granddaughters of the old lady drove up to the door, bringing with them two children, one about four years old, and the other an infant in arms. They had come to "see Grandma," and show their sympathy. Both were dressed in "Sunday-go-to-meeting" clothes, and they sat down, each with a child in her lap, and held their hands, while the already overworked and wearied daughter prepared dinner; and not until she was asked did one of them even so much as take up the fan to keep the flies from the feeble invalid.

Now, would it not have been much better and kinder to stay at home, unless the little children, whose presence was simply annoyance, could have been left behind? If one cannot be of some use where there is sickness, is it not better to avoid making more work and giving more trouble? I would, by no means, undervalue the blessing of sympathy, which is precious when the shadow of death rests upon some loved one. Do not hold aloof at such a time; go and speak some kind and tender word if you can do no more; give some practical proof of your interest in your friend, and then come away. Do not sit idly in a house where you are doing no good and simply adding to the weight of work and care.

I have been led to say this because I think people in the country often make this mistake through mere thoughtlessness. They mean to be kind, and so they drive many miles to visit their friend whose home is invaded by sickness. There are children too small to be left, and the mother takes them. Arrived at the house the horses must rest, and a long stay is made; common hospitality must offer refreshment to friends who have made such an effort to show their sympathy, and the result is that the good intention is productive of the worst results.

A little child in our neighborhood was lying for some weeks almost at the point of death. She was an only daughter, and everyone felt for the parents in their great anxiety and sorrow. Kind friends gave every assistance in nursing the little sufferer night and day, and in addition there was a constant inroad of visitors from far and near. I have seen a party of six or eight sitting at dinner prepared for them by the distressed family, and a mother, with an infant in her arms and another small child to watch, spending the day there in proof of her kindly interest and affection!

Set down in black and white such things seem almost incredible, yet I speak merely of what I have seen and known. The exercise of a little common sense will enable anyone to avoid coldness of heart and manner on the one side, and troublesome intrusiveness on the other. But two rules are always safe. Don't take your baby when you go to the house of sickness; and come away whenever you are conscious that you are not needed.

OUR ever-esteemed correspondent, Mrs. D. R. Locke (Mary Mountain), has removed to Berkeley for the benefit of her health and the education of her children. She is painfully and completely disabled by rheumatism. We hope the change will soon relieve and restore her.

### A Farming Woman in Maine.

Just before dusk, Wednesday evening, a brown-faced and pleasant-looking woman, with a short, well-built figure and firm step, fastened a plump, contented-looking bay horse in front of the Boston tea store, and tossed a molasses jug out of her wagon. She wore a widow's veil and shawl. "There," said a gentleman, "is one of the most wonderful women in the country, Mrs. Osgood, of Minot Center, the woman farmer." So when Mrs. Osgood came out of the store, with her strong arms full of molasses jug, salt box, and this-and-that, the *Journal* scribe began to ply his interrogations. "How much hay will you cut this year?" "Twelve or 15 tons. I've cut about six tons already. I commenced mowing at seven o'clock this morning, and mowed most of the forenoon. I spread 35 common stacks of hay, and after dinner I got in four good one-horse loads, in season to get down here at four o'clock and market a lot of berries." "Do you cut your hay with a machine or a scythe?" "Both; I can mow either way. I have a one-horse mower." Do you have any help?" "Only what I get from the children. There's a girl of 14 and a boy of 11, who help me a little." "Is the girl going to make a farmer?" "I don't know. I want to make a farmer of her, but she says she don't like the idea very well." "How much of a farm have you?" "I have now about 40 acres. I have planted this year half an acre of onions, two acres of potatoes, three-fourths of an acre of beans, and sowed half an acre of oats. I have done all the work myself. I have run the farm five years, and I haven't paid out a cent, not one cent for help, and I ain't going to, either (with much emphasis). Last winter I went down in the woods and cut and teamed out ten cords of cord wood." "Does your farm pay well?" "Yes, it's beginning to pay pretty well now. It was all run down when I came there and commenced work. It only cut hay enough for a cow and a horse. Now it cuts 12 tons. I have dug out the rocks and leveled off the fields with my own hands, so I shan't be thrown out when I ride my mowing machine. I keep two cows, one horse, and a lot of sheep, and there are a lot of hens running around.—*Lewiston Journal*.

### Night in the Moon.

At last night sets in. Gratefully it feels after the sun has gathered up his smiting rays and gone down to his rest. All at once we are plunged in comparative obscurity, for again there is no twilight to stay the steps of departing day. At one stride comes the dark. But, looking up into the sky, we behold a vast orb which pours down a milder and more beneficent splendor than the great lord of the system. It is such a moon as we terrestrials cannot boast; for it is not less than 13 times as large and luminous as our own. There it hangs in the firmament without apparent change of place, as if "fixed in its ever lasting seat." But not without change of surface. For this great globe is a painted panorama, and turning majestically on its axis, presents its oceans, and continents in grand succession. As Europe and Africa, locking the Mediterranean in their embrace, roll away to the right, the stormy Atlantic offers its waters to view, then the two Americas, with their huge forests and vast prairies, pass under inspection. Then the grand basins of the Pacific, lit up with island fires, meets the gazer's eye, and as this glides over the scene, the eastern rim of Asia, the upper portion of Australia sail into sight. The Indian ocean, and afterward the Arabian sea, spread themselves out in their subdued splendor, and thus in four-and-twenty hours "the great rotundity we tread" turns its pictured countenance to the moon, and grandly repays the listening lunaries by repeating, to the best of its ability, the story of its birth. Nor is the sky less marvelous in another respect. For the absence of any atmospheric diffusion of light permits the constellations to shine out with a distinctness which is never paralleled on earth. They glitter like diamond points set in a firmament of ebony. Stars and clusters which we never see by the naked eye flock into view and crown the heavens.—*British Quarterly*.

POOR REUNION.—At a meeting held in Boston, November 6th, 1880, of members of the different branches of the family of Poor or Poore, all having a common origin, it was decided to hold on the 14th day of September, 1881, at Newburyport, Mass., a gathering of all the members of the family, not only those of their own name, but all kindred bearing other names. The exercises on the occasion will be an oration by Benj. Perley Poore, a poem, singing—followed by a dinner, at which addresses will be made by different members of the family. Those intending to be present are requested to notify the Secretary of the committee, Mr. Alfred Poore, Salem, Mass.

ANNIVERSARY SURPRISE PARTY.—We hear that the occasion of the 38th anniversary of the marriage of our Tuolumne contributor, John Taylor and his spouse, was made memorable by a surprise visit to the Taylor homestead by a host of friends and neighbors. The host and hostess were kept in blissful ignorance of the coming of their guests, but soon found a way to welcome them and the greater part of the night was passed in genuine sociability and enjoyment. We add our congratulations to those of nearer friends.



## Chaff.

WHY is a little boy in a new jacket like a lady's glove? Oh! he's a six-button kid.

The house fly can only see a distance of 38 ft., but that never bothers him any. He always manages to keep within 37 ft. of everything.

WHEN you are out boating, don't fool away time hugging the shore if there are any girls along.

"I'M AFRAID that the bed is not long enough for you," said a landlord to a seven-foot guest. "Never mind," he replied, "I'll add two more feet to it when I get in."

A LITTLE boy two years old, sitting at the tea-table, gazing intently at the fleecy clouds exclaimed: "Is 'em Dod's aprons? Oh, I know. They's Dod's table clofe. He hung 'em up to dry."

FOR honesty in declaration we think the following from a loving parent will be appreciated: "What will you do when I am dead?" asked a mother fondly of her little girl. "Eat up all the sugar," was the reply.

CYCLOPES in Minnesota skin chickens alive, strip the harness off of horses, drive heavy timber four feet into the ground, and then the people there exclaim "Laws-a-massa, I couldn't be hired to go to California, where them earthquakes is!"

THERE was once a Sir James Weir Hogg, who made a fortune in India, and whose wife, holding a distinguished position in London fashionable society circles, gave splendid parties. It is said that a young blood, meeting one of the Misses Hogg at a ball and not knowing her name, asked her if she was going to a certain party at the "Piggery." Her naive reply was: "Oh, I am one of the litter!"

ANDREW JACKSON, when President, gave a reception once at Barnum's hotel, Baltimore. His tailor came forward and cordially grasped him by his hand. "I do not recall your name," whispered the old Democrat; pray favor me with it." "I made your breeches," whispered back the embarrassed tailor. "Gentlemen," said General Jackson, turning to the assembled company, "let me present to you my friend Major Bridges."

As he sat upon the steps on Sunday evening, he claimed the right to a kiss for every shooting star. She at first demurred, as became a modest maiden, but finally yielded. She was even so accommodating as to call his attention to the flying meteors that were about to escape his observation, and then go to "calling" him on lightning bugs, and at last got him down to steady work on the light of a lantern that a man was swinging about a depot in the distance where trains were switching.

## Preparing and Mounting Seaweeds.

Our sea-shore readers will find the following from the *Articians Hand-book* of assistance to them in the pleasant work with the sea growths:

Seaweeds rank among the most beautiful natural objects, while the work of collection and mounting is delightful occupation for the leisure hour. The best time to collect is when the tide has just commenced to flow, after the lowest ebb, as the seaweeds are then floated in in good condition. All specimens should be either red, green, purple, black or olive; no others are worth preservation. Mounting is done by immersing a piece of paper just below the surface of the water, and supporting it by the left hand; the algae is then placed on the paper and kept in its place by the left thumb, while the right hand is employed in spreading out the branches with a bone knitting needle or a camel-hair pencil. If the branches are too numerous, which will be readily ascertained by lifting the specimen out of the water for a moment, pruning should be freely resorted to, as much of its beauty will depend upon the distinctness of the branching. Pruning is best performed by cutting off erect and alternate branches, by means of a sharp-pointed pair of scissors, close to their junction with the main stem. When the specimen is laid out, the paper should be raised gradually in a slightly sloping direction, care being taken to prevent the branches from running together. The delicate species are much improved in appearance by re-immersing their extremities before entirely withdrawing them from the water. The papers should then be laid flat upon coarse bibulous paper, only long enough to absorb superfluous moisture. If placed in an oblique direction, the branches are liable to run together. They should then be removed and placed upon a sheet of thick white blotting paper, and a piece of washed and pressed calico placed over each specimen, and then another layer of thin blotting paper above the calico. Several of these layers are pressed in the ordinary way, light pressure only being used at first. The papers, but not the calico, may be removed in six hours, and afterward changed every 24 hours until dry. If the calico be not washed, it frequently adheres to the algae, and if the calico be wrinkled it produces corresponding marks on the paper. The most convenient sizes of paper to use are those made by cutting a sheet of paper, of demy size, into 16, 12, or 4 equal pieces. Ordinary drawing paper answers the purpose very well. For the herbarium, each species should be mounted on a separate sheet of demy or cartridge size. Toned paper shows off the specimens well, a neutral tint answering best for the olive, pink for the red, and green for the green series.

## Young Folks' Column.

## Elder Babies.

Then they went behind the garden and along the eastern hillslope, and gathered unto themselves large families of elders. A little girl who has never played with these woods babies cannot realize the delight there is in them. Warm from the sun and freshly green, they seem more alive than the most complete doll.

To make an elder doll, you break it smoothly from the parent stem, and how beautifully the pith shows in the top of its head! Then you leave arms at a suitable distance below—the elder's branches spring on exactly opposite sides—and strip all the leaves from these except those at the extremities, which are hands. And last, you give the darling a length of bare stem for waist, and place her before you to admire the delicate brown bark of her face, which has an expression individual and distinct from the faces of her sisters.

Tildy and Bluebell sought their favorite play-houses up the hill, their arms loaded, and each leading an active young elder by the hand. The play-houses were some distance from their school path.

"We ain't been here for so long," remarked Bluebell, panting up the steep with her family; "I wonder if anything's broke our acorn dishes?"

Tildy's house was a big rock cropping out of the soil. She had "up stairs and down stairs," for it was easy to go around behind and step on the top of the rock. Her down stairs was well rigged with moss; but the gray floor up stairs stood bare and cool in the wood shadows. Bluebell's residence was a mighty stump, cut clean and smooth at the top. She had dragged a fragment of rock near for door-stone, and lived on that smooth, many ringed floor. She had a back kitchen, of course, behind the stump, where her acorn delf was stored on little shelves made of bark, propped with pebbles from the run. A fleece of vivid moss, finer than the most gorgeous Persian rug, covered this kitchen. The late storm had only brightened this; but alas! her shelves and acorn cups were all to be built and stored again.

They placed themselves in their respective dwellings, surrounded by daughters, and talked across.

"Now, let's play *Thinks-I-to-Myself*!" said Bluebell—"its such a funny book—and there's Miss Mandeville and Robert and Miss Twist and old Mrs. Creepmouse—ain't that a queer name, Tildy? I read it all through, and skipped the parts where it was long. You have one of your dolls be Robert, and I have one of mine be Emily Mandeville."

Tildy allowed this to be done. The hero of "Thinks-I-to-Myself" was made of a very jaunty elder switch; and the girls put themselves into parts, and at the same time moved their puppets. Robert sent a valentine of a grape vine leaf to Miss Mandeville, and Miss Mandeville used the language which she did in the book; and Miss Twist appeared at the ball pinned all over with flounces of natural bloom, while an emerald chain of grass graced her neck. It was very interesting; but when they came to the marriage of the hero and the heroine, the movers of the drama were at a loss for a suitable ceremony. They had never seen a wedding.

"Just join their hands," said Tildy, "and I'll say, 'Bow-wow-whiddle-ink—Bow-wow-whiddle-ink!' That will do as well as anything."

So the three-leaved palm of Miss Emily was laid in the three-leaved palm of gallant Robert and twisted together, and the couple propped by a tree. Over head great branches were rocking with musical rustle, and further up the hill a squirrel barked. Ants crept up the drape of the bride expectant, and a bunch of ferns moved as if to fan her.

Tildy took her stand in front, and Bluebell stood by, grouped around with the other characters in the "Thinks-I-to-Myself," such of them as could not stand lying gracefully on their backs. Tildy opened her mouth and said "bow—" when Teeny, leading the baby, appeared on the scene.

"Didn't you hear me call you to supper?" she asked.

"No, we didn't hear anything."

"What you doing?"

"Ain't doin' anything," returned Tildy, somewhat shamefaced. Her weakness for elders was something Teeny failed to appreciate.

"We've played a story out of a hook," exclaimed Bluebell, "and now they are standing up to get married, and Tildy is going to say, 'Bow-wow-whiddle-ink!'"

"No, I ain't!"

"O, Tildy, please go on. And old Mrs. Creepmouse died, and we buried her under grass, with bushes for stones at her head and feet."

Teeny gurgled in her throat. She was a real grown young woman, you know, who sewed quilt pieces, and had one "Rising Sun" and "Pride of the West" done and quilted in shell pattern and laid away. Still she did not laugh out loud, and kindly volunteered to help the bridal party out of their predicament.

"You can marry them by the old Connecticut law."

"How, Teeny? Oh, you do it!"

So Teeny approached and said:

"By the old Connecticut law,  
I marry this Indian to the squaw;  
Kiss her and take her for your bride;  
Now I pronounce you man and wife  
All your life."

"Oh, how beautiful that was!" sighed Bluebell. "It doesn't make any difference, 'cause they wasn't Indians, does it? Now let's put 'em in the houses, and cry 'good-by.' Everybody in the book cries when they talk. I don't see what made 'em cry when they just say something. It says, 'cried my father,' 'cried Miss Mandeville.' I s'pose they felt bad."

Rocco helped to pile the elder people, who had served their time, and must lie shrivelling to-morrow upon the rock and the stump. Then the human dolls, who would have so many stories to play in their lives, went down hill chattering together.—*Wide Awake*.

## Young Folks' Cake.

EDITORS PRESS:—I am eight years old, am going to school, and am learning to cook. I send you a piece of cake I made Saturday; also a recipe for making the same. If any little girls who read the PRESS want to make a cake, they can use this recipe:

Two cups of sugar, one cup of cream, four eggs, two teaspoonful of cream tartar, one teaspoonful of soda, two cups and a half of flour, half teaspoonful of extract of lemon. Beat the eggs and sugar together.—CARRIE FIELD, Pine Station, Napa Co.

[The cake was duly received, and I was submitted to a jury of our two daughters—one five, the other three years old—and they were asked to say what they thought of it. After fair testing, the three-year-old exclaimed: "It tastes like cocoanut." The five-year daughter shyly said: "It smells like a salmon." Now salmon is one of the young lady's standards of excellence, so her verdict must be taken as favorable. On the whole, Carrie may consider her cake-making a creditable performance.—EDS. PRESS.

## GOOD HEALTH.

## Hygienic Value of Mirth.

Mirth has an hygienic value that can hardly be overrated while our social life remains what the slavery of vices and dogmas has made it. Joy has been called the sunshine of the heart, yet the same sun that calls forth the flowers of a plant is also needed to expand its leaves and ripen its fruits; and without the stimulus of exhilarating pastimes perfect bodily health is as impossible as moral and mental vigor. And, as sure as a succession of uniform crops will exhaust the best soil, the daily repetition of a monotonous occupation will wear out the best man. Body and mind require an occasional change of employment, or else a liberal supply of fertilizing recreations, and this requirement is a factor whose omission often foils the arithmetic of our political economists.

To the creatures of the wilderness affliction comes generally in the form of impending danger—famine or persistent persecution; and under such circumstances the modifications of the vital process seem to operate against its long continuance; well-wishing nature sees her purpose defeated, and the vital energy flags, the sap of life runs to seed. On the same principle an existence of joyless drudgery seems to drain the springs of health, even at an age when they can draw upon the largest inner resources; hope, too often baffled, at last withdraws her aid; the tongue may be attuned to canting hymns of consolation, but the heart can not be deceived, and with its sinking pulse the strength of life ebbs away. Nine-tenths of our city children are literally starving for lack of recreation; not the means of life, but its object civilization has defrauded them of; they feel a want which bread can only aggravate, for only hunger helps them to forget the misery of *ennui*. Their pallor is the shallow hue of a cellar-plant; they would be healthier if they were happier. I would undertake to cure a sickly child with fun and rye-bread sooner than with tidbits and tedium.—Dr. Oswald, in *Popular Science Monthly*.

## Medical Advice.

The St. Louis *Globe-Democrat* happily hits off "the suggestions of the doctors" as to the best means of avoiding sunstroke:

## AS TO DRINKING.

<i>Dr. Smith's Advice.</i> Stick to cold drinks; they keep the skin moist. Iced tea is especially wholesome.	<i>Dr. Brown's Advice.</i> Avoid cold drinks; they suppress perspiration. Iced tea is dangerous. Milk is a delightful summer drink. Beer is bad in summer.
Milk is heating. Beer is a natural summer laxative. The light wines are heating.	The light wines are cooling.

## AS TO EATING.

<i>Dr. Smith's Advice.</i> Eat all the meat you can. Eat all the vegetables you can. Avoid pastry as you would death.	<i>Dr. Brown's Advice.</i> Avoid meats. Vegetables are dangerous. Pastry is good summer food.
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## AS TO WEARING.

<i>Dr. Bliss's View.</i> Stick to your flannels. Woolen clothing should be worn in sufficient quantities to keep a uniform temperature.	<i>Dr. Barnes's Assurance.</i> The wearing of flannels is a fatal delusion. Wear only linen and light fabrics.
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## THE HEAT.

<i>Dr. Hammond's Advice.</i> Never mind the sun while you have a wet cabbage leaf in your hat.	<i>Dr. Baird's injunction.</i> Keep out of the sun; other wise you will encounter great danger.
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REMEDY FOR POISON OAK.—Dr. S. A. Brown, U. S. N., states in the *Medical Record* that he has found a specific to the troublesome eruption produced by the poison oak or poison ivy so common in our woods and along old fences. This specific he finds in bromine, which he has used with unvarying success in at least 40 cases.

He uses the drug dissolved in olive oil, cosmoline, or glycerine, in the strength of from 10 to 20 drops of bromine to the ounce of oil, and rubs the mixture gently on the affected parts three or four times a day. The bromine is so volatile that the solution should be renewed every 24 hours. The eruption never extends after the first thorough application, and it promptly disappears within 24 hours if the application is persisted in.

## DOMESTIC ECONOMY.

DOLMAS.—The Turkish way of preparing cabbage is rather elaborate. The Moslem cook makes a forcemeat of a pound of lean, raw mutton, chopped; a cup of rice cooked five minutes in boiling water, a teaspoonful of onion and a tablespoonful of parsley, chopped and highly seasoned with pepper and salt; the leaves of a cabbage are carefully washed in cold water, put over the fire in salted boiling water, boiled for five minutes, then washed in cold water and freed from stalks; the leaves are then cut in pieces about three inches square, and in each piece is wrapped a teaspoonful of the forcemeat. These little rolls of cabbage and forcemeat are the dolmas, and they are arranged in layers in a saucepan, covered with broth and held in place by laying a heavy plate upon them; the saucepan containing them is placed over a moderate fire, and its contents simmered for half an hour; the dolmas are heaped on a hot dish, five raw yolks of eggs are mixed with the hot broth in which they are cooked, the juice of a lemon is added to it, and then it is strained over the dolmas, which were served at once.

CAULIFLOWER.—Wash the flower well in strong salt and water. Then tie in a floured cloth and boil for 40 minutes, putting it into salted boiling water and keeping it in the boil all the time. Dish into a deep vegetable dish, and pour over it a sauce made with one-half pint of sweet milk, boiled with half a small teacupful of water the cauliflower was boiled in. Stir to a thin paste with cold water a small teaspoonful of corn starch; add to the boiling milk and water. Put in a piece of butter as large as an egg and one teaspoonful of sharp cider vinegar; stir till the butter melts. Pour over the cauliflower and serve it at once. There are very few palates that will not be pleased with such a succulent dish; if there be any left chop it up with as much cold boiled potato and serve very hot with the sauce mixed in it for breakfast.

APRICOT OR PEACH CREAM.—Half a pint of cream, eight ripe apricots or a dozen clear stone soft peaches, eight ounces powdered white sugar, one ounce isinglass. Put the fruit into a stewpan with a gill of water and four ounces of sugar; let them cook. When cooked let get cold. Whisk up half a pint of cream very stiff, add the fruit passed through a metal strainer and four ounces powdered white sugar; dissolve one ounce isinglass in a little hot water, mix it with the cream, stir well together and pour in a mold; stand it in ice water to get cold. When required for the table dip the mold in warm water for a few seconds, wipe with a cloth and turn out on to a silver dish; garnish with white flowers and green leaves.

ONION SOUP.—A soup made from onions regarded by the French as an excellent restorative in debility of the digestive organs, says Miss Corson. It is made by frying golden brown half a dozen sliced onions in sufficient butter to prevent burning, with a teaspoonful of sugar; two quarts of clear soup are next added to the onions, together with a bouquet of sweet herbs and a palatable seasoning of salt and pepper; these ingredients are allowed to simmer gently together for about a quarter of an hour while some slices of bread are being toasted, and placed in the soup tureen; the bouquet of herbs is then removed, and the broth and onions poured upon the bread, when the soup is served hot.

BUNS.—Two cups of scalded milk, cooled to blood heat; one cup of yeast or equivalent of compressed yeast; mix with flour rather stiffer than fritters; let it rise, then add two cups of sugar, and one cup of butter beaten to a cream; one teaspoonful of soda; mix with flour full as stiff as bread; mold it well; let it rise, then cut out and lay in pans, and after it has stood for rising, bake it. These taste better when eaten warm. If liked, stir in before molding a cupful of huckleberries or the same quantity of dried currants.

COTTAGE CHEESE.—Put sweet milk that has soured into a new tin pan on the top of the stove. Let it heat through, but not boil. Turn the edges in gently with a spoon that the curd may form evenly. When formed, tip the pan to one side and pour off the whey, pressing on the curd with a perforated skimmer. Do not drain entirely dry. Then with freshly-washed hand proceed to work in salt and butter until the taste is just right. Press down in a deep dish, and when cold pour over either sweet or sour cream. This makes a beautiful dish to set off a table, and is cool and appetizing, and far superior to the old way of making by straining through a towel.

WATER IN GEMS.—An Atlanta paper reports the recent finding, in Raubin county, Georgia, of an amethyst bearing a drop of water or similar liquid in a cavity near the center of the stone.





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W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, August 27, 1881.

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Plows and Harrows—Geo. A. Davis, S. F.  
San Leandro Plow Works—San Leandro, Cal.  
Wool Commission Merchant—Eugene Avey, S. F.  
Removal—Sweepstake Plow Co.  
Eradicate Noxious Insects.  
Percheron Horses—M. W. Dunham, Wayne, Ill.  
Guns—E. G. Rideout & Co., N. Y.

## The Week.

The wheat coming to tide water is taxing the greatest capacities of barge and car. Ships are still in demand to take the large purchases which have been made during the last two or three weeks. There is an unmistakable disposition to sell this year, which might be expected from the experience of those who held over last year's crop. This subjection to interest and warehouse charges and weevils has led many to seize the slightly advanced rates which shippers have offered this month. To many it will be a decided advantage to have the money in hand, as they may proceed with the improvement of their ranches and their homes, and indulgence in a little horticulture, for orchard and vineyard planting is now the fashion from end to end of the State. It is a good thing, for it will diversify the products for market and for food, and will bring health if not wealth wherever the trees grow—and recent experience shows that lands thought unfit for fruit are yielding very satisfactory samples.

The President still lingers between life and death, the physicians exercising their greatest skill; the people freely giving their most earnest prayers and sincere hopes.

The Mechanics' fair continues to draw throngs of visitors and delights them with its varied sights and exercises. Excursions from the country are the order of the day, something like 150 coming from Santa Cruz. It is a good idea to come.

AT THE UNIVERSITY.—The exercises at the University on Tuesday, in the inauguration of the new President and dedication of the new art building, were very interesting and well attended. We may have something to say concerning the event at another time.

## Good and Bad Potatoes.

There come from Ireland some interesting points on potato growing, a subject upon which the "Emerald Isle" is a recognized authority. Some idea of the extent of the potato yield of the island may be inferred from the statement, which we find in a London exchange, the *Farmer*, that the crop of 1879 was "\$25,000,000 under the average, and fully \$40,000,000 under what it might have been had the land been fairly treated all through and the crop handled with moderate skill." Some of the mistakes which Irish growers make, and some deductions from the experience of the best Irish producers, are given in the *Farmer* by Prof. Baldwin, an acknowledged authority on Irish agriculture. He remarks that—

Very many small farmers pay little or no attention to the selection of good seeds. In 1879, I often saw potatoes planted which were not bigger than marbles, and which had been badly stored, and which were the refuse of the entire crop. It is true of all crops that the sounder the seed the better the yield. This ought never to be forgotten in so important a crop as the potato. Good sound tubers should always be selected, and each "set" should contain two eyes or germs. Again, many of our farmers neglect to bestow the necessary care and attention on introducing fresh seed. Many of them never change the seed at all, and as they repeat the crop at short intervals on the same land, the variety degenerates, and actually dies or disappears altogether. It has been found that any variety of potatoes shows signs of degeneration and decay after some years, and the average duration of its existence has been put down at 20 years. If the seed be properly selected, and the land properly tilled and manured, a good variety may last far longer. Given a healthy germ, and the conditions favorable to healthy growth, we may expect a good crop. The more we neglect the selection of good seed, and the oftener we repeat the crop on the land, the greater the necessity for a change of seed.

There are also points made concerning the experiments with manures on potatoes made at three different farms. They indicate that potash made greatest increase in yield, and potash was obtained in the commercial article known as "kainit," a German potash salt, which can be obtained quite cheaply at the ports along the Atlantic coast. On fields where the yield was 5 tons 19 cwt. per acre without manures, the application of "kainit" raised the yield to 9 tons 17 cwt. The greatest yield obtained by the application of manures was 10 tons 19 cwt., and the compound manure used consisted of 4 cwt. superphosphate of lime, 2 cwt. sulphate of ammonia and 5 cwt. of kainit. There were also marked benefits accruing from the application of seaweed to the potato fields, which may serve as a hint to some of our growers whose lands are close to the coast.

There were also experiments made with the yield of different varieties of potatoes. While some kinds gave as low as 2 tons 10 cwt. to the acre, several of the improved English kinds gave immense results, as follows: "Magnum Bonum," 15 tons, 8 cwt.; "Champion," 16 tons, 14 cwt.; "Purple Fortyfold," 17 tons, 19 cwt. Some American kinds gave medium to high results, as for example "Early Rose," 8 tons, 10 cwt.; "American Chile," 14 tons, 3 cwt.; "American Prolific," 8 tons, 13 cwt. The trial of over 30 varieties and general experience and observation lead Prof. Baldwin to conclude that the production of new varieties of the potato by hybridization is absolutely essential to the well-being of the small farmers of Ireland, under the present circumstances. It is easily accomplished. The Champion added upwards of £1,000,000 sterling to the wealth of Ireland last year. In time it will begin to degenerate from the causes already indicated. New varieties should be ready to take its place. This agrees closely with the experience of American growers and the success of many beautiful and prolific varieties which have originated in this country is evidence of the benefits which growers realize from them.

## Railway Surveyors Visits.

Few people are aware of the way the patience of farmers is often tried by the visits of surveyors of proposed lines of railway. The popular thought of these *avant couriers* of civilization clothes them with great respect and consideration, and their coming to a region is generally hailed as the harbinger of some wonderful era of advancement. We would not rob these privileged characters of an iota of their prestige, for they are plainly of great value in the development of the country, but we would suggest that their high character would be more apparent if their daily walk and operations should exhibit a little more respect for the rights of property and the feelings of individuals through whose estates they pursue their invisible lines and angles. The prevailing method of these forerunners is to cut, slash, break and level everything which lies in their way, without thought of its intrinsic value or the esteem in which it is held by its owner. One of our friends who owns a ranch in a valley north of the bay has been so persecuted by railway surveyors, that he was prompted to see whether he had any power to prevent them overrunning his ranch or not. One of the depredations which drove him to his crowning vexation, was the mangling of a fine line of shade trees which he took great pride in. It seemed that one side of this line of trees was in the way of their instruments and they hacked at the large limbs until they dropped, and then they left them, some banging by the torn bark, some broken

down and some tumbled in brush piles beside the trees. The damage to the trees was great, and the farmer was allowed to do a day's or two of work clearing away the brush and getting the hanging branches properly sawed off.

We notice that surveyors' ways are much the same in other parts of the State. The Watsonville *Pajaronian* of last week has the following allusion to their work:

The California Central railroad surveyors, who went through this valley last week, apparently believe in and practice a new version of the doctrine of eminent domain. They tore off pickets and broke down fences as they entered and left ranches, and did not stop to repair the damage done or notify the farmer of the same. In two places we knew of the surveyors for a row or two straight through the field. Where they camped near the corners they cleaned out an orchard of apples and pears. It is a glorious blessing to have a railroad, but blank the surveyors.

Farmers, as a rule, look with favor upon the attempts to bring their lands nearer to the highways of travel, and with few exceptions, aid the railway projectors in every way in their power. They should not, however, be at the mercy of the preliminary surveyors, unless these surveyors show a decent regard for property and the cherished landmarks of those who own the land. There is decency in all things, or there should be, and railway surveyors should exemplify it in their operations.

## QUERIES AND REPLIES.

## Dodder in Alfalfa.

EDITORS PRESS:—In this week's RURAL PRESS you give Mr. Hanson, of East Lake, rather cold comfort concerning the dodder in his alfalfa by telling him that it gets in by means of foul seed and that it must be burned out in order to destroy it. Those of your correspondents that plowed up their alfalfa fields and reseeded with clean seed, did a heavy piece of work, and if done prematurely and unnecessarily, was a sad loss of time and trouble. In this county I have seen the dodder or love-weed attached to the wild grass on the plains miles away from any farm and I am entirely satisfied that it exists as a parasite over a wide range of country here. Where I saw it, it was stunted and seemed to eke out a poor existence in conformity to its poor surroundings. In Fresno county, therefore, we need not attribute the infliction to foul seed. Three years ago, after having read of it in the PRESS, I was frightened into fits by finding some of it in a corner of one of my alfalfa fields. On speaking of it to my son, he says that he had observed it two years before in the same field. Evidently, then, it had not made any disastrous progress, and I began to feel less fear of it. Since then I have watched it closely. My alfalfa fields are far apart, and are not all neatly cut. I use none of them for grazing but mow them all. In some of the corners left by the mowing machine, the dodder sometimes takes full possession for a few months. I have it mowed five times each season, though last year I took off only four crops. I have had an acre, by measurement, completely covered by it at the first cutting, so that the hay was worth very little, and yet the remaining crops of the season were free from it. In one case a field was so badly infested by it that I set four Chinamen at it with spades, but they did so little good that a day's work was not perceptible on an acre. Since then three years have passed. The dodder is still there, but there is so little of it that it is not easy to find, except here and there in a neglected corner. Our winters are too cold for it, and I have lost all fear of it. If it is not a more dangerous enemy anywhere else than it is here, Mr. Hanson need not lie awake nights worrying about it. —B. MARKS, Fresno.

## Treatment for Scab.

EDITORS PRESS:—Take 5 lbs. oil of tar, 1 gallon fish oil, 5 lbs. tallow, 2 lbs. common salt, 2 lbs. sulphur. Melt the tallow and stir all together. Wash the sheep thoroughly with Castile soap and water, and curry with a curry comb in the parts affected. Then rub in the mixture with the hand or a brush.

The above was given me by Mr. T. P. Jones, formerly of Contra Costa county, but for the last ten years engaged in the sheep business, chiefly in Mendocino county. He says he has tried various remedies, but has found none so effectual as this one. He has abandoned the clipping process, and now relies on this as an effectual cure. Thinking that this remedy might be useful to others, I give it for the benefit of your readers. —C. E. WETMORE, Oakland, July 30, 1881.

WEAK BRIDGES.—Steam threshing engines are nearly as good indicators of weak bridges as are the elephants of the strolling menageries. The elephant, however, exhibits more caution about venturing upon shaky structures. The Petaluma *Argus* says: George D. Green, Jr., was seated upon the engine of R. J. Cheeney's steam thrasher near the old "Adobe," on the Lakeville road last Tuesday, and while crossing a deep ravine the bridge gave way. Green and the engine dropped about 12 ft., and both landed bottom up. Luckily, George was not hurt in the least, but the engine was considerably damaged.

## ENTOMOLOGICAL.

## Strawberry Beetle.

EDITORS PRESS:—Dr. C. L. Anderson, of Santa Cruz, forwarded to me two examples of the beetle that has caused so much loss to growers of strawberries. The insect is *Anisodactylus confusus*, and is found in damp places in many parts of the State. It belongs to the *Carabidae*, a family of carnivorous ground beetles. This and several of the group have long been known to feed upon vegetable productions, such as ripe fruit, and upon grain when in the milky state. But a large number of animals—whether mammals, birds or insects—take seasonal changes in diet. During the heat of summer, when man takes to soda, the birds take to cherries and the insects to strawberries. This *Anisodactylus* will prove difficult of management, for, though belonging to the ground beetles, unlike many others of this group, it is furnished with wings, and in its search for a suitable location to dwell in, it often happens upon a strawberry area, which offers all that is necessary for its own existence as well as for future generations. The requirements are food, moisture and shelter. Irrigation gives the moisture, the leaves of the plants shelter and the fruit food. For the sustenance of the larva, the numerous larvae that belong to other insects, usually found on a strawberry plantation, fill the whole sum of wants to rear a numerous colony of the *Anisodactylus confusus*. —J. J. RIVERS, Curator of University Museum, Berkeley.

## The Grasshoppers Going West.

For the past three years this section has been afflicted by the grasshoppers. As a consequence the farmers have lost all their crops and got heavily in debt. From affluence several have been reduced to poverty. Last year the pestiferous insects laid immense numbers of eggs—in fact the earth was alive with them, and the outlook was very bad for this year, and many did not plant, preferring to let their land lie idle rather than raise a crop of "hoppers." This season they hatched out in full force, but for some reason they seemed to have been panic-stricken, and have winged their way in clouds across the Sierras toward California. Only a few are left behind and they can do no particular damage. This year's crop will be a fair one, while next year the harvest ought to be immense. The destination of the pilgrim plague is not yet announced, but the hope is strong that they will be caught in the mountain fastnesses and perish miserably. If our California friends find them pouncing upon their fields, they may expect to see desolation and ruin left in their track. —Reno Journal.

We commit the pest to the kindly barriers of the Sierras. If, however, any of our mountain readers should detect the insects on this side we should like to have early reports.

## Government Entomologist.

With the incoming of Commissioner Loring, Prof. C. V. Riley returns to the chieftancy of the entomological division of the Department of Agriculture. He is too well known in all parts of the country to need a word concerning his qualifications for the work. His achievements and ready zeal in the service of economic entomology have given him a fixed place in popular esteem. Prof. J. H. Comstock returns to his professorship at Cornell University, from which he had leave of absence during his stay in Washington. Prof. Comstock and his accomplished assistant did excellent work while in the Government service. Their visit to this State made them many admirers, and we should not be surprised if some California youth, eager for entomological instruction, should follow Prof. Comstock to Cornell.

## Report of Horticultural Officer Cooke.

We are pleased to promise our readers a good thing in the report of Horticultural Officer, Matthew Cooke, which will ere long be issued from the State printing office at Sacramento and distributed throughout the State. We have seen the drawings from which many of the engravings are to be made, and they are very fine. They are made directly from nature, as Mr. Cooke has full specimens of the insects which are now doing the chief injury to our orchards. The showing of the new species of scale insects which have come into unfortunate prominence in California will be of great interest. Mr. Cooke has been pursuing his duties and investigations with vigor. At last account 13 counties had organized for the insect war.

## Boiling Water for Weevils.

A San Luis Obispo correspondent writes us that he has found boiling water the only remedy for weevils in a mill. If the warehousemen would drench their establishments with boiling water it would destroy the pests.

BERMUDA GRASS ON THE LEVEES.—Gen. Bidwell, of Chico, who has tested Bermuda grass on the levees and as stock feed says that he regards it as a very successful protection to levees; that it quickly forms an almost indestructible turf against the action of water, and as far as spreading is concerned, the more it spreads and covers the ground in this dry country the better. All kinds of stock eat it, with great eagerness, and it furnishes an excellent and abundant supply of green feed during the dry and wet seasons alike, except when killed down a short time by frost in winter.

THE Bank Commissioners have issued a license to the Farmers' Exchange Bank, of San Bernardino, to do a general banking business. The capital of the bank is \$100,000, of which amount \$19,500 is paid in. The President of the bank is Hon. Byron Waters, and E. H. Morse, Cashier.



## The Arid Land Acts.

There are two investigations about to be prosecuted at Government expense, with a view of benefiting what is termed the arid lands of the country, and which we understand to embrace parts of California, Nevada, Arizona, New Mexico and Colorado. One is the selection of places for the boring of artesian wells at the Government expense, which has been placed in the hands of Prof. White, of Greeley, Colorado, and Prof. Aughey, of Lincoln, Nebraska. The other is to determine the fitness of these so-called arid lands for agriculture, which is entrusted to a commission composed of Prof. Hilgard, of the University of California, Hon. Robert Furness, of Nebraska, and Judge T. C. Jones, of Ohio. It is expected that there will be a meeting of the latter commission for consultation in this city, perhaps next month, after which some members of the commission will take to the field for local research and inquiry.

There is some reason to fear that the Pacific coast region may not receive proper attention at the hands of these bodies. From what we see in Eastern exchanges of the outlines of the work marked out for them, there is no mention of the territory west of the Rocky mountains. The artesian well commission, so far as we can learn, has not been instructed to extend its inquiry thus far. The Commissioner, in his instructions to Prof. White, has confined the experiments to an area comprising the western portions of Dakota, Nebraska, a strip of western Kansas, the eastern portion of Montana, Wyoming, Colorado and New Mexico, and about one-third of Texas. Now, it is certain that Arizona and Nevada should not have been overlooked. In fact, it is to the Pacific coast proper that the investigation owes its existence, and Nevada took the lead. This is shown by the Nevada papers, which recall the fact that in 1865 or in 1866, during C. W. Kendall's term in Congress from Nevada, he introduced a bill to encourage the boring of artesian wells by giving grants of public lands to those who succeeded in getting flowing water on the deserts, when the proposition came up last winter in its new form it received the support of the Pacific coast representatives with the understanding that their States were included in the region under consideration. California has already put herself well along in the artesian well business, but Nevada and Arizona should certainly be considered by the boring commission.

The commission to report on the capabilities and adaptations of the arid lands, of which Prof. Hilgard is chairman, should certainly include parts of the Pacific coast as well as the Rocky mountain region. It would naturally be expected that this would be the case. We are not aware that the instructions to this commission have yet been published. There could be no better choice to head the commission than Prof. Hilgard, and we trust he may be able to give his attention to the subject.

## Percheron Horses.

Our illustration shows a splendid stallion of the Percheron breed, which is becoming so widely disseminated in this country, and is doing so much to elevate the character of our common stock. The animal shown is "Arcola," imported by Mr. Dunham, of Illinois, and sold to J. H. Bowman, of Iowa. "Arcola" is No. 850 in the Percheron-Norman stud book. In this connection it may be remarked that Mr. Dunham has just brought in another lot of Percheron horses from Europe, arriving with them the first week in the present month. We have no doubt a part of them will be called for by the Pacific coast breeders.

SURPLUS fish caught at Delta cannery, Fraser river, has been distributed among the Indians for winter food.

## The Coming Fairs.

We give below a corrected list of the coming fairs in this State, several changes and additions having been made since we printed the list before:

Southern California Horticultural fair at Los Angeles, September 5th to September 10th. Secretary, Geo. Rice.

Sonoma and Marin District fair at Petaluma, September 5th to September 10th. Secretary, W. E. Cox, Petaluma.

Third District Agricultural fair at Chico, September 6th to September 10th. Secretary, W. J. Blackwell, Chico.

El Dorado District fair at Placerville, September 7th to September 10th. Secretary, C. H. Wetherwax, Placerville.

Golden Gate District fair at Oakland, September 12th to September 17th. Secretary, L. Walker, Oakland.

Mendocino County fair at Willits, September 12th to September 17th. Secretary, B. F. Coates, Willits.

Lake County fair at Lower Lake, September 14th to September 16th.

State fair at Sacramento, September 19th to September 24th. Secretary, E. F. Smith, Sacramento.

San Joaquin Valley fair at Stockton, September 27th to

## Doctoring Wheat.

Wheat growers have had not a little to say against the leveling process employed by wheat shippers in their arrangement of California wheat for export. The local result of this mixing of wheat is certainly discouraging to those who take pains to produce a strictly choice article, because, relying on mixing, the country buyer is apt to go from one producer to another, paying to each the same price irrespective of the condition of each one's grain. Of course, very marked differences in quality are noted, but there is not such close discrimination as would seem the proper reward for efforts toward excellence in production. The effect abroad is that our choicest wheat does not appear in its own character, but by mixing before shipment, it is pulled down by the presence of a percentage of inferior grain. The mixing is done so that large lots will pass muster, but the really fancy character of some California grain is obscured, and this has in part given rise to the complaint abroad that California wheat is not

## Wine Yield for Grapes.

How much wine can be made from a certain weight of grapes is an interesting question to grape growers, as it is one of the factors in determining the value of their product. It cannot be fixed at a certain amount in all cases, of course, because the condition of the grapes and the variety are influences which figure in the result. It is of interest, however, to have in mind some idea of the proportion between grapes and wine, and to this end some statements of practical wine-makers at the last meeting of the St. Helena Vinicultural club are worthy of reproduction. It is not expected that these computations will cover all experiences, but they may lead to a general comparison of experiences which will bring out the range of variations, and thus encompass the solution of the problem.

At the meeting referred to Mr. Krug said he had always thought that 14 lbs. of grapes would give a gallon of good wine at the time of the second racking in March, April or May. Mr.

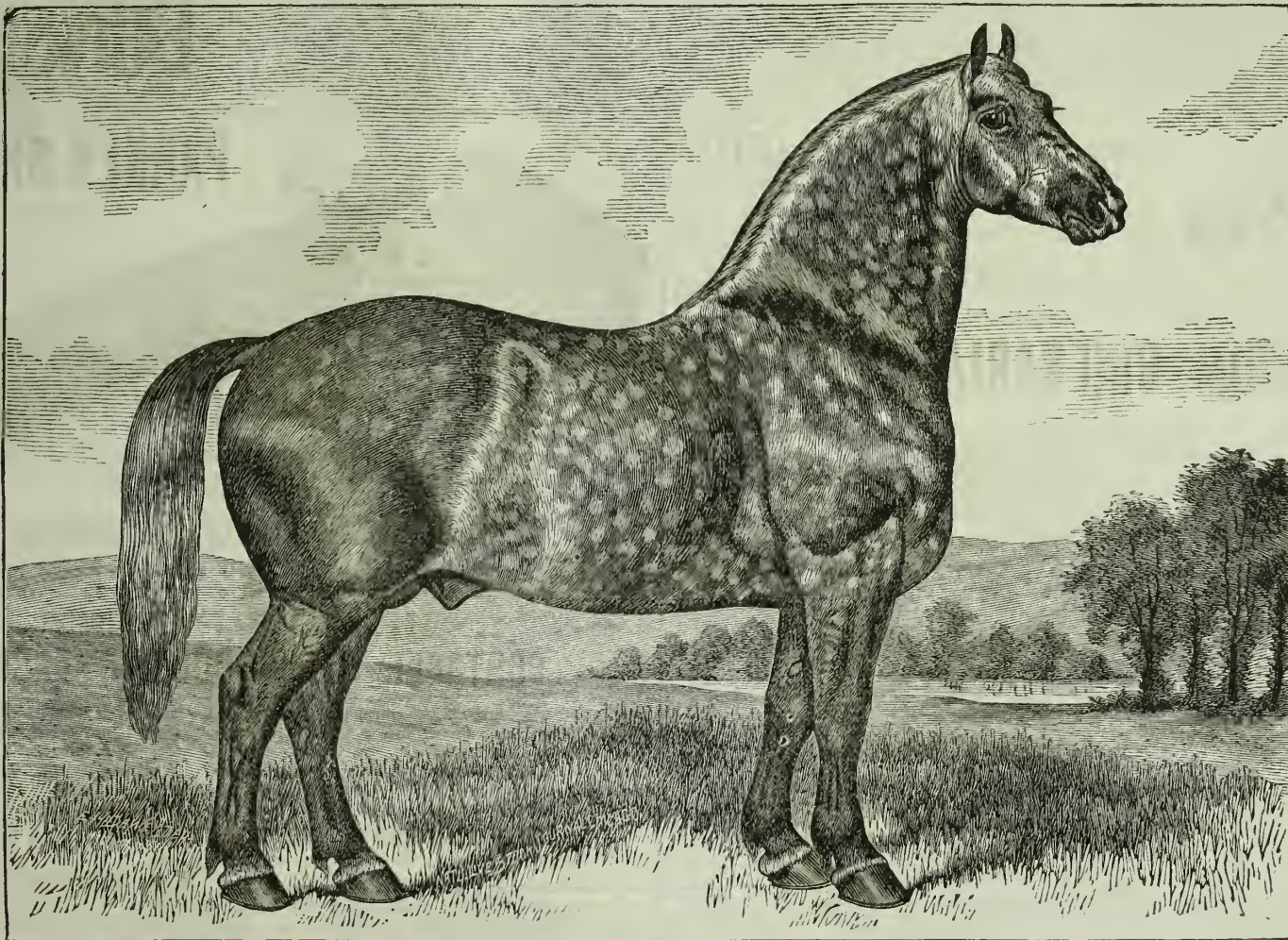
Scheffler said he had made last year 135.6 gallons of wine and 8 gallons of brandy to the ton of grapes. Counting each gallon of brandy as equal to five of wine, it was equal to about 176 gallons of wine. That was about the average of Riesling, Chasselas, Zinfandel, Malvoisie, etc. Mr. Ewer asked if Zinfandel and Riesling yielded more wine than other varieties. Mr. Scheffler said that result could not be relied upon as a rule. The general average was 136 gallons of wine and 8 of brandy, or 125 gallons of good wine and 10 of brandy.

Mr. Heyman said he was glad to get 145 gallons of clear, marketable wine on an average. Mr. McCord said his object in raising the question was to let the grape growers see that the wine makers did not make all the money. They could get at the value of grapes from it. At 14 lbs. to the gallon they could make about 140 gallons to the ton. Mr. Scheffler said he had not made his statement with any regard to prices. Mr. Pellet said that not enough distinction was made by sellers in the

quality of grapes. The very best grapes would make 150 gallons of wine at the first racking. Mr. Thomann said it couldn't be told exactly. He had had grapes that there was not 50 gallons of juice in to the ton.

**RUST INJURIES IN AUSTRALIA.**—We have occasionally suffered severely from rust in our wheat fields, but we have never undergone so sweeping a loss as that which befel the Australian growers at their last harvest. The colonists have quite complete statistics of acreage and harvest yields, and these show plainly the inroads of the rust fungus. In Victoria, the wheat growers only obtained an average of 9.84 bushels per acre in the last harvest. But even so they get nearly double that of the South Australian growers, who get an average of 4 bushels 58 lbs. The loss to South Australia occasioned by the failure of the crop, as compared with that of the former year, is estimated at a money value of over \$5,000,000, a terrible price to pay for the visitation of the mysterious scourge of rust. In California rust ravages are generally confined to certain districts, and some regions along the coast which are most liable to injury are now apparently securing exemption by the sowing of varieties which have proved rust-proof, so far as experience with them has gone.

**INTRODUCING BUCKS.**—Our breeders of improved Merino sheep are pushing the war into Africa. We understand that Mr. Strobridge sent a band of young bucks into Oregon for sale. S. Jewett, of Kern county, has made several excursions by rail to Salt Lake city with his sheep, and is this week starting that way again, with two or three carloads of fine bucks. Mr. Jewett finds ready sale for his bucks there at prices which leave him a greater margin of profit, time and expense of transportation included, than he can receive here.



PERCHERON STALLION "ARCOLA," IMPORTED BY M. W. DUNHAM, WAYNE, DuPAGE CO., ILL.

October 1st. Secretary, J. M. Larue, Stockton, Cal.

San Mateo and Santa Clara District fair at San Jose October 3d to October 8th. Secretary, T. S. Montgomery, San Jose.

Contra Costa County fair at ———, October 10th.

Monterey District fair at Salinas city, October 11th to October 15th. Secretary, S. J. Westlake, Salinas city.

Nevada State fair at Reno, October 10th to October 15.

Sixth District fair at Los Angeles, October 31st to November 5th. W. J. Neeley, Secretary.

Plumas County fair at Greenville, October 24th to October 29th. W. D. Fletcher, Secretary.

Bay District races in San Francisco, October 12th to October 15th. Secretary, T. W. Hinchman, San Francisco.

Sonoma Agricultural Park Association races at Santa Rosa, August 30th to September 3d. Secretary, Chas. Hoffer, Santa Rosa.

Our list is not complete. We shall be pleased to hear from all these societies.

**ENLARGING HIS SILOS.**—The ensilage pioneer of California, John W. Green, of Springbrook farm, Hollister, has, according to the *Advance*, finished building another silo, with a capacity of 500 tons, and intends giving the ensilage system a thorough test this season. Mr. Green is satisfied from his experiments of last year that the system is a success, but proposes now to demonstrate that fact beyond a doubt for the satisfaction of others who are interested. The new silo was built in three compartments, which were filled one after another as the fodder was ready. Mr. Green is a firm believer in ensilage, and is always ready to exhibit his arrangements and appliances to those who are interested. We hope he will give us a full report of the experiments he makes with the food this year.

It is proposed by leading citizens of Red Bluff that the city offer a bonus of \$5,000 to any company that will put up a woolen mill and put it in operation.

what it was a few years ago. By this change a certain part of our wheat is shorn of its true value, but shippers find the loss more than balanced by the gain on the poorer grain which they are enabled to "average up."

The extent to which this mingling of wheat is done, may be inferred from an item in the *Martinez Gazette* of last week, as follows:

At McNear's Port Costa warehouses the proprietor has recently provided and put in operation machinery, driven by steam power, for cleaning, smutting and mixing, wheat of various qualities to make cargo lots of uniform grade. For "Club" grade cargoes, only the best plump, white grain will answer, after having been through the cleaner to rid it of all foil matter. For No. 1 cargo lots the grain must be plump, of standard weight, but will pass, though of mixed color. For No. 2 cargo lots the wheat must be well cleaned, and a fair proportion of full sized, plump grain, is required to bring that which is of smaller size, and shrunken, up to average. To make up a cargo of No. 2 grade, usually requires the mixing of six to eight or more warehouse lots, all of which must be assorted according to weight, color and size of the grain, and turned into the elevator bin hopper in the proper proportions. From the bin the mixed wheat is elevated to the cleaning screens and thence run into the bags again, ready for shipment. Smutty wheat has to go through the smutting mill before mixing treatment with any other for cargo grading. The cost of cleaning and mixing lots of wheat to uniform grade depends largely upon the condition, number of varieties mixed, and distance of trucking to cleaning and mixing mill, but Mr. Perrine, the gentleman in charge, for Mr. McNear, at Port Costa, estimates it at from one to two cents per sack; and, as the greater proportion of grading is for No. 2 cargoes, requiring the mixing of a large number of varieties, the average cost would be rather over, than under one and a half cents per sack.

This detailed account of wheat mixing will be of especial interest just at this time, for the meeting of the Wheat Growers Association will be held in this city, Sept. 5th, and they will no doubt have something to say on the subject. At the last meeting, held in this city, April 15th, the following resolution was adopted:

*Resolved.* That while we as wheat growers will see that our wheat shall leave our ranches in the best possible condition, we earnestly protest against the practices of those shippers who mix different grades of wheat, thereby lowering the standard of California wheat in the markets of the world.



# A \$40 Twenty-Six Shot Sporting Rifle \$15

WEIGHT 9 1/2 lbs.

LENGTH OF BARREL 28 INCHES.

Price \$15.00

No. 1. SHOTS ACCURATELY UP TO 1200 YARDS.

No. 2.

AN EXTRAORDINARY BARGAIN.

## THE EVANS TWENTY-SIX SHOT MAGAZINE SPORTING RIFLE.

SHOTS 26 SHOTS IN 60 SECONDS WITHOUT REMOVING FROM THE SHOULDER.

No hammer in the way. Throwing down the guard EXPOSES LOADS AND COCKS. THE EVANS is without exception the most accurate, longest ranged, easiest loaded, quickest fired, best constructed, simplest and most perfect breech-loading Rifle in the World. The new model and latest Improved EVANS MAGAZINE SPORTING RIFLE is exactly as represented in above cut. It is .44 Calibre, centre fire, 28 & 30 inch barrel, engraved black walnut stock, and sighted with graduated sights up to 1200 yards, at which distance it is more accurate than any Rifle in the world. The magazine which is located in the stock as shown in Cut Number 2, contains 26 shots, or more than double the number of any other Repeating Rifle in the world. The working parts are all of the finest quality, case hardened and blued and the New Patent Locking Device makes it **POSITIVELY SAFE TO CARRY** when loaded. THE EVANS is a great favorite with sportsmen on account of the rapidity with which it can be fired, as well as for its accuracy at any distance from 100 to 1200 yards. Owing to the failure of the Evans Rifle Co. we were enabled to purchase their entire stock of \$50,000 worth of perfect Rifles for less than one-third the cost of manufacture, and as these beautiful and expensive Rifles cannot be made cheap enough to compete with cheaper Rifles they will not be made again. This will be your last chance to secure one at the low Price of \$15, and we pledge our business reputation that they cost to manufacture double what we ask for them.

**UNTIL FURTHER NOTICE** we will send one new model Rifle as above described carefully boxed for only \$15 and when cash accompanies the order, will send a box of reloadable Metallic Cartridges and samples of the new phoenix 3 ball cartridge, a great invention in ammunition with which three balls can be shot inside a 12 inch ring at 200 yards. **SEND MONEY BY P. O. ORDER or Registered Letter at our risk, or we will send the Rifle C. O. D.** (collect on delivery) with privilege of examination before paying, upon receipt of \$2.00 or your express agent's written guarantee that the Rifle will be returned free if you do not take it, but we do not send the Cartridges if sent C. O. D., as this is an extraordinary inducement to those who send Cash With Order. **WHAT IS SAID OF THE EVANS!** **UNSOLICITED TESTIMONIALS!** "The Evans has been my constant companion for two years. I have shot 60 Buffaloes at one run, and ponies from between my wife's fingers, at 40 paces."—**Kit Carson, Jr.** "The Evans is simply immense. I am proud of it."—**Joseph Arnold, Vice-president First Nat. Bank, Lockport, N.Y.** "I have used the Evans in competition with the Sharp, Winchester, and Buller's, it beats them all."—**J. Frank Locke, Burnsville, Minn.** "It shoots like a house on fire! I can clean out a whole band of Indians alone with it. I tell them wherever I go."—**Texas Jack.** "It is the Strongest Shooting Gun I ever put to my shoulder, and as for accuracy it can't be beat. I know it to be the best Rifle in the market."—**J. A. Boyd, of Yates' Sharpshooters.** **We guarantee every Rifle Perfect in every respect.** **THE EVANS SADDLE RIFLE**, similar to the above, except in Rifle lighter and 22 inch barrel, price \$14, including awls and straps. **THE EVANS** can be used as a single shot breech-loader and the magazine held in reserve if desired. Price of reloading tools for reloading shells, \$4.00, (larger price \$6.00). Evans cartridges can be reloaded many times. **ORDER NOW**, or if you have no use for a Rifle for some time to come. You will never get another such bargain and you can readily sell it for \$30 to \$40, and we hereby agree if the Rifle is not exactly as represented to refund the money in every instance and pay you \$5.00 for your trouble. **SPECIAL OFFER.**—Any one getting up a Club and sending us \$50 will receive seven Rifles. We refer to any Bank, Mercantile Agency, Express Company, or Newspaper Publisher in this City. Address **E. T. ALLEN, Agent for the Pacific Coast, 416 Market Street, San Francisco, Cal.**

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Hay, Wool, Hide and Hop PRESSES.

\$25 VINEYARD HARROWS, \$25

The Best and Cheapest Harrow.

MADE FOR VINEYARDS OR ORCHARDS, PERFECT SAFETY TO THE TREES, AND PULVERIZES THOROUGHLY.

## WINDMILLS.

Jackson's Improved California.

BEST AND CHEAPEST.

ADDRESS,

**JACKSON & TRUMAN,**

Manufacturers, San Francisco.

## GUNS

Lowest prices ever known on Breech-Loaders, Rifles, and Revolvers. **OUR \$15 SHOT-GUN** at greatly reduced price. Send stamp for our New Illustrated Catalogue (B) **P. POWELL & SON, 238 Main Street, CINCINNATI, O.**

## WAGONS

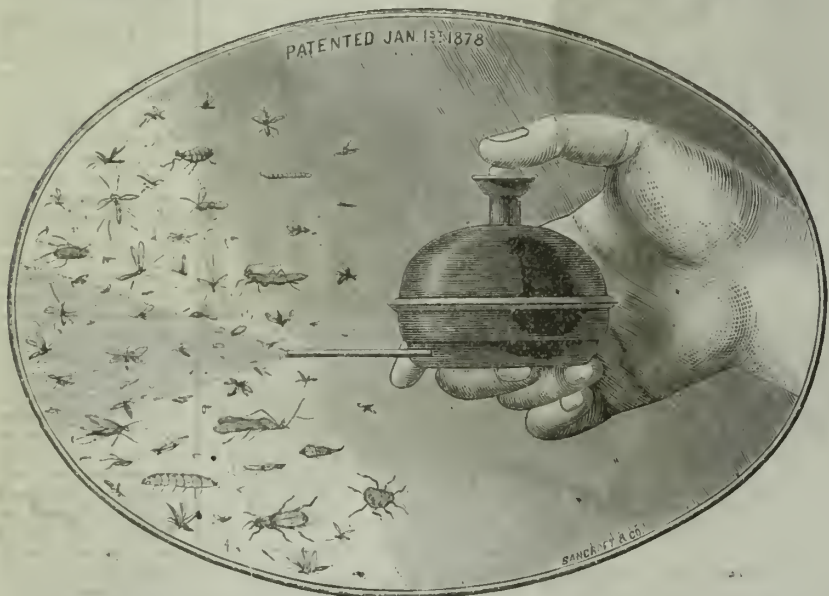
At the **SANBORN WAGON DEPOT,**

24 and 26 Beale Street, S. F. Cal.

Three sizes of **THOROUGH-BRACE WAGONS**, with 1, 2 or 3 seats. Eight sizes of **EXPRESS AND DELIVERY WAGONS**. Three sizes of **FOUR SPRING WAGONS**, with 1, 2 or 3 seats. Besides Business Wagons and Buggies.

Also, all sizes of **FARM WAGONS**, made by Mitchell, Lewis & Co., of Racine, Wis., who make the best Farm Wagons in the world. All our Wagons are fully warranted. **A. W. SANBORN & CO.,**

## PYRETHRUM CINERARIE FOLIUM.



## THE GREAT CALIFORNIA INSECT-DESTROYING PLANT.

This celebrated plant has been pronounced by the most competent authorities to be unequalled as to its value and efficacy by any other production ever introduced on the American continent. It has already rendered immense service to mankind, in the preservation of food and clothing from the inroads of pestilential insects and worms, and vastly enhanced the comfort of both man and beast by its judicious use. Its growth and general use will eventually destroy all noxious vermin which infest the dwellings and persons of men and the domestic animals, as well as the insects which create such havoc with the products of the soil and of human industry.

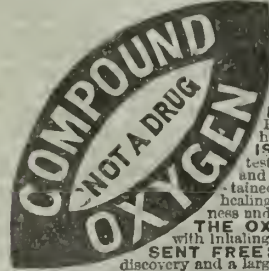
Among the eminent scientists who have given the Pyrethrum exhaustive and thorough examination and trial, may be named Prof. C. V. Riley, Chief of the United States Entomological Commission, and Prof. J. Henry Comstock, of the Agricultural Department, Washington, D. C.; Prof. A. J. Cook, Agricultural College, Lansing, Mich.; and Prof. E. W. Hilgard, State University, Berkeley, Cal., all of whom unite in declaring it superior and infinitely surer and safer than any other insecticide ever offered to the public.

On receipt of \$5 we will send a package of seed by mail to any address, with instructions for cultivating the wonderful plant from which our **G. N. MILCO'S BUAHACH CALIFORNIA INSECT POWDER** is made. Each package will furnish plants for two or three acres. All orders for seed must be sent to the

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## A NEW TREATMENT for Consumption, Asthma, Bronchitis, Catarrh, Dyspepsia, Headache, Debility, Neuralgia, Rheumatism, and all Chronic and Nervous Disorders.

**ACTS DIRECTLY** upon the great nervous and organic centres, and cures by a natural process of revitalization.

**HAS EFFECTED REMARKABLE CURES**, which are attracting wide attention.

**HAS BEEN USED** by Rt. Rev. John J. Keane, Bishop of Richmond, Va.; Hon. Wm. D. Kelley, T. S. Arthur, and others, who have been largely benefited, and to whom we refer by permission.

**IS STRONGLY ENDORSED:** "We have the most unequivocal testimony to its curative power from many persons of high character and intelligence."—**Lutheran Observer.** "The cures which have been obtained by this new treatment seem more like miracles than cases of natural healing."—**Arthur's Home Magazine.** "There is no doubt as to the genuineness and positive results of this treatment."—**Boston Journal of Commerce.**

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**WE HAVE ESTABLISHED A DEPOSITORY OF OUR COMPOUND OXYGEN HOME TREATMENT** at San Francisco, Cal. This will enable patients on the Pacific Coast to obtain it without the heavy express charges which accrue on packages sent from Eastern States.

All orders directed to **H. E. MATHEWS**, 606 Montgomery street, San Francisco, Cal., will be filled on the same terms on which we fill orders sent directly to our office in Philadelphia.

Patients ordering from our depository in San Francisco, should, at the same time, write to us, and give a statement of their case, in order that we may send such advice and direction in the use of the Treatment as their special disease may seem to require.

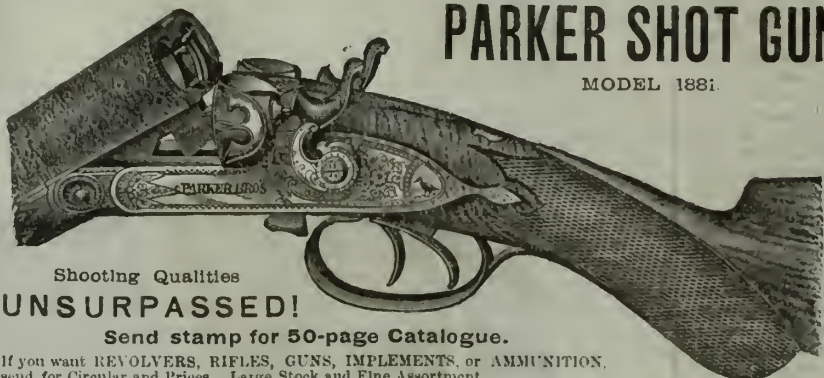
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MODEL 1881.



Shooting Qualities

**UNSURPASSED!**

Send stamp for 50-page Catalogue.

If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION, send for Circular and Prices. Large Stock and Fine Assortment.

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The above Engine is the safest and most powerful in the market, lighter than other Engines, and no danger of explosions. An explosion of Heald's boiler has never occurred. Two sizes are made; either size will run the largest separator. All the latest improvements have been added to the boiler and engine. Is ready to stand a test any time. Is guaranteed perfect in all its parts, and will do the same work with less water and fuel than any other engine in the market. With one of

## HEALD'S BARLEY MILLS,

It will thresh and grind at the same time, all the separator can thresh. For further particulars,

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**J. L. HEALD, Vallejo, Cal.**

Engine can be seen at **D. M. OSBORNE & CO., 33 Market St., S. F.**

## M. J. PAILLARD & CO.,

Manufacturers and Importers of all Kinds of

## MUSICAL BOXES.

## MUSICAL BOXES

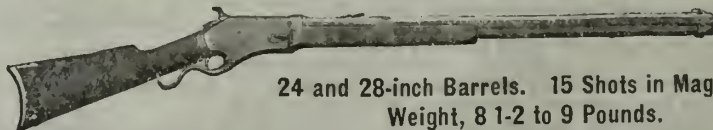
Of Standard Reputation. The largest and finest assortment in the city. Musical Boxes with changeable cylinders always on hand at low figures. The latest style patented, "THE INTERCHANGEABLE," patented February 11, 1879.

Repairing Musical Boxes and Furnishing Material a Specialty.

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## THE KENNEDY REPEATING RIFLE.



24 and 28-inch Barrels. 15 Shots in Magazine.

Weight, 8 1-2 to 9 Pounds.

USES THE WINCHESTER MODEL 1873 CARTRIDGE, .44 CALIBRE, 40 GRAINS, CENTER FIRE.

Out of 500 Glass Balls thrown from a trap, 479 were broken with this Rifle. Prices Low. Circulars on application to

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## ANDERSON'S SPRINGS,

LAKE COUNTY, CAL.

Nineteen Miles from Calistoga.

Hot Sulphur Water for Rheumatism, Paralysis, etc.

Cold Sulphurs for Diseases of the Bowels and Stomach

Climate Beautiful; Scenery Magnificent; Abundance of

Trout Fishing; Good Cooking. Board, \$10 to \$12 per week.

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## FOR THE LADIES.

## TURKISH RUG PATTERNS

A Pleasant and Profitable Fancy Work. Patterns stamped in colors on heavy hurlsps; Animals, Flowers and Scrolls. Can be made of rags or waste yarn. Full printed directions furnished with pattern. Send for Catalogue. Address

**CHAS. PEAKE & CO., 209 Kearny St. S. F.**

## \$6,000—RANCH FOR SALE.

Four Hundred and Twenty Acres. Highly Improved. For particulars apply to the owner on the premises.

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Refers to C. S. KELLEY, 173 Railroad Avenue, South San Francisco.



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PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

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HENRY PIERCE, 728 Montgomery Street, S. F. Jersey Cattle, bred from importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted butter strains on the island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound butter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

M. WICK, Oroville, Butte County, Cal. Breeder of Thoroughbred Cattle, Short-Horns. Young Bulls and Heifers for sale at all times of the year.

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HENRY MILLER, San Francisco, Cal. Breeder of Thoroughbred Norman Horses of the Stock Imported by Mr. Perry, of Illinois, took First Premium at San Jose Fair, 1880.

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JOHN S. HARRIS, Hollister, Cal. Breeder of Thoroughbred registered Goats. Took Eight Premiums at the State Fair of 1880. I had one Buck at the State Fair with staple 16 inches long. Correspondence solicited.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

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GEO. TREFZER, Napa, Cal. I have a fine lot of Brown Leghorns for sale, all one year old, for \$3 per trio, if taken soon, in order to make room for my young stock.

MRS. L. J. WATKINS, San Jose, Cal. Poultry. Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rock, Pekin Ducks.

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ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

ELIAS GALLUP, Hanford, Cal., Breeder of Poland China Swine. Stock recorded in American Poland China Record. Are descendants of the celebrated McGarry-Bismarck, bred by D. M. Magie, Oxford, Ohio. Took five First Premiums at State Fair in 1880.

## ITALIAN SHEEP WASH.

Extract of tobacco, free from poison. Prepared by the Italian Government Co. Cures thoroughly THE SCAB OF THE SHEEP.

And is an excellent Sheep Dip. The best and cheapest remedy known for curing the Scab.

BELLE VIEW RANCH, Bakersfield, Cal., June 16, '81. CHAS. DUISENBERG, Esq., San Francisco—Dear Sir: I take pleasure in recommending to all Wool Growers the Italian Sheep Wash. I have used it with the greatest success and efficacy in curing the scab, without injury to either sheep or growth of wool. For cheapness and simplicity for application it ranks above any remedy I have ever used.—Yours respectfully, Geo. F. Thornton, General Sup't of Belle View Ranch, Kern Co., Cal.

Successful in every case. For particulars apply to CHAS. DUISENBERG & CO., Sole Agents. 314 Sacramento Street, San Francisco.

## RAMS FOR SALE.

250 THOROUGHbred And Graded SPANISH MERINO

Rams for Sale.



Bred from the first importation of Spanish Merino Sheep to California, in 1854. Thoroughbred and High Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division U. P. R. R.

P. O. address, MRS. E. MCCONNELL WILSON, Elk Grove, Sacramento Co., Cal.

\$400 to \$60,000.

Farms to suit all; Grains, Grape, Fruit, Stock and general Farming Lands and Suburban Homes, some very cheap. PACIFIC LAND AGENCY, 305 Kearny St., S. F.

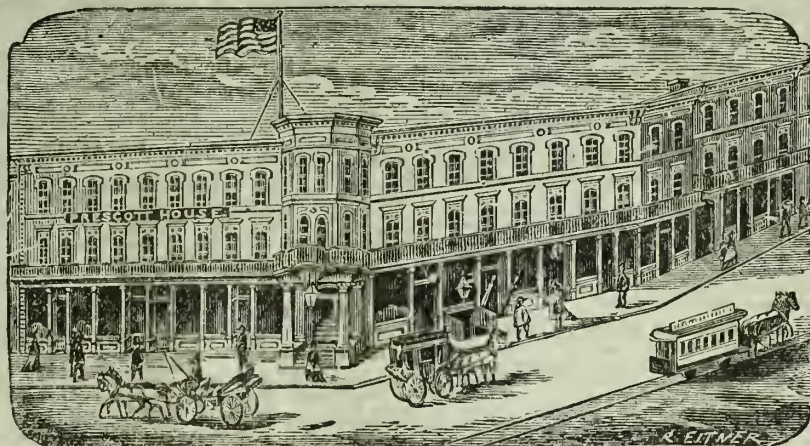
## The Fresno Colony,

On the line of the Southern Pacific Railroad and adjoining Fresno City and the Central Colony. Has the most favorable location of any Colony, as well as other superior advantages. Abundant water secured. Land unsurpassed for Vine Raising and Fruit Culture. Send for Map and Circular, or come and examine. Address

THOMAS E. HUGHES & SONS, Fresno City, Cal.

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## PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House.

O. F. BECKER, Proprietor

## AMERICAN EXCHANGE HOTEL.

Sansome Street, (Opposite Wells, Fargo & Co's Express), San Francisco.

This Hotel, under the management of CHAS. MONTGOMERY, has been thoroughly renovated, and being in the very center of all the Banks, Insurance Offices and Commission Merchants, it offers special inducements to Merchants from the Interior and Farmers.

Board, with Room, \$1, \$1.25 d \$1.50 per day. Special rates by the week or month.

FREE COACH TO AND FROM THE HOTEL.

## YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE.

JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

Price Reduced to \$1 Per Gallon.

## MOORE'S SULPHUR DIP,

THE BEST AND CHEAPEST PREPARATION FOR THE CURE OF SCAB.



The General Health and Condition of the Sheep Promoted by its Use. Non-Poisonous.

One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

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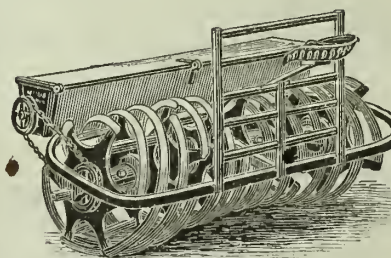
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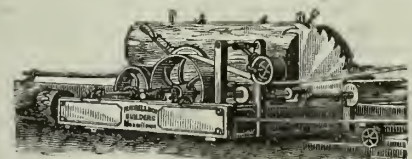
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The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.00 per gallon. For directions and testimonials apply to FALKNER, BELL & CO.,

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Hooper's South End Grain Warehouses,

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First-class Fire-proof Brick Building. Capacity, 10,000 tons. Goods taken from the Dock and the Cars of the O. P. R. R. and S. P. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

50 All Gold, Chromo and Lithograph Cards. (No 2 alike). Name on 10c. Clinton Bros., Clintonville, Con.



## The Fresno Excursion.

Two hundred and fifty-four persons availed themselves of the opportunity afforded by the excursion train on Monday to visit this section. A large portion of the population of town was at the depot to welcome the arrival of the train, and the Fresno brass band volunteered its services for the occasion, and played several airs while the passengers were disembarking from the train. Every effort had been made by the committee to secure sleeping accommodations for the excursionists, and as rapidly as possible, they were hurried to the hotels and registered. Grapes were put on exhibition at the various hotels, and these were immediately examined and commented on by the guests. After the guests had got quartered and partaken of their evening meal, they were invited around to Metropolitan hall, when a public welcome was given them by Judge Winchell and Judge North, in behalf of the people of Fresno. Remarks were also made by Gen. Murray Whalen, of Sonoma (who also read a letter from Gen. Vallejo, regretting his inability to be present), and by Mrs. Laura DeForces Gordon, Fred. K. Krauth, of the Alameda Encinal, and others. The excursion is certainly a great success, and to the efforts of Thomas E. Hughes & Sons, more than to all others, is the credit due for it. It was originally conceived by the Messrs. Hughes, and they have worked untiringly for its accomplishment. It has cost them much money, time and trouble. When others altered, they only redoubled their efforts, and hence accomplished what would have but a short time ago been considered the wildest folly to attempt. These gentlemen ought to reap a liberal reward for their enterprise.—*Expositor*.

We learn that the excursionists declared themselves well pleased with their reception from the Fresno people and delighted with the marks of success and progress which they saw at the different colonies. The result will doubtless be the farther increase of home-makers in that pleasant land.

## The Value of the Rural.

EDITORS PRESS:—I wish to say a word in commendation of your paper, which I have taken since 1st of January last, by simply remarking that I consider any one of three articles in August 13th issue, viz., "Evaporation from Stirred Soil," "The Linnet Nuisance," and "Scale Insects at San Jose," to be worth the price of a year's subscription in information on those subjects. I shall save a good many "three dollars" next year by putting in practice the suggestions there made.—*SUBSCRIBER, Anaheim, Cal.*

## Our Agents.

OUR PATRONS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. P. OSBORNE—San Francisco.  
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## Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grove walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sealions is increased and there is a better chance to study their actions. The pavilion has now varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

\$40 RIFLE FOR ONLY \$15.—The Evans 20-shot Sporting Rifle, advertised by E. G. Rideout & Co., 10 Barclay street, is a great bargain. We are positively assured that the retail price of these Rifles was \$40 each; any one can get the same Rifle now by sending to the above named firm only \$15. They offer to refund the money sent if the Rifle is not as represented. Read their large advertisement in this issue.

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## S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 24, 1881.  
Since our last report there has been considerable fluctuation in Wheat, though nothing like the wild excitement and speculation which has characterized the Eastern grain markets. Wheat reached its highest point last Friday, when it touched \$1.70 per cwt. It has since receded, until \$1.65 per cwt is the top price to-day for fancy Milling lots. The general outlook for Wheat value is, however, as good as it was last week. In fact, each week brings farther reports of moderate results in all other Wheat growing regions and some threats of greatly reduced yields, as may be seen by our advices by telegraph below. The latest from Liverpool is the following:  
LIVERPOOL, Aug. 23.—Good to choice California Wheat, 10s 9d@11s. Off coast cargoes, 5s 3d; just shipped and nearly due, 5s 3d. Receipts for the past three days, 151,000 cwt, including 119,000 American.

## Freights and Charters.

The iron ship *Trafalgar*, now discharging at San Diego, has been chartered to load at San Francisco at 17s 6d to Cork. The freight market was very strong Tuesday, and an available vessel on the spot could have been placed at 85s. The cause of the market's firmness was the advance of Wheat in Liverpool.

## The Foreign Review.

LONDON, Aug. 22.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says:

The past week's weather has jeopardized the harvest. Mildew is rapidly developing in standing grain, and cold nights and moist days are causing Wheat in sheaves to sprout. The quality of Wbeat, from which the very best results were expected, is found to be affected by premature ripeness, and the quality and yield are disappointing. In both Great Britain and on the Continent there has been an advance in the price of Wheat, not solely on account of the disappointing harvest. Stocks have been let down low in anticipation of early deliveries. These calculations have been upset by the weather, which entirely prevented threshing from the fields. The bulk of the crop must go through the ordinary sweating in stocks before it comes to an extended market. Practically there is no "old native" Wheat. The advance is in sympathy with foreign values. Wbeat opened at an advance of 2 3/4s, closing 3 3/4s dearer. The new crop is difficult to quote, on account of the varied quality and scarcity. Foreign trade has been more active. Millers have been putting up stocks at an advance of 3 3/4s per quarter. Flour has been scarce on the spot. On Monday prices improved 3s, and on Friday prices were still firmer. Foreign supplies continue light and show a similar advance. Barley was 1s dearer, in sympathy with other feeding stuffs. Foreign was irregular and in favor of sellers. Oats improved, on account of the bad prospects of the new crop. Foreign were dearer. Maize has advanced 2s since Monday, and American mixed parcels 3s on Monday. The off-coast market is bare. Australian figures begin to show a rapid decrease of exportation. Sales of English Wheat during the week were 10,934 quarters, at 48s 10d per quarter, against 11,845 quarters, at 43s 9d, for the corresponding week of last year.

LONDON, Aug. 23.—The *Times* says: The almost daily rains are sadly interfering with the harvest, and, unless fine weather sets in, irreparable injury will be caused to the Wheat crop, much of which has been cut for some time. A large acreage yet remains exposed in the fields awaiting suitable weather for carrying in, while reaping has been suspended in some places.

## Eastern Grain and Provision Markets.

NEW YORK, Aug. 21.—The past week, while comparatively quiet and steady, as a general thing, commercially, has in some cases been one of almost unprecedented excitement, while most radical changes have occurred in values. The Wheat market has been manipulated by speculators about as they chose, on the strength of stronger cables and demand from the shorts here and country buyers, both of whom went wild while the bulls were selling out, and prices advanced correspondingly. To-day, however, the reaction came, and prices went off rapidly, and a panic seemed probable. On 'Change the outlook at this moment seems to be downward. Legitimate trade will be checked, shippers being wholly shut out by advance. Pork, firm, 18 1/2c@18 5/8c. Lard is in fair demand and steady.

NEW YORK, Aug. 23.—Wheat is stronger on cables, and bad reports of weather and harvest from Great Britain, together with the reported clique buying in Chicago, either for long or short account, and it advanced 1c, closing strong. Shippers claim that nothing whatever can be done for export, as the market is 50c above any foreign market, and only speculative shipments can be made. Just before the close a good export trade was done on new orders from the United Kingdom at about market rates. Pork is strong, and Lard active and easier.

## New York Dried Fruit Markets.

NEW YORK, Aug. 21.—Foreign Fruits are not over lively, though there is a good trade for the season. Raisins are scarce and firm; Valencia, 92-95; loose Muscatel, 82-85; London layers, 83; Valencia, 91. Prunes are in good demand, at 7c for new. Dried Apples are held firmly and confidently, although there is not much doing.

NEW YORK, Aug. 23.—Turkish Prunes are very strong at 7 1/2c.

## Eastern Wool Markets.

NEW YORK, Aug. 21.—Wool remains very quiet, but there is no pressure to realize, and prices continue steady. Sales are reported of 110 bales and 25,000 lbs of Spring California at 29c@30c; 19,000 lbs secured at 60c@72c.

BOSTON, Aug. 23.—There is a steady demand for Wool. Prices are unchanged and holders quite firm for all desirable grades. There is a confident feeling that prices are as low now as they are likely to be some months to come. Ohio and Pennsylvania are quoted at 40c@42c for X and XX; 42c@44c for XX choice and XXX, for 45c@47c medium and No. 1; Michigan, 39c@40c for XX, which are firm. Combing and delaine selections—fine medium and No. 1—are wanted and command full prices, but coarse grades are neglected. Fine Michigan and Ohio delaines at 44c@46c for medium and No. 1; combing, 46c@48c. Unwashed Wools continue in steady demand, particularly Territory, at 16c@22c for low and coarse; 25c@30c for fine and 27c@34c for medium. California Wool remains quiet and unchanged. Pulled Wools are in steady demand at 32c@35c for common and choice super, with occasional sales as high as 48c@49c. Nothing of consequence has been done in foreign Wool, but stocks are held firm.

PHILADELPHIA, Aug. 23.—Wool is steady.  
LONDON, Aug. 23.—The third of the series of colonial Wool sales for 1881, during which 333,000 bales will be offered, was opened to-night. Sydney was largely competed for at rates current at last sales. Port Phillip was slightly weaker, and for cross-bred there was from 10d@11d decline. Eighty-one thousand bales were sold, chiefly Sydney and Port Phillip.

BAGS—The values are still low. There has been an auction sale of 100,000 standard Calcutta at 87.72 1/2. Wool Bags are held at 44c@50c.  
BARLEY—Barley is still improving, and is now approaching old-fashioned prices. There is a short crop of Barley this year because of reduced acreage. Abroad, too, Barley promises to be in request. We note sales: 385 sks poor old Brewing, \$1.25; 518 and 275 sks Feed and 113 sks Coast Chevalier, \$1.20; 500 sks Coast Chevalier, \$1.17; 500 sks dark Coast Feed, \$1.15, and 250 sks poor do, \$1.10 per cwt.

BEANS—There is a slight improvement in Pea, Pink, Red and Small White Beans.

CORN—Corn is still advancing and sales of Yellow have been made at \$1.17 and Small Yellow at \$1.20. White Corn is nominal.

DAIRY PRODUCE—Butter is unchanged and firm. Cheese is also at last week's rates.

EGGS—Eggs are selling about as at our last report. Eastern and Utah Eggs are a shade lower.

FEED—The advance in Grain has brought the expected elevation of Bran and Middlings, as shown in our price list. Hay is unchanged.

FRESH MEAT—Fresh Beef is a fraction lower for all kinds. Mutton has improved slightly and Lamb is nearer Mutton prices.

FRUIT—There is no great change, except a little decline in grapes, owing to freer supplies. Peaches and Pears are now arriving in mixed conditions, and the poor ones bring down the average value. Canteloupes are also over-ripe in some cases, and go low. Raspberry rates are nominal, as there were none in to-day.

HOPS—The first new Hops came from Sacramento, and are reported able to go East at 15c. The rate for new is nominally at 13c@20c, to cover holders' views.

ONIONS—Silverskins are 10c lower per cwt.

POTATOES—Potatoes have also shaded off a little, owing to large receipts.

PROVISIONS—Prices are well maintained and the trade good.

POULTRY—Hens, Roosters and Broilers show a disposition to advance a little, as the low rates have induced growers to hold back somewhat.

VEGETABLES—The market is altogether quiet and free from fluctuation. Tomatoes remain at the low figures of last week.

WHEAT—Dealers report the situation weak to-day. There is, however, an improvement of 2 1/2c per cwt over the rates of Wednesday of last week. We note sales: 1,000 sks gilt-edged milling, \$1.63; 500 tons, 2,500 sks good shipping, \$1.62; 1,775, 1,500, and 1,200 sks do, \$1.60; 40 tons off grade, \$1.52; and 35 tons Odessa, \$1.45.

WOOL—Rates are about the same as last week, but holders complain that bids are few and low. Very few sales are made.

## Domestic Produce.

WHOLESALE. WEDNESDAY M., August 24, 1881.

BEANS & PEAS. (Silver Skin.) 70 @ 75

Bayo, cwt. 90 @ 121

Butter 1 10 @ 30

Castor 3 00 @ 50

Pea 2 00 @ 50

Rad 87 @ 90

Pink 87 @ 90

Small White 2 00 @ 50

Lima 2 00 @ 50

Field Peas, big eye 40 @ 50

do, green 1 35 @ 40

BROOM CORN.

Southern 3 @ 31

Northern 4 @ 6

CHICORY.

Callifornia 4 @ 41

Germans 6 @ 7

DAIRY PRODUCE. ETC.

Cal. Fresh Roll, lb. 30 @ 32

do Fancy Brands 33 @ 35

Pickles Roll 28 @ 31

Elkins new 27 @ 30

Western 18 @ 22

New York 16 @ 22

CHEESE.

Cal. Cal. lb. 13 @ 14

Cal. Fresh, doz. 23 @ 28

Ducks 25 @ 25

Oregon 17 @ 24

Eastern, by ex'ps 17 @ 24

Pickled here 21 @ 24

Utah 21 @ 24

FEED.

Bran, ton 25 @ 25

Corn Meal 26 @ 27

Hay 7 00 @ 12 50

Middlings 22 00 @ 23 00

Oil Cake Meal 24 50 @ 25 00

Straw, bale 40 @ 45

FLAX.

Extra, City Mills 5 25 @ 75

do, Country Mills 4 75 @ 25

do, Oregon 4 50 @ 50

do, Walla Walla 4 50 @ 50

Superfine 2 75 @ 30

FRESH MEAT.

Beef, 1st cut 5 @ 6

Second 4 @ 5

Third 3 @ 4

Mutton 3 @ 4

Spring Lamb 5 @ 5

Pork, dressed 5 @ 6

Pork, undressed 5 @ 6

Veal 7 @ 7

Milk Calves 7 @ 8

do, choice 8 @ 9

GRAIN, ETC.

Barley, feed, cwt. 15 @ 20

do, Brewing 1 25 @ 30

Chevalier 1 15 @ 20

do, Coast 1 10 @ 10

Buckwheat 1 00 @ 10

Corn, White 1 10 @ 12

Yellow 1 10 @ 12

Small Round 1 15 @ 20

Oats 1 40 @ 43

Milling 1 50 @ 65

Rye 1 40 @ 47

Wheat, No. 1 1 60 @ 62

do, No. 2 1 55 @ 57

do, No. 3 1 40 @ 50

Choice 1 62 @ 65

HIDES.

Hides, dry 19 @ 20

Wet salted 9 @ 10

HONEY, ETC.

Beeswax, lb. 23 @ 25

Honey in comb 13 @ 15

Extracted, High 9 @ 11

do, Stark 8 @ 8

HOPS.

Oregon 13 @ 20

California, new 13 @ 20

Wash. Ter. 13 @ 20

Old Hop 13 @ 20

NITS Jobbing.

Walnuts, Cal. 8 @ 9

do, Chile 7 @ 8

Almonds, all sh lb 8 @ 10

Soft shell 14 @ 15

Brazil 16 @ 17

Peanuts 16 @ 17

Fliberts 14 @ 15

ONIONS.

Red 50 @ 65

Southern Fall 12 @ 13

## Fruits and Vegetables.

(WHOLESALE.)

WEDNESDAY M., August 24, 1881.

FRUIT MARKET.

Apples, bx. 25 @ 25

Bananas, bch. 2 50 @ 50

Cantaloupes, crt. 40 @ 100

Cocconuts, 100 6 00 @ 7 00

Crab Apples 50 @ 100

Cranberries, bbl 40 @ 75

Figs, bx. 40 @ 90

Grapes 40 @ 90

do, Malvosa 75 @ 90

do, Rose Peru 75 @ 90

do, Hamburg 75 @ 90

do, Muscat 75 @ 100

Limes, Mex. 6 00 @ 8 00

do, Cal. box 4 50 @ 5 00

Lemons, Cal. bx 4 50 @ 5 00

Sicily, box 12 00 @ 14 00

Australian 1 00 @ 1 25

Nectarines 1 00 @ 1 25

Oranges, Cal. bx 1 75 @ 2 50

do, Tabal M 20 00 @ 25 00

do, Mexican 1 00 @ 1 25

do, Loreto 1 00 @ 1 25

Peaches, bak 75 @ 1 00

do, Mount, bx 1 25 @ 1 50

Pears, bx. 30 @ 75

do, Bartlett 2 00 @ 2 50

Pineapples, doz 6 00 @ 8 00

Plums, bx. 40 @ 75

Prunes, German 40 @ 90

Quinces, bx. 40 @ 90

Blackberries, crt. 5 00 @ 6 00

Raspberries, crt. 4 00 @ 5 00

Strawberries, crt. 4 00 @ 5 00

Sugar Cane, bbl 5 00 @ 10 00

Watermelons, 100 5 00 @ 10 00

DRIED FRUIT.

Apples, sliced, lb 5 @ 5

do, quartered 15 @ 16

Apricots 10 @ 11

Blackberries 10 @ 11

Citron 28 @ 30

Dates 9 @ 10



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With Full and Ample Water Rights.

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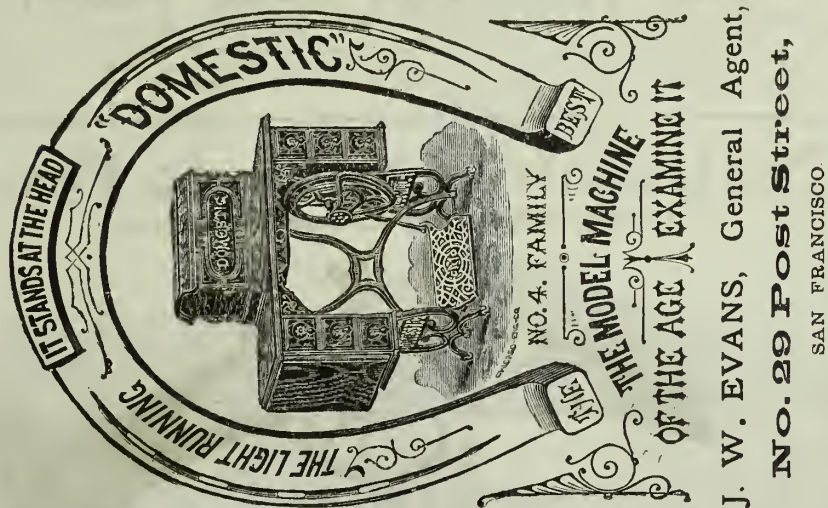
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Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.



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A complete Manual and Reference Book on all subjects connected with successful Bee Culture, by E. Kretschmer, of Coburg, Montgomery County, Iowa. A new edition, containing 244 pages of plain and full instructions by a practical and scientific apiarist, and illustrating the new system of Bee Culture with the Honey Extractor. It also tells how to rear Italian Queen Bees. Bound in cloth. Price, postpaid, \$1. Sold by DEWEY & CO., 202 Sansome St. San Francisco.

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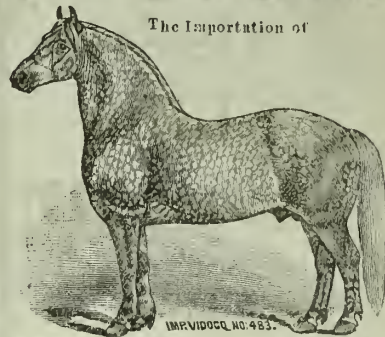
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The Importation of



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After these horses were purchased they were Exhibited at the Great Horse Show of France, of 1881, and carried off all the Prizes but one.

They will arrive at his farm September 1st, where can then be seen One-fifth of the Imported Percheron-Norman Horses in America.

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For Warming and Ventilating Private Residences and Public Buildings.

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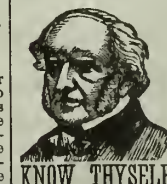
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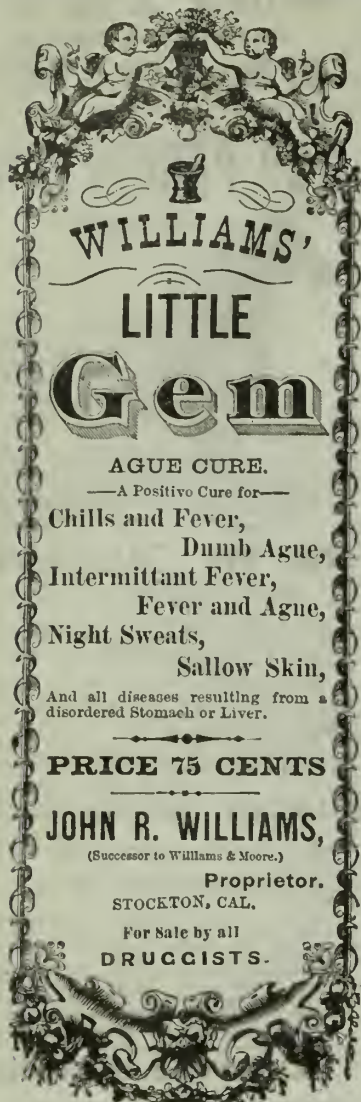
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AGUE CURE.  
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Chills and Fever,  
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Intermittent Fever,  
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Night Sweats,  
Sallow Skin,  
And all diseases resulting from a  
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**PRICE 75 CENTS**

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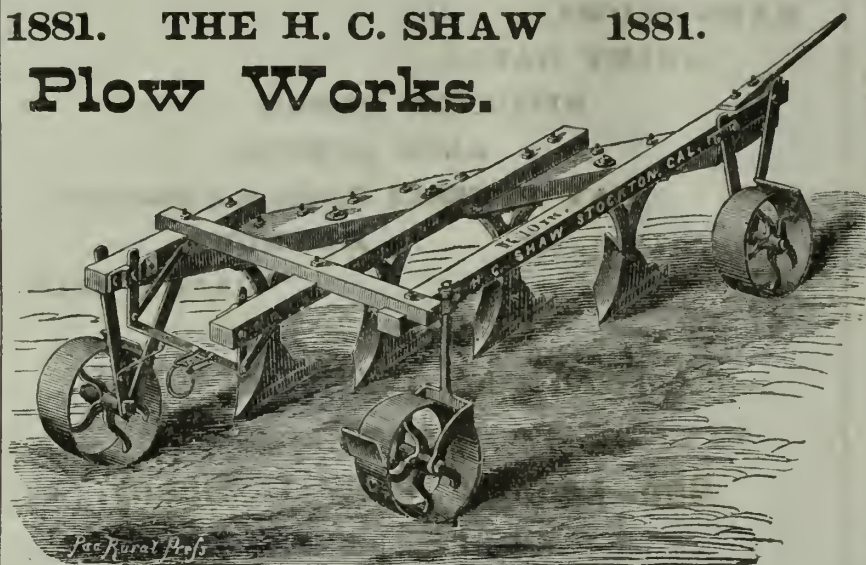
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## 1881. THE H. C. SHAW 1881. Plow Works.



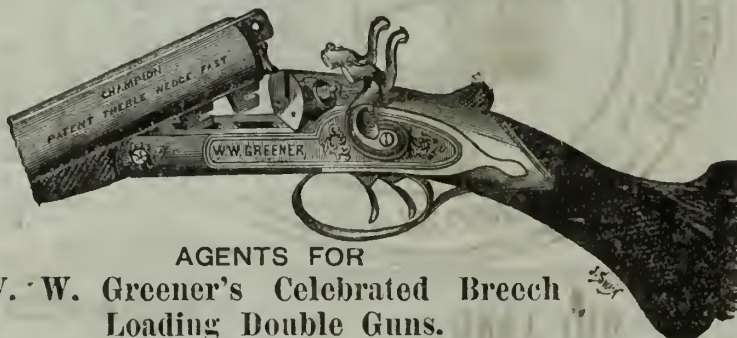
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Over 2,000 of H. C. Shaw's Improved Patent Stockton Gang Plows Sold in Five Years  
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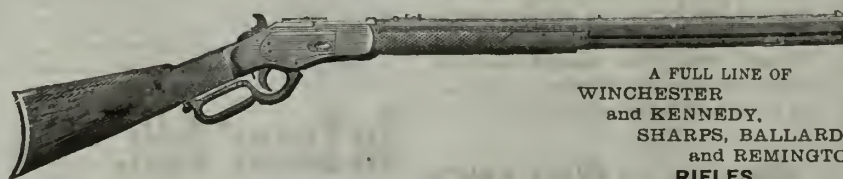
Ammunition in quantities to suit A liberal discount to the trade. Price List on Application

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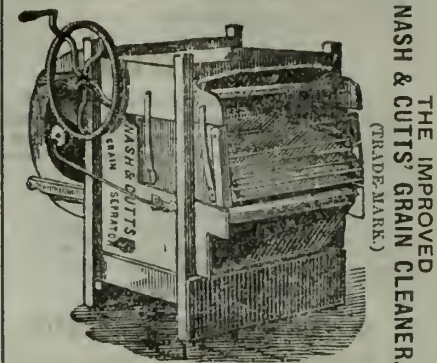
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Improved Again for 1881.

Five sizes, warranted to clean from 50 to 200 bushels per  
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Diploma that has been offered by the State Agricultural  
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THE IMPROVED  
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Composed of perforated zinc and patent rolled wire. The zinc  
is not punched as of old, with all holes of a size, but they  
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Notwithstanding the extra expense incurred by the pur-  
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**H. D. NASH & CO.,**

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Sole manufacturers of "The Improved Nash & Cutts'  
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We also make a Cleaner to attach to Threshing Ma-  
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The Twenty-Eighth Annual Fair  
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The attention of Exhibitors is called to the liberal  
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**Calvert's Carbolic  
SHEEP WASH.**  
\$2 per Gallon.



After dipping the Sheep, is use-  
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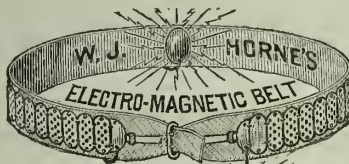


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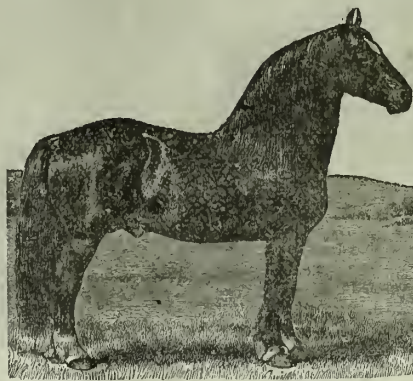
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MOST EFFECTUAL!

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It is Superior to any Lini-  
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RINGBONE, SPAVIN,  
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And OLD SORES, apply  
freely so as to blister, from  
three to five days in succes-  
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if not cured repeat as at first.

SPRAINS, STIFF JOINTS, BRUISES, WIND GALLS,  
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to blister. SADDLE SORES, CUTS, and all other sores  
where the skin is broken, mix the Liniment half and half  
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THE BEST!

AS A  
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We are safe in making the  
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curing the following diseases:  
RHEUMATISM,  
Apply freely to the parts af-  
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from 10 to 20 drops in from  
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same as above, repeated every half hour until relieved.  
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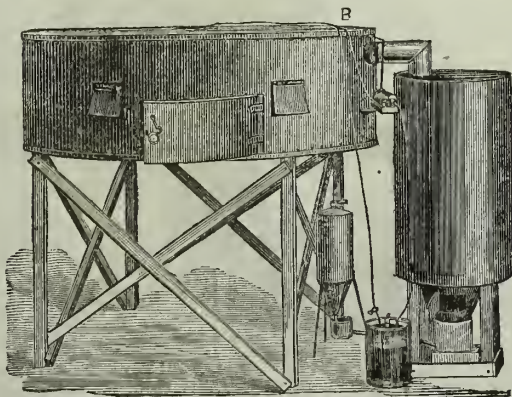
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Self-Regulating, Durable, Practical and easily  
Understood. Will Hatch where none other  
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Consignments of Grain, Wool, Dairy Products, Dried Fruits and other Produce solicited, and ad-  
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**AMOS ADAMS, Business Manager.**

54 All Gold, Chromo and Lithograph Cards, no 2 alike. 50 Lithographed Chromo Cards, no 2 alike 10c. Name  
name on, 10 cts. C. DePuy, Syracuse, N. Y. in fancy type. Conn. Card Co., Northford, Ct.

## Lands for Sale and to Let.

# TEXAS LANDS.

I am prepared to sell lands in various counties of Texas  
and at prices ranging

From 50 Cents to \$5 Per Acre,

Owing to nearness to Railroads and improvements, sup-  
ply of wood, water, etc. These lands are carpeted with a  
rich and nutritious growth of MESQUIT GRASS, green  
the year round.

I have a solid body of 9,200 acres in Zavalla County,  
fronting Leona River.

Plenty of Grass, Timber and Water,

At \$1.25 per acre, unfenced, and 15 miles from Railroad.  
Also tract in Frio County, of 10,000 Acres, fronting on  
Frio River. NEVER-FAILING water, well coated with  
Grass; ALL FENCED. Well adapted to Cattle, Sheep,  
Swine or Farming, five miles from Railroad Station, at  
\$3 per acre, one-half cash, balance in one and two years  
at 8% interest.

Also 4,605 acres on same river, two sides fenced and  
near County seat at \$2 per acre.

Also some 640-acre tracts of rich land at \$2.50 per acre,  
and near Railroad, besides many other pieces in other  
counties.

**JAMES M. THOMPSON,**  
San Antonio or Frio Town, Texas.

## FOR SALE.

A charming country residence, three-quarters of a mile  
north of "Camp Capitola," the famous camping ground of  
Soquel, Santa Cruz County, on an elevated plot, over-  
looking the town. A one-story Cottage, with climbing  
vines; a lovely flower garden, with shrubs, foreign varie-  
ties of grapes, berries of various kinds, fruit trees, and  
an abundant supply of excellent water, windmill, tank-  
house, stable and out-buildings. Good drainage, in fact,  
everything pertaining to a desirable country residence.  
Terms easy, apply to C. H. HALL, Soquel, or Howe &  
Hall, 408 Davis Street, San Francisco.

# FARMING LAND

For Sale in large or small tracts, on easy terms, in  
the best parts of the State.

**McAFEE BROTHERS,**

202 Sansome Street, San Francisco, Cal.

## SANTA CRUZ COUNTY

Goods Crops every Season without Irrigation

Farms, Stock Ranches, Dairy Farms, Fruit Farms,  
Vineyards, Chicken Ranches and homesteads of every  
class and description in this and adjoining counties for  
sale or rent on reasonable terms. State requirements  
and obtain suitable particulars from the Real Estate

**EXCHANGE & MART,**

Santa Cruz, Cal.

## The Famous "Enterprise,"

**PERKINS' PATENT**  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.



These Mills and Pumps are  
reliable and always give sat-  
isfaction. Simple, strong and  
durable in all parts. Solid  
wrought iron crank shaft with  
double bearings for the crank  
to work in, all turned  
run in babbitted boxes.

Positively self regulating  
with no coiled spring or springs  
of any kind. No little rods,  
joints, levers or balls to get  
out of order, as such things  
do. Mills in use six to nine years in good order now, that  
have never cost one cent for repairs.  
All sizes of Pumping and Power Mills. Thousands in  
use. All warranted. Address for circulars and infer-  
mation

**HORTON & KENNEDY,**  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Food Mills for sale,  
San Francisco Agency, LINFORTH, RICE  
& CO., 323 & 325 Market St. et.



**THE GIANT RIDING MACHINE.**

This Wonderful Improved  
**SAW MACHINE**  
is warranted to saw a 2-foot log in three min-  
utes, and more cord wood or logs of any size in a  
day than two men can chop or saw the old way.  
Every Farmer and Lumberman needs one.  
**AGENTS WANTED—Circular and terms Free.**

SEND FOR CIRCULAR TO

**LINFORTH, RICE & CO.,**

General Agents for the Pacific Coast,  
323 and 325 Market Street San Francisco.



# THE GARDEN CITY GANG PLOW.

This Gang Plow is the result of many years' experience in their manufacture, aided by a long series of practical tests in the hands of some of the best farmers on the Pacific Coast. They are extremely simple, strong and durable, and have several features superior to all other known Gang Plows. One feature of great importance is the Brake arrangement, for raising plows out of the ground. By this means even a boy can raise them with perfect ease, since the horses do the raising as soon as the brake is applied to the wheel.

We have lately added a Lever by which the Pole is moved to the right or left, for the purpose of giving the Plow more or less width of furrow, as may be desired. It can be operated by the driver while the Plow is in motion. For plowing around circular corners, or curved furrows of irregular shaped lands, it works to perfection.

We also make a jointed Pole, which allows a free up and down play of same, and does away with any pressure upon the horses' necks, that might otherwise occur in plowing over uneven surfaces. They are guaranteed to do as good work as can possibly be done by any Gang Plow in existence.



## OUR LIST COMPRISES:

- The Garden City Clipper Plows.
- The Garden City, 10 inch and 12 inch, Two Gang Plows.
- The Garden City, 14 inch and 16 inch, Single Sulky Plows.
- The Furst & Bradley, 14 inch and 16 inch, Friction Sulky Plows.
- The Garden City Steel, Hand or Walking Plows—all sizes.
- The Garden City Chilled Plows—all sizes.
- The Diamond Iron Plows—all sizes.

We carry a greater variety and the largest Stock of Plows on the Coast, making ours

The Plow House of the Pacific Coast.

## La Dow's Jointed Pulverizing Harrow,

For Two Horses, with Weight Boxes.

Particularly Adapted for Orchards and Vineyards.

CUTS SIX FEET WIDE.

Is superior to all others, because it is Light, Simple, Durable and Flexible. Thousands in use, giving entire satisfaction.

### TESTIMONIALS.

CARPENTERIA, SANTA BARBARA COUNTY, CAL. }  
February 10th, 1881. }

EDWARDS & BOESEKE—Gents: This is to certify that I am using the Small sized La Dow Jointed Pulverizing Harrow in my orchards, and it gives me great pleasure in recommending it as the only cultivator that just fills the bill. The one I am using will do the work of at least five teams with plows, and in orchards is superior to the plow in every respect. Yours, etc.,  
RUSSEL HEATH.

With Three or Four Horse Hitchers.

CUTS TEN FEET WIDE.

Easily handled by three horses, each doing an equal part of the work. Each Gang independent, with Weight Boxes and Patent Reciprocating Scraper-Bar Attachment, the most perfect device ever used for cleaning the wheels in sticky soils. Each Bar is Independent! Each Scraper is Independent! and is made to shave the earth from each disc of each gang all at one time, by simply drawing the lever toward the driver. When not in use, the scrapers do not rub against the wheels, and make the machine run hard. When the handle is released, the Scrapers are out of the way. Capacity, 25 acres per day.

RANCHO EL CONKIO, VENTURA COUNTY, CAL.  
EDWARDS & BOESEKE—Gentlemen: The three ten-foot La Dow Harrows I purchased of you last fall work like a charm. I use them not only as a harrow, but in pliable ground for breaking. For pulverizing, I use four mustangs abreast. For breaking, I add two small horses on the lead, and fill the weight boxes until the disks penetrate to the required depth. In this way, six mustangs will break up more pliable ground in a day than a dozen big horses can with ordinary gang plows. It excels the plow for the same reason that the wagon excels the sled—the wagon transfers the friction to a greased axle. A large proportion of the draft of a plow is caused by friction. In the La Dow harrow nearly all of that friction is transferred to a greasy socket. Yours truly,  
O. S. ABBOTT.

SANTA BARBARA, CALIFORNIA, }  
February 18th, 1881. }

EDWARDS & BOESEKE—Gentlemen: We are each of us using four of the La Dow Harrows, and consider that they are the most economical implements that we have ever used. For cultivating tree ground, if done in proper season, we can avoid plowing, and thus save much time and expense. The invention is unequalled in agricultural machines, and should be recommended to every farmer in the State.  
ELWOOD COOPER, COL. W. W. HOLLISTER.

SANTA PAULA, VENTURA COUNTY, CALIFORNIA, }  
March 2d, 1881. }

GEO. A. DAVIS—This certifies that we have used in our orange orchard your La Dow Pulverizing Harrow, and find that it leaves the ground in excellent tilth, besides being a good destroyer of weeds.

BLANCHARD & BRADLEY.

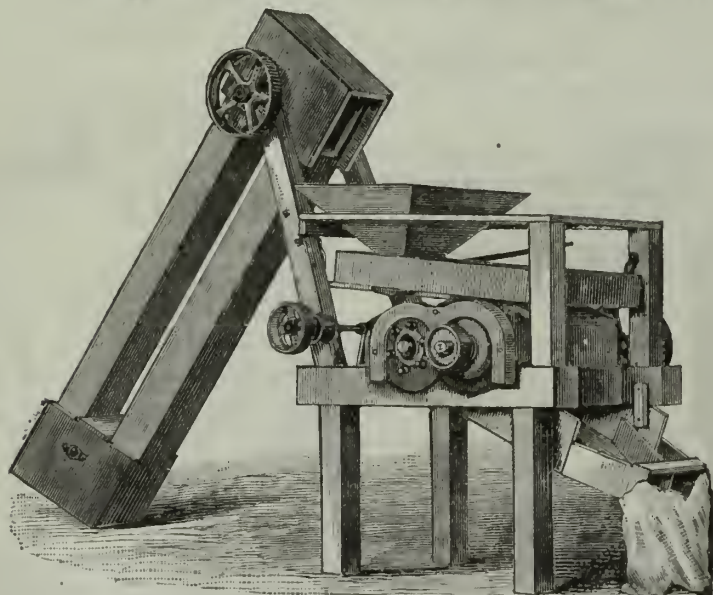
SAN GABRIEL MISSION, LOS ANGELES COUNTY, CALIFORNIA, }  
February 17th, 1881. }

MR. GIESE, Los Angeles—Dear Sir: In reply to your letter, I would say I have put in over 600 acres of grain with the La Dow Harrows I purchased of you this spring, without one collar's expense on them, and on stubble land without plowing. I have also used them in my orchard, and in every case they have given perfect satisfaction. I cannot say that they are worth much, and think they will wear well. Yours truly,  
J. HARBERT.

Live Agents wanted in every Town, City, Village and Hamlet on the Pacific Coast. Address:

GEO. A. DAVIS, 327 and 329 Market St., S. F.

## RUSBY & MERY'S IMPROVED FEED MILL, Using the Benoit Corrugated Rollers.



### RUSBY & MERY'S BARLEY CRUSHER.

More durable, crushes more grain. No danger of grain heating. It is used by the leading grain raisers in preference to feed ground with hurs. Sole Agents and Manufacturers for the Pacific Coast, Chico, Cal.

MACKINTOSH & CO.,  
Dealers in Wall Paper.  
NO. 715 MARKET STREET, SAN FRANCISCO.  
Orders by Mail solicited.

### PEBBLE SPECTACLES.



Muller's Optical Depot,  
135 Montgomery St., near Bush.

SPECIALTY FOR 30 YEARS.

WHOLESALE AND RETAIL.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Compound Astigmatic Lenses Mounted to order in Two Hours notice. Orders by mail promptly attended to.

## BARTLETT SPRINGS.

THESE WELL-KNOWN AND  
Celebra'd Health-Giving Springs

Are Situated in Lake Co., Cal.,  
ABOUT 160 MILES from SAN FRANCISCO.

### HOW TO GET THERE.

Tourists can have the choice of two routes, one by boat to Donahue, then by rail to Cloverdale, the balance of way by stage. Second, trail to Williams, passing through the thriving towns of Davisville, Woodland and Cacheville, changing cars at Davisville. Stage from Williams to Springs over a beautiful road of 28 miles.  
GREEN BARTLETT & T. S. McMAHON, Proprietors.  
To be under the supervision of JOHN CRIGLER, of Lake County, and C. R. CLARKE, of Nevada County, who will spare no effort in making guests comfortable. Hotel has been refitted and refurbished throughout.

52 Gold, Crystal, Lace, Perfumed & Chrome Cards, name in gold and jet, 10c. Clinton Bros., Clintonville, Co.

## THE NEW IMPROVED ALTHOUSE VANELESS WINDMILL.

MANUFACTURED EXPRESSLY FOR  
PACIFIC COAST TRADE.

It combines every essential to make it a First-class WIND MILL.

Being Perfect in Self-Regulation,  
**STRONG,  
DURABLE  
and CHEAP.**

During the past two years there has been many improvements made, simplifying its machinery, strengthening every weak point; using only the best selected material and employing none but competent workmen, a

### WIND MILL

Of unquestionable superiority has been produced, SUITABLE FOR ALL PURPOSES.

It is especially adapted to the wants of

Farmers, Stockmen, Railroads,

And all who desire a CHEAP and EFFICIENT WATER SUPPLY for PRIVATE RESIDENCES, FOUNTAINS, IRRIGATING LAWNS, GARDENS, etc.

We keep constantly on hand a full stock of 10, 12, 14 and 16 foot

### VANELESS WIND MILLS

AND MAKE TO ORDER

LARGE GEARED MILLS.

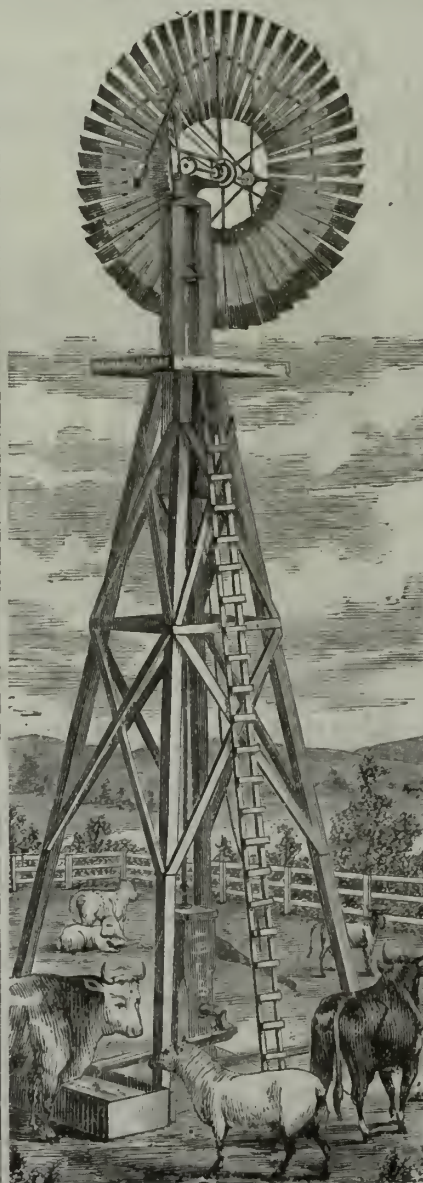
Those who are unable to erect a tank should put up a mill on an ordinary stock frame (as shown in the annexed cut), and by making a few troughs, an abundant supply of water can always be had for stock. Why pump water by hand, when nature has provided you with abundance of power to do the work? Save your strength—you can apply it more profitably. Buy one of our new Vaneless Windmills, and let the wind do your pumping.

We are prepared to furnish Windmills, Pumps, Pipe, Pipe Fittings, Hoses, Tanks and Tank Frames. For full particulars call on or address,

## WOODIN & LITTLE,

No. 109 Pine St., S. F.

Catalogue sent free upon application. Write for Prices.





# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 3, 1881.

Number 10

## The Electric Light.

No doubt many of our readers who have been living during the last two or three years in a state of industrious reticence in their rural homes, have not yet seen the electric light nor the apparatus by which it is produced. We cannot show them the light, but they may imagine a white light of exceeding brilliancy, which gives an illumination quite different from ordinary lamp or gas light. The machinery by which the light is generated and set forth to view is easily presented and may be of interest to our readers. We show the apparatus which has been in operation for the lighting of the pavilion of the Mechanics' Institute during the fair now in progress.

There are several different systems employed for producing the electric light; but the one thus far most generally adopted is the one herewith shown. It is the invention of Mr. Chas. F. Brush, of Cleveland, Ohio, and is to-day pre-eminently the most perfect and widely used system of electric lighting in the world, over 90% of the total of light now in use being constructed upon this pattern. The California Electric Light Co., No. 119 O'Farrell street, have secured all the rights under this patent for the Pacific coast.

The lower engraving gives a prospective view of the Brush generator. It has many points of resemblance to the Gramme machine, but differs altogether in the disposition of its field magnets, and in the relative position of the revolving helices and the magnetic field. What is, however, one of the important features of the Brush machine, is the arrangement of the magnets by which the magnetic field is produced, and by which the armature coils are, during their revolution, almost continually passing through a very intense magnetic field. It will be seen that the armature ring is closely embraced on each side by the large horizontal electro-magnets, whose poles are expanded so as to be presented to three of the armature coils on each side, leaving one pair of coils free from their direct influence, and this is the pair which is passing through the neutral region of the magnetic field.

The upper engraving shows the forms of the lamp employed by Mr. Brush, the regulation of which is quite as much an element of the remarkable success of his system of electric lighting as are the machines themselves, and while their performance is surpassed by no other regulator, and although they contain special contrivances to enable them to maintain a steady arc when burning 16 or more together in a single circuit, they are probably the simplest in construction or arc regulators, involving no clock-work or complicated feeding mechanism, or indeed anything that is likely to become deranged. They can be constructed to burn continuously for 8, 16, 24, or indeed for any desired number of hours, and the mere hanging of a lamp in its place puts it thereby into the circuit of the other lamps of the series, and with the machine, while, on the other hand, the extinction of one or more lamps, or indeed their re-

removal altogether, does not affect the others except (if the machine be driven at the same speed), to make them brighter; but by driving the engine slower and therefore using less steam, the same initial degree of illumination can be maintained in each of, say 14 lamps, as if all the 16 were in operation.

To more fully understand the principle and actual working of the generator and lamp, as

are saturated. The current is then passed to the lamps by conducting wires, and light is produced by the energy of the current overcoming the air space between the carbon points, which are gradually disintegrated; as the carbons consume, the mechanism of the lamp, which is controlled by the current, allows the upper carbon to descend, as already described, maintaining an equal distance between them at all

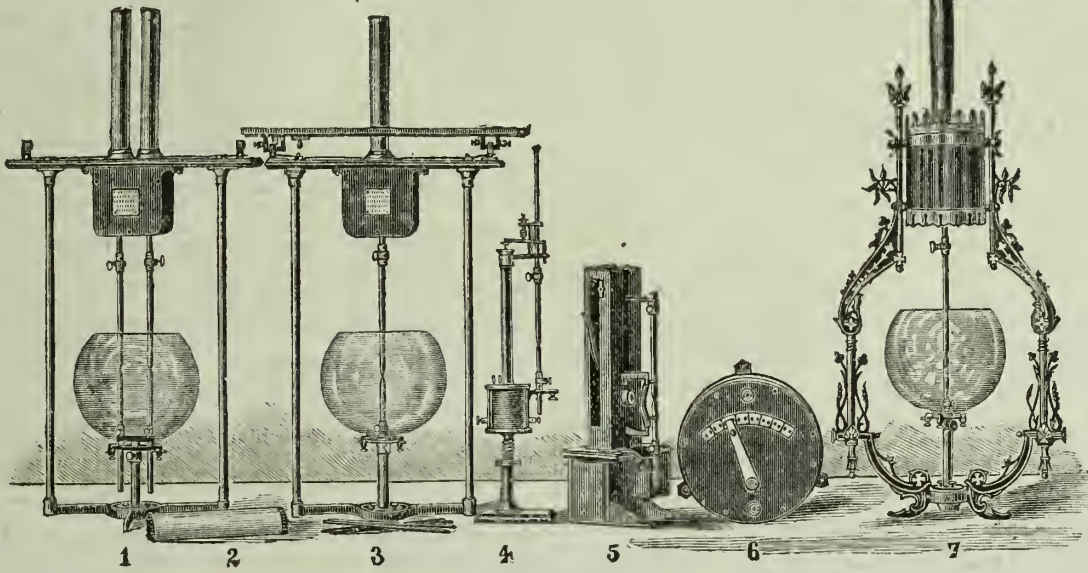
## Sand.

At the last meeting of the San Francisco Microscopical Society, Mr. Chas. H. Dennison read a very interesting paper on the formation, composition, uses and value of sand. He showed 46 varieties of sands from all parts of the globe in small vials, and the same mounted on slides for the use of the microscope. The formation he claimed was due to the action or various forces of water upon rocks, the crushing and grinding of rocks by glaciers, then carried by the streams to the sea, and to the effect of heat and moisture. He claimed and calls attention to the fact that rocks when heated and thrown into, or water thrown upon them, decrepitated, or were broken in pieces. He named a place where angular and sharp-pointed sand was found in position where it was made, and showed samples of it. The power, steam or gas that pushed the hill or rock above the surrounding hills, has escaped through the rock and reduced it to sand. He showed by statistics that in 30 years past ordinary sand for building and manufacturing purposes amounted to about \$3,000,000,000, and that all the golden sands, hydraulic and quartz gold found in California for 30 years amounted only to \$1,400,000,000, so that the ordinary sand of commerce had been the most valuable. The action of water upon quartz sand had been shown by experiment, that in 60 years rolling upon a beach by the waves, sand one fiftieth of an inch in diameter was angular and not worn, showing not a particle of abrasion. Mr. Davison supposed the opalized sand on the Pescadero beach had been rolled by the water a vast cycle of time, and mentioned a hundred thousand years as the time it might take to wear that sand into its beautiful and perfect shape.

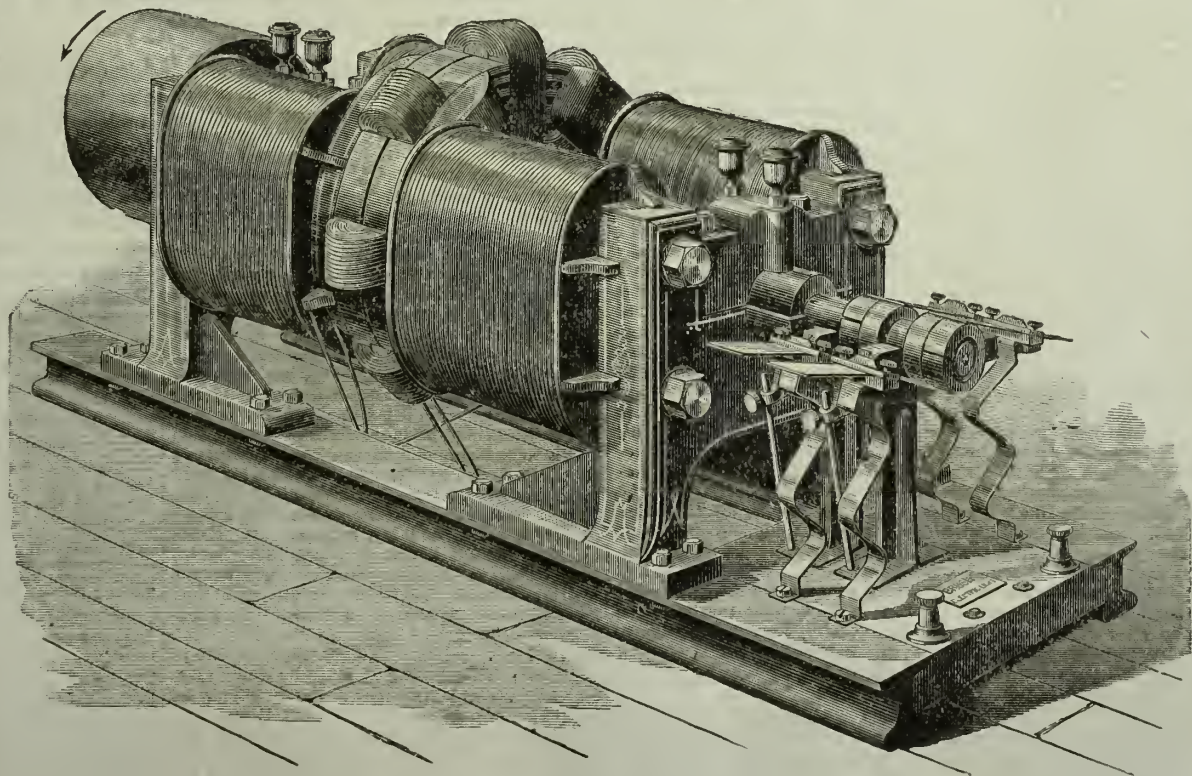
**THRESHING FLOORS.**—To be building threshing floors and 40-inch cylindered separators at the same time is rather a peculiar linking of past and present, and yet such is the deed. A correspondent of the Los Angeles Mirror tells of a threshing floor he made last year. He placed 1x4 strips of pine on the ground about 5 ft. apart; across these placed 2-inch pine plank 20 ft. long—enough plank to make the floor 20x30 ft. Fixed a railing at each side and tied a rope across the ends. Placed a flooring of grain on this in an oblong shape—tied 2 horses together by tying the rope halter of one around the neck of the other.

Tied two more horses in the same manner and commenced work. Two men inside this oblong ring with pitchforks keep the horses at work, and turn over the grain to be threshed. Tread out 1,000 lbs. of flax seed in one day with 4 horses. Have the same kind of work to do this season. We threshed out 75 sacks of flax, 20 of rye and some of barley last year and have about the same to do this year.

**TRACK-LAYING** on the one-track railroad has commenced at Hanford, and will be prosecuted vigorously.



ELECTRIC LAMPS OF THE BRUSH SYSTEM.



THE BRUSH MACHINE FOR GENERATING ELECTRICITY.

shown, it should further be said Fig. 1 represents the generator, or dynamo-electric machine. The center wheel, or armature, wound with wire at right angles to its plane, is revolved rapidly under the influence of the large electro magnets, seen on either side, and a small current of electricity is produced within the armature wire by induction. This current traverses the wire surrounding the side or field magnets, increasing their magnetism, which in turn induces a greater current within the revolving ring; by this action and reaction a large volume of current is produced, reaching its maximum when the side or field magnets

times.

In the upper figure, 1 represents the double lamp; 2, the carbons; 3, single lamp; 4, focusing lamp; 5, headlight lamp; 6, dial attachment; 7, an ornamental lamp. These show different varieties, but all the lamps are on the same general principle as above described.

Elk are said to abound in great numbers at Marble mountain in Scott valley, and large bands have been seen in the Siskiyou foothills, probably driven back into the mountains from the coast.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eos.

### Eastern Washington.—No. 2.

Aside from the prosperity contingent to the railroads, there is another feature connected therewith which of itself will insure great prosperity and growth, and that is

#### The Water Power of Spokan Falls.

As an available and abundant water power, the great falls of Spokan are equalled by only four similar powers in the world. The river never overflows its banks, although but a few feet below the level of the town above the falls. The channel will not change, as the sides and bed of the stream are of augitic basalt, which is unsusceptible to the action of the water. Above the town the river is about 150 yards wide and very deep. So deep and powerful is the current, that from official measurements taken and computations made by Lient. Thos. W. Symons, it is shown that the volume of water above the falls is greater than that of the Ohio above Cincinnati. Lient. Symons (who, by the way, is reported to be the original discoverer of the late comet), is the head of the U. S. Coast Survey Department in this section, and made these estimates while his camp was pitched in Spokan for the purpose of establishing the latitude and longitude of the place. The river here divides into four channels, and after a succession of falls re-unites in front of the central part of the town, and makes a leap of sixty-five ft. The total height of the falls is 155 ft. The water power covers an area of 120 acres, and is sufficient to run two mills on each acre. From a scenic stand-point, these falls are more than picturesque—more than grand—possessing, in a large degree, all the elements of the best scenes produced by dashing, foaming and falling water.

#### A Rich Outlying Country.

The outlying country about Spokan Falls is great and rich in agricultural and mineral resources, which are sufficiently developed to give an idea of their latent possibilities. It is also interesting from the standpoint of the pleasure-seeker and tourist. Sporting facilities with rod or gun are close at hand. The streams fairly swarm with trout. Game of all kinds, from the prairie chicken to deer and bear, is abundant. And speaking of that which tickles the palate, I must mention the water. Don't smile, guiltless reader. It's no sarcasm. The water drawn from the wells all through this section of country absolutely discounts anything in the line of aqueous fluid that the water heretofore has ever absorbed. There is an indescribable satisfaction arising from imbibing it that lasts only while it is out of sight, or till actual thirst again attacks one. I never heard of a water toper, but I believe that if any water could do it, that could accomplish such a being. There is a wheel and bucket well at a hotel corner on the main street at which a man is strongly tempted to stop and sample the ice-cold liquid every time he passes, no matter if it is 20 times a day. During the long summer days it is about as attractive a magnet to the crowds of picturesque but lazy Siwash Indians who hither congregate, as if it were so much "firewater." Among attractive points is Cour d'Alene Laks military post, said to be the finest in the United States. A ride of 28 miles over a hard level road across the Idaho line brings one to this resort, rich in scenery and various attractions. In another direction 15 miles to the southeast is Medical lake, whose waters are said to have great curative properties for rheumatic and skin diseases. The waters of it, like those of Mono lake in our own State, are so strongly impregnated with alkali, that a stiff breeze will wash the surface into a soapy lather. This resort is attracting many invalids from all portions of the coast. The exit to various outlying points is accomplished by ferrying the river, but a free bridge to span the Falls is now in process of construction, to cost about \$6,000, all of which is derived from voluntary subscriptions. As to mineral wealth it is hardly necessary to speak at any length, as Eastern Washington and Western Idaho have long been noted for their paying mines of gold, silver and coal. Suffice it to say that within a radius of 30 miles from Spokan is found gold-bearing quartz yielding as high as \$80 to the ton, and silver mines in active operation yielding finely. While there is not much coal being mined at present on this side the Territory it is not because it is lacking in quantity, but because the demand has not yet been sufficient to call it out. In the vicinity of Peud d' Oreille, the miners and prospectors frequently used coal for their camp fires, sometimes getting pieces so large that it required two men to get them to the fire. But the solid hops of this part of the Territory is in its almost unlimited resources as an agricultural and grazing country. In the 65 miles ride southward

#### From Spokan Falls to Colfax

One sees, perhaps, the most desirable section of country for immigrants. Here are millions of acres of good land which may be, and are being rapidly secured by a desirable class of immigrants who are willing to come here and work hard and deny themselves for a few years, in

order that they may secure for themselves and children homes which will inevitably be as fair and as valuable as any that charm the eyes of the traveler in the older States. For a distance of seven or eight miles south of Spokan the land is fairly timbered, and here already are numbers of well-improved farms, yielding their occupants good livings, with many of the extras in the shape of as good fruits and vegetables as are found in California. From here on, the country is a rolling prairie with little timber. The soil is of a loamy, friable character as a rule, the major portion being tillable, and all being good grazing land. In its present undeveloped state, it forms the best stock country on this coast, being thickly covered with that great natural staple—bunch grass. This grass, whether young and tender, full grown or dried to an almost powderable condition, is greedily eaten by all kinds of stock, and is as nutritious and lays on the fat as well as oats. In all these miles of open pasture land on which are many herds of horses and cattle (although not a tithe as many as the country would sustain), I did not see a single head of poor stock. Mares with fine large sucking colts were in as good a condition as though they had only themselves to live for. As a rule, stock will keep in fine condition the year round, sheltering themselves during the winter storms behind the little hills which break the force of the wind, and only occasionally having to paw away the thin coating of snow to get at the nutritious and all-sustaining perennial bunch grass. Last winter was an exception to this rule, and a good deal of stock, which had always heretofore been accustomed to wintering out of doors without extra food, suffered and perished. Such a winter is not apt to come soon again, however, as old settlers, who have been in the county twenty odd years, say that but ones has its like appeared before, and that in the early part of their settlement. The county is splendidly watered. In almost every "draw," or sink, between the rolling hillocks of 50 or 60 ft. in height, is found a spring of living water. The occasional farms which one sees along the road attest the remarkable fertility of this soil. And now, in direct opposition to those croakers who say that all the good land is taken, I will say that to my own knowledge there are miles of as good land as ever lay out of doors, that may still be had by the poor man and the man of moderate means. Of course, it is natural that there are some particular spots more desirable than others that have been taken on the barber shop principle. These chances are yearly growing less, as the tide of immigration here is something enormous.

#### How to Get Land.

There are several ways in which the settler may get land. From the Government he may get land by the homestead right, the pre-emption right—paying \$1.25 per acre for the land when thrown on the market—and in the prairie section of country, the Territorial timber culture act applies on certain sections in each township, where a man may secure his quarter section by planting ten acres of forest trees thereon, being allowed five years to perfect the work. If a man is in condition to apply these three methods, he may thus secure 480 acres. Then again, land may be bought at reasonable prices from the railroad company. Without stopping to criticize the somewhat questionable generosity of the Government in granting as a subsidy to the Northern Pacific every alternate section on each side of their railroad for fifty miles deep, it may be stated that railroad wild lands are sold in tracts not exceeding 320 acres to actual settlers who will improve the same, for \$2.60 per acre. If this money cannot be paid down, the company will sell the same on installments with interest. There is another incorporation known as the Oregon Improvement Company, which owns much valuable land through the country. But it seems to the writer that their policy does more to retard than advance immigration, owing to the high price at which they hold their land—\$10 per acre. True, for this sum they build a house and make certain other improvements for the buyer, but then a man had generally rather build his own house and direct his own improvements than pay a round price to others to do it for him. Along the rivers in this region (which are ordinarily out of sight, so far below the general level of the country do they flow), is found a fringe of cottonwood, willow and other timber, but as a rule the timber for fencing and fuel has to be hauled ten or fifteen miles. In one of these crevices in the ground, at the forks of the Palouse river, the traveler comes upon the town of

#### Colfax.

Which is so securely hidden as not to be visible until one is right over it. Although of not over 500 or 600 inhabitants, Colfax does more business in one day than many California towns of thrice the size transact in a week. It is the natural distributing point for a region of farming country for 30 miles around and extending into Idaho. The railroad which is to put Colfax in the line of connection between Walla Walla and Spokane Falls has already been surveyed through Colfax and grading commenced. From Colfax there are two routes by which the traveler may make connections with trains for The Dalles and boats thence to Portland. One of these routes is a stage ride of 18 miles southward to Almota on the Snake river, thence by steamer down the river to Ainsworth, where direct rail communication is had to The Dalles. The other route which your correspondent took

shows more of the country. It consists of a 65 mile stage ride south to Dayton, over a rough and dusty road—so thick being the real estate hovering in the air that the driver had to call a halt several times to let the dust clear away sufficiently to be able to see his leaders and get his bearings. From Dayton, the present terminus of the O. R. & N. Co's. road, trains connect daily with The Dalles via Walla Walla. Along the Snake river, which the stage route to Dayton follows for several miles, the scenery is wild and savage. The river is a mighty gulch hemmed in on either side by rugged and barren slopes and walls hundreds of feet in height, and studded with peculiar geological formations cropping out continuously. The whole country from the Snake river south to Dayton and Walla Walla does not impress the traveler as agreeably as the country north of the Snake, being drier and of lighter soil. But it is more thickly settled, owing to its proximity to rail and water transportation, and many farms along the Snake river yield plentifully grain and fruit.

#### Dayton.

The county seat of Columbia county, is a handsome town of about 1,500 inhabitants, and is charmingly located on the Touchat creek, in the center of a rich valley. It has a number of manufactures, including a woolen mill. The railroad company has also here a large timber flume, reaching up into the hills. Dayton's population are enthusiastic over its future, although their ardor has several times been checked by destructive fires which have visited the town. The railway has just reached here, and your correspondent had the pleasure of accompanying the first regular train that traveled the 30 miles from there to Walla Walla. This flourishing city and its rich surrounding country are so well known as not to need more than passing mention. The climate of this region is not so pleasant as north of the Snake, being considerably warmer, but the climate of all eastern Washington is a dry and healthy one, being very similar in most places to that of the major portion of California. Invalids troubled with asthmatic and pulmonary complaints generally find great relief. An all-night car ride brings us back to The Dalles—and thence homeward bound! By close economy, the traveler can make the above described trip from San Francisco and return for \$100, first class, occupying about three weeks; but he had better take along \$50 extra, in case of an emergency.

W. B. TURNER.

## FORESTRY.

### The Census Forest Inquiry.

We had several notes last summer of the visit of the Census Forestry Commission to this coast. It will interest our readers to have some farther information concerning the investigations of the tree experts and the results attained. The *Rural New Yorker* has gathered some news of this kind, which we reproduce as follows:

As one of the special investigations undertaken by the United States Government in connection with the tenth census of the United States, a thorough study into the forest area and forest wealth of the country, and of the economic importance of the American forests in relation to agriculture, commerce, the railroads, etc., was determined on. Prof. Sargent, Director of the Arboretum of Harvard College, was placed at the head of this Department. He organized his investigation by dividing the country into several sections, placing at the head of each a competent observer whose duty it was to examine and report on the extent and nature of forests in his section, the development of the lumbering industry, and the other industries dependent on the forest. The forests of the Pacific Coast being least known, both in their economic importance and the distribution and specific characters of the trees comprising them, Prof. Sargent reserved this for his individual investigation. Accompanied by Mr. Robert Douglas, of Illinois, the well-known grower of trees, and Mr. Skinner, his private secretary, he left Boston in June, 1880, passed some time in Eastern Kansas studying the western limit of the Atlantic forest, and then devoted some weeks to a hurried examination of the forest of Central Colorado. Then the Professor and Mr. Skinner went by rail to California, being joined en route by their associates, Dr. George Engelmann, the distinguished botanist of St. Louis, and Dr. C. C. Parry, who for more than thirty years has explored the botany of Western, and especially Southwestern, North America. From San Francisco the party went by sea to Portland, Oregon, and then through Puget's Sound to Vancouver's Island, and up the Fraser river in British Columbia to above Yale. In descending the river they ascended a high peak south of it near the town of Hope, a Hudson's Bay station. Here much was learned in regard to the northern distribution of the coniferous species of the Pacific forests, and there the party was fortunate enough to rediscover the *Abies amabilis*, a species discovered by Douglas more than 50 years before in Oregon, and about which great confusion and doubt have always existed in the minds of botanists. The re-discovery of this truly magnificent species, the most beautiful representative of the genus

in North America, and the determination of its range and specific character may be considered, perhaps, among the most important of the scientific results of the expedition. The party then returned to Portland, stopping at various points to study the forests in their different aspects.

They then, Dr. Parry having left them to explore the botany of Mt. Adams, ascended the Columbia river to The Dalles on the eastern edge of the Pacific coast forest, and in returning, Prof. Sargent made the ascent of the high mountains south of the Cascades of the Columbia river, and succeeded in reaching the very spot where, 50 years earlier, Douglas discovered his *Abies amabilis* and *Abies nobilis*, a spot which no botanist since Douglas had visited until August 4, 1880, when Prof. Sargent made the ascent.

From Portland the party went overland to southwestern Oregon and explored the magnificent forests of Lawson's cypress, which abounds in the neighborhood of Coos bay and Port Orford. Then crossing the Coast Range, they proceeded south to the Mt. Shasta region, in northern California, where several weeks were passed in exploring the forests of northern California. Thence they returned to San Francisco and then went south to the forest of the "Great Trees" (*Sequoia*), in Tulare county, and then to Los Angeles and to the San Bernardino mountains. Then by rail eastward through Arizona to Tucson, the then eastern terminus of the railroad. From this point they went south by wagons to near the Mexican boundary into the high Santa Rita mountains, where many interesting discoveries were made and many trees peculiar to the Mexican flora were collected. From this point the party returned to San Francisco, and then after a short stay in the Sierras, near the crossing of the railroad, Prof. Sargent returned home, after an absence of over four months, during which nearly 15,000 miles had been traversed.

The expedition was thoroughly successful, and resulted in the most comprehensive and thorough survey of the Pacific forest which had ever been made, and which extended from far north of the British boundary to the Mexican boundary in the south. A vast amount of information was collected in regard to the distribution of species, their specific character and economic importance, adding besides several new species to the flora of the United States. Wood specimens of every tree of the Pacific from the northern to the southern boundary were procured, often only with great labor and difficulty, and sent home, to furnish material for a series of experiments undertaken by Prof. Sargent, for the purpose of determining the exact value of all North American woods as fuel and for various purposes of construction. The result of the tests, and the scientific and economic results obtained in the course of this expedition by Prof. Sargent's numerous assistants in various parts of the country, will appear in his final report, now in course of preparation.

## HORTICULTURE.

### Meeting of the State Horticultural Society.

The State Horticultural Society held its regular monthly meeting August 26th, in the Academy of Sciences, Prof. E. W. Hilgard in the chair. Minutes of the last meeting were read and approved. The following new members were elected: R. E. C. Stearns, Berkeley, Cal., Mrs. N. W. Winton, San Francisco, corresponding members; W. C. Miller, James Fisher, San Francisco, A. Drahms, Martinez, W. C. Blackwood, Hayward, regular members.

A partial report was made by a committee appointed, suggesting the most economical mode of boxing fruit. The committee asked and received an extension of time in which to make a report.

#### B. S. Fox Memorial.

The committee appointed to draft appropriate resolutions upon the death of Bernard S. Fox, a pioneer fruit grower and a member of the State Horticultural Society, made a report, as follows:

The State Horticultural society, for the first time since its organization, is called to mourn the death of one of its members, Mr. Bernard S. Fox, one of our most prominent florists and horticulturists, has passed away.

His record as a worthy man and good citizen will be written elsewhere. To us it belongs only to speak of his labors and his sacrifices in that line of service to his fellow citizens, and to his State, in which we, as a society, are engaged.

In whatever relates to the interests of horticulture in its fullest significance, he was not only a pioneer, but was ever ready to sacrifice time and money to further its best interests. He was especially noted for a disposition to risk his time and his means in the introduction of new and untried fruits and plants, thus testing their adaptability to our soil and climate. His zeal in this laudable work was only limited by his means and opportunities. It is probably safe to say that of all the worthy pioneers and co-laborers in our noble work on this coast, no name is entitled to a more honorable position than that of Bernard S. Fox.

His last journey from home, which was cut short by the messenger of death, was undertaken largely in the interest of the same cause which was so dear to him at home. He intended to visit those districts of Europe especially devoted to the production of grapes, pines and figs, in the hope that on his return he might be able to add something to our knowledge of these fruits, either by the introduction of new varieties, or in the methods of culture. Mr. Fox came to California in 1851, and engaged in the nursery business in connection with Commodore Stockton and G. N. Aspinwall.

In 1856 he commenced the business at the place occupied by him until his death. His entire business has been that of nurseryman and florist, and grower of fruit for



market, in which he has been in good degree successful in a pecuniary point of view.

Mr. Fox departed this life at the age of 65, at Council Bluffs, Iowa, July 20th, 1881.—J. SHINN, J. ROCK, I. A. WILCOX, Committee.

The report was adopted and ordered spread upon the minutes of the meeting.

#### Points on Fruit Growing in California.

On behalf of the committee appointed last fall to obtain information for fruit growers concerning the success or failure of certain fruits and varieties thereof in various parts of the State, the secretary reported that nearly all the counties of the State had been heard from, and it was now necessary that the returns be prepared for publication.

On motion, the blanks were referred to a committee for revision and to compile the information, and prepare a complete condensation of the material in the mass of correspondence. The committee appointed were J. Strentzel, W. B. West, J. Rock, E. H. Rixford and L. Coates.

#### Agricultural Conventions in Washington.

The President submitted a communication from George P. Loring, Commissioner of Agriculture, announcing his intention to call conventions of agriculturists, cattle and fruit-growers in Washington. The first will be held January 10th, and be devoted to agricultural colleges and be in session two days. The second to be held on the 12th of January, and be devoted to cattle-growing. The third to be held January 14th, and to be devoted to grain and cereal, and the fourth convention to be held January 17th, and be devoted to viticulture.

The proposition to send delegates was taken under consideration. The suggestion was made that the various agricultural, viticultural and horticultural societies might unite to send delegates to the convention to be held in the East. On motion, the President appointed R. J. Trumbull of San Francisco and A. T. Hatch of Solano county a committee to confer with the State Board of Agriculture and Viticulture, with a view to co-operative action in sending delegates to the conventions to be held in Washington next January.

#### Fruit For the Chicago Horticultural Fair.

A communication was read from Jonathan Periam, Superintendent of the great horticultural fair to be held in Chicago in September, asking exhibits of California fruit. On motion of Mr. Trumbull, a committee of three was appointed to suggest ways and means to have a creditable exhibit of California fruit at the Illinois exposition. The committee appointed are R. J. Trumbull, B. B. Redding and E. T. Earle, as San Francisco committee. District committeemen, John Rock, of Jan Jose; J. Lewelling, Napa; A. T. Hatch, Solano; J. Strentzel, Martinez; James Shinn, Niles; W. W. Smith, of Vacaville; J. M. Asher, San Diego; D. W. McLeod, Riverside; J. De Barth Shorb, San Gabriel, Los Angeles county; H. C. Ford, Santa Barbara.

#### Delinquent Members.

The Secretary was instructed to send a statement of account to those who had been elected but who had not paid their entrance fee; also to members who were more than three months delinquent on monthly dues.

#### The Collection of Fruit Statistics.

A. T. Hatch of Cordelia, Solano county, submitted the following suggestions: In regard to the collection of fruit statistics these suggestions are offered, not expecting that they are all that is necessary, but yet hoping that they may be improved upon to a degree that will insure the end desired, which is some approximate knowledge each year of the supply of, and demand for our various horticultural productions.

Each grower of fruits or nuts for sale who desires such information, should furnish to the State Horticultural Society, on suitable blanks furnished on application to the Secretary, or in any other manner, a report as correct as possible of his probable crop of each variety of fruit or nuts, and the probable condition of it when it would come on the market; the amount to be estimated in hundreds of pounds, unless it is in citrus fruits, and then in number of thousands—the quality to be estimated as extra, good, fair or bad, as the case may be, or appears that it may be. Such reports to be made and sent to the Secretary of the State Horticultural Society as soon as a fair estimate can be made prior to coming to a marketable condition—say as soon as past usual chances of failure. Any subsequent damage that may result from any cause to seriously reduce the estimates in any way, or should the prospect improve in any degree in any variety of fruit or nuts, such changes should be matter for a supplemental report. All reports should be compiled under the auspices of the State Horticultural Society, and a copy thereof sent to each one who will furnish reports as above at actual cost of compiling, printing and postage.

In case there may be individuals who do not feel efficient interest in this matter to send reports, it would be well, if those who do, living in their vicinity would send estimates as nearly correct as practicable, of their fruit or nut crops, giving name of owner and place.

A committee to collect statistics of the quantities of the different varieties of fruit and nuts necessary to fill the various demands, should be appointed by the State Horticultural Society to report in time for their report to accompany the compiled report when circulated, and be a part of it.

Such action by the fruit growers of this State it seems might be of great benefit to them in many ways, by enabling them to determine ap-

proximately the value of their goods as compared with other years, the supply and demand being similar; by showing up failures and cause of such failure, and when failure results in many places from same cause, the necessity for a remedy and united action to that end, etc.

Great assistance could be given by the Horticultural Commissioners in each county, they making estimates of the probable production of each orchard in their jurisdiction, specifying variety, name of owner and locality.

The suggestions offered by Mr. Hatch were ordered on file, and a vote of thanks was given.

#### Mildew.

The Secretary reported that Mr. Moore, a corresponding member to whom was referred the subject of mildew on trees, was not ready to report. He was engaged upon a paper treating upon the various kinds of fungi, including the potato blight, rust in wheat, and which would be a popular review of the fungi injurious to agriculture. This, it is to be hoped, may be submitted at some future meeting of the society.

#### Exhibits.

There were a number of interesting fruit exhibits. Mr. Shinn showed peaches and pears in variety. Mr. Lewelling had peaches, prunes and almonds. Mr. O. B. Shaw, of Sonoma, showed some grapes which seemed a cross between an American and a European variety. Mr. W. G. Klee showed some pears from the University orchard at Berkeley. Dr. Kellogg had a handsome specimen of a wild plum from the Sierras.

#### Subjects for the Next Meeting.

It was decided to continue the subject of pear growing to the next meeting; the subject to be opened by W. W. Smith of Vacaville. On motion of Mr. Wolleb, grapes were also chosen for consideration, Mr. Coates being appointed to prepare an essay on table and raisin grapes. On motion, the society adjourned until September 30th.

#### Hillside Tree Planting.

EDITORS PRESS:—I have lived for 16 years in these hills, about 20 miles southeast of San Jose. They are justly noted for the purity of their atmosphere and the number of pure as well as mineral springs that abound. It is a grand, healthy country, but most of its workers are obliged to be very economical and industrious to make "both ends meet" and keep out of debt. Improvements in fencing, building and grubbing come slowly.

I have read with much interest the articles on olive culture in the RURAL PRESS and other papers, including the March number of the *Californian* magazine, and I have a strong hope that olives and nuts may make this section of hills valuable. We have a most wonderful even and moderate climate, and on nearly all side hills are found fine specimens of the various oaks. They seem to do well where they happen to get a good start. I wish to ask your opinion of an idea. I am cogitating to give nut and olive trees a favorable start. With a little assistance from the grub hoe, we can drive a handy horse across the face of many of our side hills, the first time making a very light furrow, returning cutting deeper each trip, broadening the trail and throwing a ridge of the best soil below. If trees could be started in this ridge they must have the benefit of the extra soil, the loose surface and the moisture that must soak into the trail and ridge below. I have made many such trails and they naturally settle at the outside enough to keep a part of the hills natural slope, which lets the water off the trail into the ridge, without gullyng the trail. On nearly every ranch there is a spring or stream, and some moist fertile land, enough if worked faithfully to start many trees. To start trees in moist fertile land and transplant to dry hill side, is to give yourself and tree a truly up hill job. Could the tree be taken with quite a quantity of its native soil, its tap root undisturbed, its chances must be better.

I have thought of planting the cutting, whether grape-vine or olive, or putting the nut for seed into a box or tube, say three inches square and one, two, three or four feet long, according to circumstances, ability or experience; the tube to be made as loose as possible and of some material that will soon rot away and leave the roots to absorb its material rather than to be cramped by it. These boxes set on end could hold the plants one or more years in the nursery, then be taken with one horse on small narrow sleds along the trails and be set in deep holes below with but little disturbance to the plant roots and dirt in the box, and with some soft rich dirt in the bottom of the holes, the tap root may go down out of the box unbroken.

Can you tell me whether this has been tried and what available material will last about long enough to make the box? I think of nothing better than our quickly-decaying alder that grows along the creeks. I suppose basewood or linden could not be had cheaply here. Do you think it would help the roots run down to make the lower end of the box larger than the upper?

I have also thought of making a hole, with a crow-bar, under the bottom of the box, the hole to point at an angle into the mountain, to be filled with good soil, on the supposition that the tap-root would thence be coaxed to promptly run deep. It would seem that a tree with a tap

root six or more ft. in length would insure any tree a square start.

C. A. WYMAN.

Cosy Nook, Evergreen, Cal.

[Some of our readers can doubtless find interesting experience or observation on this point. Concerning the use of an envelope in which the plant can be started and then planted without removing it, we should use some earthy receptacle rather than a wooden box. In our issue of Nov. 13, 1880, Mr. Wyman will find an illustrated article concerning the early culture of cinchonas based upon experience in Ceylon.

There it is shown that the plants are grown in pots made of a mixture of fresh cow dung and sand baked in the sun. This is sufficiently strong to hold the plant, but when buried in the soil allows the roots to pass through. We should not calculate on letting the plants get very large in the nursery. As for deepening the hole for the tap root, it is the practice of some planters, where the hard pan is near the surface, to bore down with a post-hole auger, filling up the hole with poor soil. This often gives the tree drainage, and gives the roots a chance to go down. What have readers to say upon these points?—EDS. PRESS.]

## THE VINEYARD.

### The Crazy Grape.

EDITORS PRESS:—In the report of the United States Commission at the Universal exposition of Paris "on the culture and products of the vine" I find the following passage:

There is one variety of vine commonly seen on rich soil and deemed unfit for poor ground, except where grown for brandy, as in Cognac, that may possibly be of value to us. It is called "la folle," (the crazy) "en ragatt," (from enraged). Except in its infancy it needs no stakes, but holds itself erect by the strength of its stalk, which is trained about one ft. high, and from which the cane or branches shoot out with great vigor, like those of the osier willow pruned low. Every winter all the branches are cut back to two or three eyes, and during the season the ground is cultivated in the usual manner, but further than this it demands no attention. There is no summer pruning nor any tying, winter or summer. It is never hurt by frost, is proof against any disease, and is unfailing in its fruiting and yields when in good condition, 1,200 to 1,500 gals. of wine per acre. Its most favorable soil is a sandy loam, and when grown on such its wine, which is quite strong, is worth 40 cts. per gallon. Of that produced about Bordeaux a good deal is mixed with coarse red wine and made into claret for American consumption. Of itself it will not make wine. It is possible that this hardy vine or grape will stand our severe winters, and, with or without covering, obtain a footing in American soil. If so, every farmer or whoever else can command a quarter of an acre of land might raise for his own table an abundance of good sound wine at a trifling cost. Generally, it is bad policy to introduce a coarse plant of any sort, but we have so vast a spread of land that is too rich for growing delicate wines, no matter what variety of plant is tried, and of late the mildew and rot have been so discouragingly fatal in many parts of our country, it might be well to give the "en ragatt" a trial, and, since we must drink the juice baptized "St. Julian," "Chateaur," "Margeaux," and all the saints of Medoc, we may as well enjoy the satisfaction and the very large profit of raising it ourselves.

The high degree of praise bestowed upon this vine by such prominent and reliable horticulturists as composed said commission gives to it special significance.

The system of training the vine in practice in California, as well as that of adjacent districts, seems to specially demand a vine possessing the peculiar characteristics of the "La Folle." Now, the purpose of this is to inquire if this vine has been introduced and tested in California, and if so, with what degree of success. Will some one possessing the needed information please respond through the PRESS?

V. DEVINNY.

Denver, Colorado.

### The Anti-Insect War in Nevada County.

EDITORS PRESS:—I hope to please you by sending you a copy of the "Rulee and Address to Fruit Growers of Nevada County," as adopted by the Horticultural Commissioners of Nevada county. You will notice that we have adopted the main rules, as recommended by Mr. M. Cooke, adding a new one (rule C), as follows:

Grapevines in the immediate vicinity of apple, pear and quince trees must also have their bark scraped off, and the same wash as for fruit trees applied to them (see rule 1), that is, as far as the codling moth or other noxious insects injurious to fruit and fruit trees is concerned.

As oidium of grapevine mildew is very bad and quite persistent this year, we added to our "rules" a resolution on that disease of the vine, as follows:

The commissioners would recommend the following remedy for oidium or grapevine mildew: Against mildew of the vine powdered sulphur has to be used. It may be applied with bellows fitted for that use, or dredge, or common tin can having the bottom finely punctured. It is better to sulphur grapevines known to be liable to get

mildewed before the fungi breaks out on the surface of leaves, stalks and fruit in spots of what appears to the naked eye as a fine white powder. Sulphur, when used as a preventive, must be applied on the vines one or two weeks before blossoming, during its continuance and 15 days after its close. If the mildew has already broken out among the vines when first noticed, the vines have to be sulphured two or three times, and at an interval of 10 days. The mildew, once eradicated, never appears on the vines again in the same year.

The "Notes on the Codling Moth," as given by our commission, I have compiled myself from back numbers of your excellent paper, the RURAL PRESS. I desire to publicly acknowledge the great service the RURAL has been to us, in this as well as other instances.

To make our paper complete we had the law inserted on the back of it, so that people cannot plead ignorance on the power conferred by the law on those horticultural commissions. We had 2,000 copies of it printed by the county, and intend to distribute them forthwith all around. Our idea, since the codling moth is making such ravages right in our midst, was to give people all possible information on the common enemy, the remedies to fight it and an outline of the law under which we are ready to enforce our rules.

At some other time I will give you more details on the ravages of the codling moth in Nevada county. FELIX GILLET.

Nevada City.

[We are glad to know that the Nevada county commissioners are going ahead with such vigor, and shall be glad to hear more of their work and their observations on insect pests.—EDS. PRESS]

## THE STOCK YARD.

### Short Horns and the State Fair.

EDITORS PRESS:—The results of the last meeting of the Short Horn Breeders' association, held at San Jose in April last, were so ignominiously disappointing to me that I had hoped nothing more would be heard of it beyond the ordinary newspaper reports. If we are to meet together and spend our time so unprofitably as was done then, the sooner we disband the better. Outside the ordinary routine business, the whole time was spent in nothing better than "bandying of words," as Mr. Smith aptly puts it, upon subjects which little concerned us.

Mr. Younger made some rather severe strictures on the reduction of premiums at the State fair, the result of which was the resolution correctly quoted by Mr. Smith. Then came a long string of resolutions from Mr. Sturges, amounting to neither more nor less than censuring Gov. Perkins for appointing J. D. Carr as one of the Directors of the State Board of Agriculture in place of Cyrus Jones, a subject quite irrelevant to anything connected with Short Horn breeding. It was reported that Mr. Sturges' resolutions were carried unanimously, which was a mistake. Mr. C. Clark did not vote at all, and I voted against them, holding that the Governor had a right to appoint whom he would.

Neither did I vote for the resolution quoted by Mr. Smith, for the reason that I thought it quite useless, and when Mr. Jones (our President) afterwards asked me if I would write to all the breeders and ask them not to exhibit at the State fair, I told him that as I was not in favor of the resolution passed, and that some breeders would exhibit in any case, I did not think it worth while to waste my time in doing so; it would be better to leave all alike at liberty to do as they thought best for themselves.

I should not have troubled you with any remarks on the subject had the name of the leading officer been given by whom you here requested to make the "statements regarding the action of the Breeder's society."

As my name is mentioned by Mr. Smith as one of two Short Horn breeders who have not engaged stalls, I hope he will not look upon my not exhibiting as anything exceptional with me, when I tell him that in the last eight years I have only exhibited at three fairs, viz.: twice at Oakland and once at Sacramento.

I prefer keeping my cattle in breeding condition to that plethoric state in which it is necessary to keep cattle intended for exhibition; yet I am free to confess that were the premiums offered large enough to cover some of the many attendant risks of exhibiting breeding Short Horns, I would look upon it as a part of my duty as a breeder in a State where there are but few herds of the breed to help to show what could be done with improved Short Horn cattle.

ROBT. ASHBURNER.

Baden, San Mateo Co., Aug. 27, 1881.

COMET'S TAILS.—M. Flammarion is inclined to the belief that comet's tails are not material and are rather some sort of excitation (caused by electricity or otherwise) of the ether. The transference of the tails goes to support this view. He calculates also that the tail of the comet of 1843, at the distance of the sun from the earth, must have swept space with a velocity of 64,000,000 meters per second. Any molecule of matter flying at such a rate would not remain a single instant dependent upon solar attraction and would not go in a closed orbit.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Worthy Master's Appointments.

B. R. Spilman, W. M. of California State Grange, has made appointments to meet with a number of subordinate Granges before the meeting of the State Grange. It is to be hoped that there will be a full rally of the brethren and sisters to greet the W. M. and counsel together for the good of the Order. The meetings will be held at 1 p. m. at the following days and Granges:

Stockton—Saturday, Sept. 3, 1881.  
Point of Timber—Monday, Sept. 5, 1881.  
Alhambra (Martinez)—Tuesday, Sept. 6, 1881.  
Vallejo—Thursday, Sept. 8, 1881.  
Suisun—Friday, Sept. 9, 1881.  
Montezuma (Bird's Landing)—Saturday, Sept. 10, 1881.  
Elmira—Monday, Sept. 12, 1881.  
Dixon—Tuesday, Sept. 13, 1881.  
Grand Island—Thursday, Sept. 15, 1881.

Bro. Spilman's postoffice address is Penington, Sutter county.

### Reviving Granges.

An essay prepared for the occasion of the reviving of an Eastern subordinate Grange contains truths of universal application, and we reproduce them for the encouragement of some in this State who may be wavering over the question, "To be, or not to be."

No doubt this question has been agitated in your Grange—as it has in almost every other Grange—whether you should live, or whether you should die; and each time with a weakening effect. It goes as an arrow straight to the heart of your little band. There are on record instances of persons dying from imaginary causes, and thus it is with this Grange; most of your trouble is imaginary, but fortunately, you did not die. You have only been dormant—asleep, resting to gather new strength and vigor—but such long naps are dangerous and work great harm.

Never allow this vital question of life and death to be discussed in your Grange hall again, for it makes even the strongest members feel weak. Who among us has not, at times, gone to the Grange feeling buoyant and hopeful, as if he wanted to do his duty? When the question has been revived have you not felt your ardor cool, as if there was no use trying? If you specify a time to die you shall surely die, and that by your own hand. Patrons, now is the time to rally; look not at the past, but press forward to the future. You cannot remedy the past, but the future is at your bidding. Your career so far, it is true, has been of little import, but take courage and grow, both in numbers and interest. Let each strive to do his or her duty, and thus the whole duty will be performed.

Let us be encouraged when we remember that the Order is yet in its infancy; it has not yet attained to the strength of youth, but the gradual revelation of its germinal principles is taking place through the genial warmth of friends and amid the blasts of hostile circumstances. The effects upon the landscape are readily observed by those who are watching its interests. The farmer commits his seed to the earth and it passes from sight and control, but there rests not the shadow of a doubt upon his mind that in due season it will spring up and bear fruit to reward his labor and trust. And thus it is with each subordinate Grange. We sow seeds which will germinate and grow, and strengthen our noble Order. It has been said that subordinate Granges are the life-blood of our system, and give to it all its power, moral and active, and when one of these sources of light and power fails the head and heart feels it.

You may not realize at once, nor for a time, the advantage you hoped for and which must come in due time if you persevere, but bear in mind the general good to our class and country already accomplished, and the largely greater benefits we may secure individually and collectively. Be united and our success will be assured. Power and superiority are the rightful attributes of our class; not weakness or dependence. Then, Patrons, let us put our shoulders to the wheel with renewed energy and strength and move on in solid columns to the enemy's works, feeling that there is strength in union. Keep up your regular meetings; be punctual in attendance, prompt in your actions, honest in your dealing, and charitable in your intercourse with your fellow men.

And sisters, here is a work for you. Be ever ready with words of comfort and cheer; bear up the hands of your tired and foot-sore brothers; remember that they have borne the burden and heat of the day. Let Ceres never fail to bring in her golden grain, and may Pomona ever breathe her fresh young breath on the gardens and orchards, and beautiful "Flora come forth with her blossoming train, to gladden the earth as her holy domain." If our Order should, according to the prediction of a disinterested few, die out after a short life, it will restore to the soil, from whence it came, the elements of vitality that will enrich it, and the seeds from

which will spring a more vigorous growth of its principles. Words and deeds, when launched upon the stream of time, are horns down upon the ever-widening channel into the ocean of eternity. May our beloved Order never grow old, but when generation after generation has passed away to be forgotten, may this Order rejoice in eternal youth, and may this pleasant prairie still resound to the happy voices of Patrons, and may these lovely trees still droop their branches as if in benediction over them.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### CONTRA COSTA.

**SPLENDID FRUIT.**—Antioch Ledger, Aug. 20: The present season has been remarkably favorable for grain and fruit in this, the eastern portion of Contra Costa. Mr. Josiah Wills brings us a sample of grapes from three-year-old vines, also apple, plums, apricots and nectarines grown on his ranch near Antioch, which are large, fair and of excellent flavor. This is only an example of what may be grown on the ranches in this neighborhood. Diversified farming must and will eventually be resorted to. It will not do to depend entirely upon wheat. Several thousand acres of land in the delta and along Marsh creek, would be as productive of grapes and small fruits as any land in the State. Every farmer should have an orchard and vineyard at least to grow fruit for his own table if not for market; and we would add that the "boys" heartily thank Mr. Wills for his generous gift.

#### MONTEREY.

**COLT.**—Salinas Index: J. R. Hebborn, of Natidad, is the owner of a two-year-old colt, 17 hands high and weighing 1,450 lbs. Its sire is Ford's "Fullon" (Norman) and its mother is a thoroughbred. Its color is dapple gray, and it is said to be the largest and finest colt of its age in the State. We hope Mr. Hebborn will exhibit it at the State fair.

#### MENDOCINO.

**HOPLAND ITEMS.**—Dispatch: Hop picking was commenced in this valley by Duncan and Harber this week. Mr. Duncan is employing Indians who pick by the pound. Many white persons also are engaged in picking. A good picker can make wages at it. The crop is only fair. The Sanel school will take a vacation during hop picking, as many of the scholars are going into the hop fields.

#### SAN BERNARDINO.

**GRAPES FOR KANSAS.**—Riverside Press: C. E. Dodge this week received an order from Topeka, Kansas, for 2,000 lbs of Riverside grapes, to be shipped by express in time to reach there when the State fair opens, September 12th. The washouts of the railroad through Arizona and New Mexico have prevented shipments by that route this week, but it is to be hoped Mr. Dodge can get this order through, as it would be a good advertisement for this section. It will cost 4 cts. a pound by express to Topeka, in lots of over 2,000 lbs.

#### SAN BENITO.

**CATTLE.**—Hollister Advance: Mr. E. J. Breen, of this county, and Mr. L. Godeaux, of San Francisco, recently purchased some \$30,000 worth of stock cattle and \$80,000 worth of beef cattle in Idaho. With the exception of 2,000 head, the entire band will be shipped to the San Francisco market. Mr. Breen started for Winnemucca, Nevada, Thursday, to superintend the shipping. The 2,000 head will be shipped from Winnemucca to San Jose and then driven to his ranch in the Topo valley, by way of San Juan, where they will be pastured for a short time. Mr. Breen is perhaps the most extensive cattle dealer in the State, outside of Miller & Lux.

#### SANTA CLARA.

**PACKERY AND CANNERY.**—Gilroy Advocate, Aug. 27: With an eye to the future fruit business of the Gilroy valley, and to the profit which may now be within reach by the purchase of fruit for canning and drying, Messrs. Osborn, Phegley, Harris and Alexander have formed a company, and are about to convert the cheese factory at Old Gilroy into a cannery and pork packing establishment. These gentlemen have capital and business ability, and no doubt success will reward their enterprise, and much advantage will accrue from it to the district. Not only will it furnish employment to some of our idle boys and girls, but it will stimulate fruit cultivation. We believe there is no superior district in the State for the perfect growth of the most marketable varieties of fruit.

**MOUNTAIN LANDS.**—Wrights Station Cor. Bulletin: In February last lands in this region could have been bought at from \$5 to \$7 per acre. Then it rose to \$10 and \$12, and as our people gained heart and realized that hard times were over, and that California was to be the fruit country of the world, and this its center, the price still advanced, and purchasers came thick and fast. Within the last 15 days from 1,000 to 1,500 acres have been sold here at prices ranging from \$15 to \$25, uncleared, unfenced, even unsurveyed. The most of it was sold in lots of from 20 to 40 acres; but one gentleman, E. Meyer, the proprietor of the Eureka nursery of your city, purchased a tract of 800 acres, on which he goes to work at once with a force of from six to ten men. He means to establish nurseries on a large scale, experimental

vineyards, plantation of palms, bananas, oranges, exotic flowers, schools of forest trees, nut trees, and orchards and berry patches to harvest from for the market. There is sufficient water for fish ponds and fish propagation.

**PRUNES.**—San Jose Herald: Drying the prunes is keeping many orchardists busy just now. Many small growers sold their fruit on the tree to persons who make a business of drying and are thereby saved the trouble, but if a person has, say ten tons of green fruit, it is probably better to dry it themselves. Mr. Geo. A. Fleming, in the Willows has been buying the prunes from several orchards, as well as one or two orchards outright. He bought one orchard of nine-year-old prune trees, paying \$800 per acre for the land. The crop this year will within a few dollars pay for the land. Last year, Mr. Fleming kept an accurate account of the prunes gathered from 31 nine-year-old trees and they netted \$9 to the tree.

#### SAN MATEO.

**EXPLOSION.**—Redwood City Gazette: A deplorable accident befell a threshing gang employed on the ranch of Frank Doyle, near Mountain View, early on Friday morning of last week. The men were preparing to begin their day's work, at 6 o'clock in the morning, when the engine boiler suddenly exploded with great force, killing the fireman, injuring others more or less seriously, killing two horses, stampeding the others and creating general wreck and destruction. Joseph Connell, the fireman, a lad 16 years of age, was engaged in raking the fire at the moment of the explosion, and was instantly killed. J. W. Mockbee, who was acting as engineer, was cut and scalded about the face and head. Two other employees were less seriously injured. Two horses attached to the water wagon were killed. The other animals employed about the work ran away. The front end of the boiler was thrown a distance of a mile and a half (?) by the force of the explosion. The main body of the boiler rested about 40 ft. from where it stood at the time of the explosion. The threshing was under the direction of Mockbee & Boggs, who, however, were only renters of the machinery. The engine had been thoroughly overhauled and put in perfect order at the beginning of the season. The cause of the accident is unknown, but censure is placed upon Mockbee for assuming to act as engineer with no practical knowledge of steam machinery.

#### SAN JOAQUIN.

**SHEEP ON THE FARM.**—Independent: J. M. Ritchie, who lives three and a half miles south of Colledgeville, finds it profitable to raise a few sheep. They are utilized to keep down greenness in summer-fallow and in destroying such vegetable growths along the highway as, if left to go to seed, would naturally foul the adjoining fields. He has been sending letters to different parts of the State in order to secure a Southdown ram to his liking, but has not been able to do so. Yesterday he purchased of J. W. Bird, near Bantas, a buck which is without doubt the biggest sheep in the county. The animal was sent to Stockton, and with the little crate surrounding him weighed 305 lbs., his weight alone is 252 lbs., and he is a mixture of Shropshire and French Merino. He was 3 years old last January, and girls 5 ft. 4½ inches, although not fat. He is capable of carrying enough more flesh to increase his weight to 300 pounds. He will be turned in with Mr. Ritchie's Southdowns. Mr. Ritchie is also looking for a band of 75 ewes. He has found a good profit in raising lambs for market—not ordinary ones, but such as butchers bid for about Christmas time, when meats are of extra quality and sought after. There is no great money these days in an ordinary horse, cow, pig or sheep for market; but there is money in those of extra quality. It costs no more to keep these than common ones, and after the first cost, no more to breed them; but when offered for sale the return is appreciable. Mr. Ritchie will have his sheep at the coming fair.

#### SONOMA.

**HOP NOTES.**—Condensed from Healdsburg Flag, Aug. 25: During the past week we have taken occasion to visit some of the hop yards near our city, of which there are 61 acres of bearing vines, within one mile of Healdsburg. The first hop yard we visited is owned and cultivated by Peter Schmidt, in Bailhache avenue. It contains five acres of healthy, thrifty vines that are laden with a fine growth of hops. The yield of this yard last year averaged 1,400 lbs. to the acre, being the largest crop since the yard was started, and the indications are that the crop will be equally as good this year. Mr. Schmidt realized 18 cents per lb. for his crop, and informs us that the total expense of cultivating and preparing his hops for the market amounts to 12 cents per lb., leaving the net profits at \$84 per acre. He pays the pickers 1½ cents per lb., employing 25 hands, and on the last week paying 1½, on account of the hops becoming drier. The pickers average one dollar per day, and find themselves. We next visited the hop yard owned by J. D. Grant and rented and cultivated by Ernest Tanfinner. Mr. Tanfinner has 20 acres in good bearing condition. The soil is of a loamy, sandy character, some better than Schmidt's. The yield last year was 1,700 lbs. to the acre, but the average price realized per lb. was 17 cents. He believes the yield this year will be about 600 lbs. to the acre. The present price for last year's crop ranges from 15 cents to 20 cents; average crop per year about 1,200 lbs. to the acre. Mr. Tanfinner believes the total cost of cultivating and preparing the crop for market will amount to 13

cents per lb. including his own time and labor.

We next visited the Alderson hop yard, owned by M. Redding, of San Francisco, and rented by John Borne. There are 20 acres in this yard, and Mr. Borne thinks the crop this year as heavy as that of last year. The hops are not quite so large, but there are more on the vines. The yield last year was 1,400 lbs. to the acre. The vines in this yard are 10 ft. apart, and this, he believes, accounts for the yield being less to the acre than the Grant yard. Mr. Borne thinks heavy, loamy soil will produce a better crop of hops than the sandy loam. The back part of this 20-acre yard is richer and heavier soil than the front, and the crop is always better. Last year's growth brought 17 and 19 cents per lb. He thinks the total cost of production will reach 12 cents per lb. Last spring Mr. Borne put eight acres of his own land in hops. We visited the new yard and found it in a most excellent condition. He thinks he will get at least half as much to the acre as he will in the older yard; enough, he believes, to pay all expenses, provided, of course, present prices hold good. He has planted his vines in rich, heavy soil, and eight ft. apart, first setting his poles, and then putting his rootings in by them. The expense of starting a yard is no small item, as the ground must be as thoroughly prepared as for grape land, and roots set with as much care as grape cuttings. After they sprout they are cultivated at least four times. His poles cost him 3½ cents apiece, which amounts to at least \$23 per acre; the poles are 8 ft. long, and are set 18 inches in the ground, the hops being tied together with ropes, at a height that will permit a horse to pass under in cultivating, and not too high for training by hand. In heavy ground he allows four and five stalks or stems to the hill. After they are carefully trained and tied to the poles they require constant care to keep the small suckers that spring up from the roots cut off. The work in the yard is generally over by the first of July, until picking time. Mr. Tanfinner and Mr. Borne will commence hop picking on next Monday, when these two large yards will present a busy aspect, as each employs over 120 hands. The picking season will continue over three weeks.

**CROPS.**—Petaluma Courier, Aug. 26: Threshing in this section is almost over, and the grain and hay is coming in rapidly. The fruit crop is large and generally paying much better than for several years past. Corn and potato crops are doing well, and unless something unforeseen should happen we will have an abundance of both. Stock of all kinds is in a fine condition, and bringing, when offered for sale, good prices. Everything indicates that our farmers in future will plant less grain and raise more stock for market than formerly. The fine fruit prospects of this season have given an impetus to the fruit business, and nurserymen tell us they now have orders for more fruit trees of certain varieties than they can supply next winter. The dairy business, too, is on the increase, and dairy cows in demand at good prices. Notwithstanding the partial failure of our grain crops, the county is prosperous.

#### TEHAMA.

**VINA INDUSTRIES.**—Cor. Bee: Times are pretty lively around here just at present. The town is full of wagons hauling wheat to the depot for shipment, all being seemingly anxious to sell at present prices. We have shipped 90 carloads of wheat to South Vallejo and Port Costa the past two weeks, and have over 100 cars on the track awaiting movement. The Chinese gardeners and fruit raisers on Deer creek are shipping large quantities of dried fruit, comprising nectarines, plums, peaches, pears and apples. Up to this date the agent here has shipped to San Francisco 2,021 sacks of dried fruit, all shipped by Chinamen to Chinese merchants. The total number of sacks will probably reach 4,000, as they are right in the midst of the season. All the gardens on Deer creek are leased to Chinamen with one exception, and this is owned entirely by Chinamen, and it is the finest ranch on the creek, and could not be bought for \$20,000. This town is also a noted place for peanuts. The crop comes on when all the fruit is taken care of. Last fall there were shipped over 11,000 sacks, averaging 85 lbs to the sack. We also ship every year some 30,000 gals. of wine, made on the well-known Gerke rancho. It is almost a settled fact that we are to have a fruit cannery here in the spring. San Francisco parties were here a few weeks ago looking up a location and getting the people interested in the matter. They will also can salmon, of which there are large quantities caught here every fall and spring.

#### TULARE.

**OUTLOOK OF THE COUNTY.**—This year Tulare county takes her place as the banner grain-producing county of the State. It must not be supposed, however, that this is the extent of our wheat-growing resources. An extent of virgin soil equaling the combined areas of the States of Delaware and Rhode Island remains untouched by the plow. Probably not one-fourth of our best wheat lands have been brought under cultivation. The world has yet to learn that Tulare county embraces the heart of the broadest and most fertile valley in the State of California. Whole townships in this county which are as yet in their natural state are in every respect superior to lands in other counties valued as high as from \$100 to \$300 per acre. The only objection which could be urged against their superior value is their relative access to market. If New Orleans should become our outlet, as we confidently expect it will by the



time our next crop is harvested, none of the leading grain-growing counties but Kern will have a better market. The Southern Pacific railroad will be brought into sharp competition with ocean transit, and freights will range low. Aside from our mountain lands and the lands west of the lake, the government could furnish one thousand settlers with a homestead or pre-emption each, of good wheat lands in this county. Of course we assume that what irrigation has done for Mussel Slough it can do for other valley lands; 150,000 acres of good valley lands in this county are still in possession of the government, and probably 500,000 acres of similar lands are still owned by the S. P. railroad. The utmost capacity of the soil of Tulare county during a good year would probably equal the present wheat crop of the whole State.

**FAIR ASSOCIATION.**—*Delta*, Aug. 25: Last Saturday afternoon there was a meeting in the City Hall, Visalia, of stockholders in the Agricultural Fair Association, called for the purpose of organizing, this having been postponed from the Saturday last previous. The election of Directors resulted in the election of the following: E. Jacob, R. E. Hyde, F. J. Walker and F. Bacon, of Visalia; H. Hamilton, Kaweah; J. F. Uhlhorn, Tulare City; and E. Giddings, Lemoore. After the adjournment of the stockholders' meeting, the Directors proceeded to the election of officers, with the following result: E. Jacobs, President; E. Giddings, Vice-President; J. F. Uhlhorn, Secretary; R. E. Hyde, Treasurer. After this, the Directors adjourned to find the best available place for holding the fair. In the meantime, the public needs no better assurance of the success of the enterprise than the names of the Directors offered. They are thorough business men, and fully alive to the requirements of the undertaking and the immense advantages of this country that will result from it. They should be sustained by the efforts of every individual in the community, there being no better encouragement than appreciation, and a similar interest on the part of those receiving the benefit. Farmers and stock-raisers should keep the fair in view, and begin now to prepare for it. The example of one in a particular community will be of great service in awakening general interest. Such action inspires confidence and infuses energy. There is a general disposition among people to await the action of others.

#### TEHAMA.

**SORGHUM SUGAR.**—*Tocsin*: John Howard, who has had some experience in Kansas raising sorghum cane, rented 10 acres of bottom land from Andrew Simpson at the edge of town, and sowed it in the latter part of April last, with amber cane seed. The cane has grown well and thrived in this climate, growing tall and juicy. When we were there Thursday two boys were cutting the cane down and hauling it upon a wagon to the cane crusher, an iron mill with three heavy, round iron rollers run by steam. Mr. Howell has built a brick furnace, with boiling vats of galvanized iron, and is using great care and diligence while boiling the juice to remove as fast as possible all foreign substances as they rise in the scum; the result is, that the syrup thus made by him is good syrup. The experiment has certainly proved that cane can be profitably raised on our river bottom lands, especially where the soil is sandy. Out of these 10 acres, so far as cut, it has averaged 50 gallons of syrup to the acre, and taking the price of syrup at 80 cents per gallon, it returns him \$40 per acre.

#### NEVADA.

**CATTLE BRANDING.**—*Reno Gazette*: Cattlemen estimate that there is an annual loss to the State of Nevada of a hundred thousand dollars by the branding of cattle and horses. The hide is so badly cut up and seared that a loss of from 50 cents to a dollar a piece is incurred. Old marks cost the hide about four bits, and fresh burns that have not yet healed are at least a dollar's damage. If a brand is laid on the animal's ribs, it spoils a whole side of leather, and yet it is done by a great many intelligent stock men. They say they can see it farther. There has got to be such a mixture of herds in this State that a man has to nearly murder a "critter" in order to mark it so as to be able to hold it. There is so much buying and selling, so much driving of bands from Oregon, Mexico and Texas, that confusion worse confounded seems to reign. It is not an unfrequent thing for cattle dealers to have bands on their ranches coming from half a dozen different places, and when they come to add their own brands to those inflicted when the brutes were yearlings, the animals look like Japanese puzzles. It used to be considered sufficient to use an iron with a double letter or some character for each owner. This was registered with the County Recorder, and was well known all over the State. Some would have an ear mark; others a dew lap, and so on. Now, almost everybody has a branding iron of some sort, and all the other marks too. A *Gazette* reporter saw last week on a ranch in Elko county a cow that had a big brand on the hip, another on the ribs, one ear was cut so that a strip hung down and a point stuck up, and another section maintained its original position at right angles to the horn. The other ear had a slit the whole length of it. An iron had burned into the shoulder some time in the youth of the animal. A dew lap the size of a small carpet sack hung down in front from the throat, and a chunk of skin had been cut out of the cheek and hung down beside the jaw. The conundrum suggested itself where the next man who owned her would get in his branding iron or knife.

### Proposed Narrow Gauge Railroad.

**EDITORS PRESS:**—More than a year ago it was proposed to make a narrow-gauge railway reconnaissance, in order to ascertain the practicability or non-practicability of more railway communications for the counties of Los Angeles and San Bernardino.

A meeting of citizens of Los Angeles, on the 19th inst., appointed an engineer and a statistician to make the examination.

As the movement originated with rural people, and continues under the original impulse, the subject seems to be eminently within the scope of the *RURAL PRESS*.

The map on this page represents the proposed system of narrow-gauge railways. The exterior solid line, passing through the towns named, is the only line contemplated by the citizens' meeting. The interior dotted lines will probably follow the construction of the exterior line, sooner or later. Probably one of the interior lines will be constructed at no very distant period.

If both the exterior and the interior system were completed, the two counties would be no more gridironed with railways than are some portions of the East.

A given area in Southern California requires steam thoroughfares at shorter intervals than in the East, for the reasons that more is produced here to the square mile; that a smaller percentage of it is consumed on the farm; that a larger percentage becomes freight; that the tendency is to concentrate tillage on the more profitable exportables, and to buy the less profitable articles of home consumption; that the tendency is to the more minute subdivision of farms; that the conditions for a denser population of soil

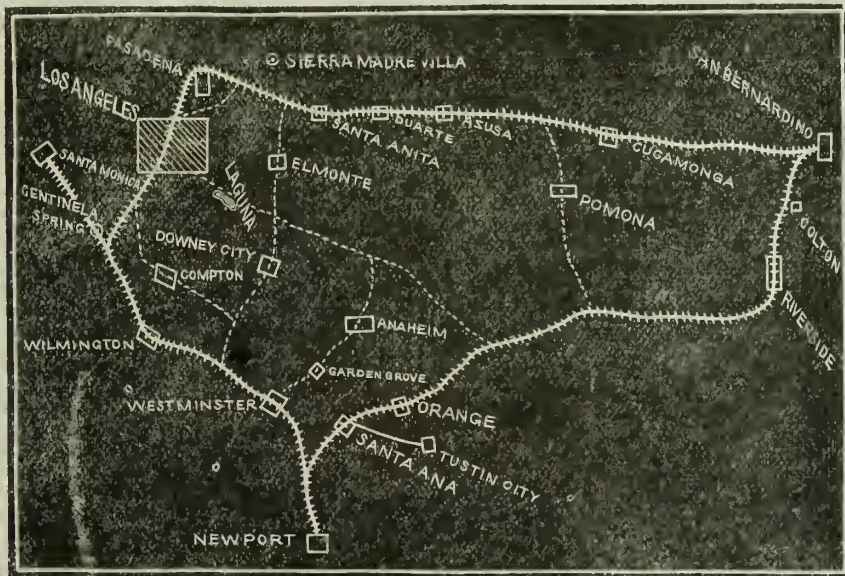
into gigantic carry out of freight and fetch in of coin. I heard of 50 tons of table grapes going East, from a California depot one season and 1,000 tons the next. General Stoneman alone could this season ship more than 1,000 tons of grapes from his 200-acre vineyard, on one of the narrow-gauge belts.

After deducting several hundred square miles for nearly valueless land, there remain nearly 1,000 square miles of good land, nearer to the proposed narrow gauge lines than to the existing standard gauge lines.

The exterior and interior lines shown on the map will not aggregate more than 270 miles in length. The cost, ready for the locomotive, will not exceed \$1,500,000. A subscription of \$2.34 for every good acre, in the narrow-gauge belts, would raise money enough to make the road ready for the locomotive. The land would be enhanced in value several times the cost of the system of roads, and the land would then readily sell at the rise. Farmers and other land owners could sell enough land to reimburse them on their subscriptions, have more property in land than before they subscribed, and own a railroad, as a clear profit. How would you, my agricultural friend, like to own 270 miles of railroad, virtually costing you nothing?

Capitalists form syndicates. Let the agriculturists and fruit growers of the narrow-gauge belts form a syndicate and build the roads. If the holders of the immense tracts of rich, but unpeopled, land on the narrow-gauge belts would lead off, the small farmers would follow. Baldwin, Bixby, Hollenbeck, and a few others, could head a syndicate which would speedily build the road and appreciate their estates far more than the outlay.

True enough, the roads would pay but little more than the running expenses for the first few years. But this is because the belts are comparatively without inhabitants. An immi-



PROPOSED NARROW GAUGE RAILWAY IN SOUTHERN CALIFORNIA.

tillers are coupled with those inducing resident and transient health and pleasure-seekers.

There is a growing "all-fetch-and-carry" business here, similar to the all-fetch-and-carry of mining towns and of the Gulf regions of sugar and cotton, which, railway magnate Huntington says, is the most paying railway business to be had. All-fetch-and-carry Southern California widely differs from all-fetch-and-carry mining towns and all-fetch-and-carry Dixie. Mining towns and Dixie conduct their all-fetch-and-carry business with distant regions, but the Los Angeles and San Bernardino narrow-gauge belts have, or may have, their fetch and carry largely with each other, and have the all-carry (the carry of staples abroad), and have the all-fetch (the fetch of coin from abroad.)

Why should Riverside devote an acre to raising \$15 worth of grain, which acre would yield \$100 worth of raisins, one-fifth of which would buy the grain on the artesian belt, and more than pay the freight to Riverside, if the narrow gauge ran down through Santiago canyon to Gospel swamp? Why should San Gabriel devote an acre to growing \$10 worth of pork, which acre would yield, at 500 to the tree, 50,000 oranges, 1-25 of the proceeds of which, at \$5 per 1,000, would buy the acre's yield of pig, and 25 cents would narrow gauge the pork from the squash belt to San Gabriel? Why should Pasadena torment highland nature out of an acre's grudgingly yielded butter or cheese, where Pomona smiles \$100 per acre, 1-20 of which will buy the butter and cheese on the artesian belt? These highlands will, in a sense, have their corn cribs, pig sties, creameries and cheese factories on the low lands, and the narrow gauge will prosper on fetch and carry.

As in cotton States, in a sense, have their granaries, smoke-houses, Irish potato bins, dairies, apple cellars and cider presses in the northern States, so both northern and cotton States, and as part of the rest of the world, in a similar sense, will have their wine cellars, raisin barns, fruit canneries and cheese factories, on the Los Angeles and San Bernardino narrow-gauge belts. As the northern States buy early fruits from the south, and the south buys winter fruits from the north, so all, both north and south, will buy both summer and winter fruits from the narrow-gauge belts. This will grow

gration syndicate could speedily populate the unpeopled spaces on the narrow-gauge belts.

One without reflection does not think of the supreme mastery of the situation which the finished narrow gauges would give to the farmers of the narrow-gauge belts if they became owners of the roads, even before equipment with rolling stock. Indeed, the owners need never either equip or operate the narrow gauges. They can lease them to the Southern Pacific, or to some other transcontinental line, any one of which would be glad to equip and operate the roads for the privilege of concentrating the freight and travel at their broad-gauge depots for further shipment and upon the following conditions. That the lessee pay reasonably for the use of the road, ship freight and pass passengers over the narrow gauges and over their local and transcontinental standard gauges at stipulated rates, with nominal rates for immigrants and their household goods.

The narrow gauges would become the potent auxiliaries of the lessee, for which the lessee could well afford to reciprocate even to the extent of joining the immigration syndicate. Immigration is the cure for the emptiness of our rural solitudes entailed by land monopoly. The land monopolists have blocked immigration, retarded progress, embarrassed the economies of State, kept themselves laud-poor, starved themselves in the manger and hold the key to the inauguration of the narrow-gauge system represented on the map.

Much of this narrow-gauge letter applies to various other sections of California. Everywhere narrow gauges are the pets of the people, for reasons analogous to the reasons that cause people to idolize Washington and other liberators.

J. H. SHIELDS.

**INDIANA STATE FAIR.**—We have received a complimentary ticket to the State fair, to be held at Indianapolis, Sept. 26th to Oct. 1st. There is every reason to expect a notable exhibition this year. The Secretary is Alex. Heron of Indianapolis, from whom any information pertaining to the fair may be obtained.

### Anti-Debris Association.

The annual meeting of the Anti-Debris Association of the Sacramento valley took place at the court house in Yuba City on Saturday last. The meeting was largely attended by farmers and others from Yuba, Butte, Colusa and Sutter counties. The meeting was called to order by Secretary B. F. Walton. C. K. Dam was chosen President.

The old Board of Directors were re-elected, consisting of C. K. Dam, J. M. C. Jasper and C. E. Sexey of Yuba county, and S. E. Wilson and B. F. Walton of Sutter county. George Ohleyer was elected Treasurer. The debris question was pretty thoroughly discussed. George Ohleyer offered an address and resolutions, which were unanimously adopted.

Dr. D. P. Durst then read an able address setting forth the destructive nature of hydraulic mining, its evil effects upon the great industries of the State, and the urgent necessity for immediate relief by removing the cause. On motion of T. B. Hull the address was referred to the directors of the association.

It having been announced that the Board of Trade of San Francisco had expressed a desire to meet a committee from this section competent to represent our exact condition in regard to mining debris and its devastating effects upon this great Sacramento valley and the permanent industries of the State, on motion of C. P. Berry, a committee consisting of Dr. C. F. Stone, Geo. Ohleyer, C. Hampton and Dr. S. J. S. Rogers were selected for that object, to arrange for a meeting early in September.—*Sacramento Bee*.

### Golden Gate District Fair.

The fair of the Golden Gate District Association will be held at the Oakland Trotting Park during the week commencing Monday, September 12th. There may be expected a fine live stock show and an unusually interesting series of races, as the entries in the different classes are large, and the finest horses in the State will take part. The occasion should be a memorable one in live stock and racing circles. Last year, if we mistake not, Golden Gate District had the best live stock show in the State. As the grounds are accessible by lines of travel from the interior and the towns around the bay, there is generally a large and brilliant assemblage to grace the occasions.

### Border Leicester and Cotswold Sheep.

**EDITORS PRESS:**—Who is there in this State engaged in breeding first-class "Border Leicester" sheep that have been imported from such flocks as Messrs. Stark, Lord Polworth, Messrs. Parvis, Dickinson Turnbull, etc., all in the neighborhood of Kelso, Berwickshire, Scotland? Also mention who keeps the best flock of "Cotswolds," imported from such as Beele Brown, Gloucester, Eng.—*Edw. K. EVANS*.

Who has such animals?

### News in Brief.

SAN BERNARDINO expects soon to have its streets lighted with gas.

THERE is great excitement in Georgia over reported gold discoveries.

THE Comte de Paris is writing another book on the American civil war.

A RAILWAY syndicate has purchased 8,000 acres of land in south Chicago, for \$1,200,000.

RAILROAD taxes this year in San Bernardino county, \$14,000; in San Diego, over \$50,000.

THERE was a heavy frost at Lewiston, Trinity county, lately, the thermometer standing at 42° early in the morning.

THE Yellowstone river in Montana at the point where it is intersected by the railroad is 1,200 ft. across.

AN earthquake has occurred at Tehesme, Asia Minor, opposite the island of Scio, causing great damage to property.

PRINCE KROPOTKINE, the Nihilist, denied any asylum in Switzerland, has decided to take refuge in Canada.

A MOVEMENT is on foot in New York to aid the oppressed Jews of Russia to emigrate to the United States.

A LARGE force of the so-called "emergency men" have arrived at Boycott's house, at Loughmask, Ireland, to assist in gathering crops.

MRS. MARK HOPKINS has been removed by the San Francisco Probate court from the administration of her late husband's estate.

WELLS, FARGO & Co.'s treasure box was taken from the stage near San Luis Obispo Thursday night by highwaymen.

THE business failures during the week throughout the country have been more numerous than usual, though showing lighter liabilities.

IMPORTANT oil developments are about to be commenced at the mouth of Sirsa creek, Ventura, by San Francisco capitalists. It is said that \$50,000 will be expended if necessary.

It is currently reported at Portland that Charles Crocker, of the Central Pacific railroad, has bought the Carbon Hill coal mine, W. T., with the famous 11-ft. vein, for \$7,000,000.

THE Empress of Germany, on her convalescence, published a letter through Bismarck, thanking the people for their affectionate manifestations of sympathy during her illness.

THE late Congressman Whitehouse of Poughkeepsie, in a will of only 160 words, leaves his entire estate, valued at \$4,000,000, to his widow and daughter, who with Jacob B. Carpenter, he appoints executors.





### Goin' Fur the Cows.

The western skies were all gray  
The clouds o' red an' gray,  
The crickets in the grassy fields  
Were chirping merrily,  
When up the lane a' the hill  
I saw a maiden roam,  
Who w. nt her way at close o' day  
To call the cattle home:  
Co-hoss—co-hoss!  
Co-hoss—co-hoss!  
Com' home—come—home!

The echo o' the charmin' voice  
Resounded thro' the vale;  
It lingered on the evenin' air,  
It floated on the gale;  
'Twas borne along the mountain side,  
It drifted thro' the glen;  
It died away among the hills,  
Far from the haunts o' men:  
Co-hoss—co-hoss!  
Co-hoss—co-hoss!  
Come home—come home!

Her face was flushed with hoes o' health,  
Her arms an' feet were bare;  
She had a lithe an' active form,  
A wealth o' ebon hair,  
Beyond the hill she passed from sight,  
Ez sinks a falling star,  
Untill her voice was faintly heard  
Still calling from afar:  
Co-hoss—co-hoss!  
Co-hoss—co-hoss!  
Come home—come home!

Soon o'er the distant knoll appeared  
The cattle, red an' brown,  
An' from the pasture to the lane  
Came gaily trottin' down,  
With sparklin' eyes an' cheeks aglow  
Returned the maiden zay,  
Who waved her arms, an' shouted low:  
Why-hoss—why-hoss—O why!  
Why-hoss—Why-hoss!  
Why-hoss—why-hoss!  
O Why—O why!

### A Little Unpleasantness.

[Written for RURAL PRESS by Julia H. S. Bugcia.]

When Helen Castell had made up her mind to marry a certain young man named Cameron, her friends looked at each other with prophetic glances—George Cameron being noted for his strength of purpose—that is, his intense stubbornness—and Helen, the worst little case of capriciousness and self will they had ever known. Had her mother lived to rear her, she would have received better discipline, for Mrs. Castell had a gift that way; in fact—but let us forbear. Helen's father, though having had ample opportunity to learn his wife's method, had not profited by it; he was not a disciplinarian; indeed, the Castells, as a family, had "no government," and Mrs. Thoroughgood, his sister, who, with her son Jack came into the family at the time of Mrs. Castell's death, was as gentle and yielding as himself. Jack Thoroughgood, on the contrary, had no idea of being led around by the nose; yet, having a very ingenious way of influencing his pretty cousin without seeming to do so, there was never any open warfare between them, and they were as fond of each other as brother and sister. After all, Helen was not altogether spoiled, for, having a fine nature, and a warm, true heart, she was really a most lovable girl. George Cameron thought so, and did not hesitate to undertake the responsibility of marrying her.

Mr. Castell shook his head and sighed, Mrs. Thoroughgood did the same, and Jack smiled, remarking that the sauciest, most obstreperous maidens usually made the meekest maidens, and vice versa.

In course of time they were married and commenced housekeeping in a handsome villa near Oakland. What beginning could be nearer perfect—youth, health, wealth and love, and always in sight of those purple hills and the broad, beautiful bay? Between Helen and the untamable sea was a bond of sympathy. She loved to watch the changing hues, the sparkle and the flash of the restless, beautiful waves, the circling flight of the sea-gulls, with their graceful wings and gleaming backs, and the white sails moving to and fro, touched with the red mists of morning, gleaming in the golden mid-day sun, or rich with sunset hues. Like their calm sailing passed the first few months of Helen's married life. She was so much in love with her husband that she forgot herself. But one day, when she had become pretty well acquainted with him, and had lost somewhat of the awe with which she had at first regarded him, it was suggested to her—by one of those rapacious spirits that wander about seeking whose happiness they may devour—that she was not having her own way very much.

"But oh, dear!" said Miss Itoldyouso, in a tone that aroused the very spirit she was in search of, "we all knew how it would turn out. Some said you were more than a match for George Cameron, and would always keep your independence, but I knew you'd be just like the rest of 'em; little by little you'd give in, till you wouldn't dare to say your soul was your own, unless you'd heard him say so first."

"Nasty meddling thing!" commented Helen, when the door had closed upon her; but although she despised her, she could not help feeling uncomfortable at the thought that she was being ridiculed by her friends. From that moment the trouble began. George was disposed to yield to anything reasonable, but the tests she imposed upon him were too severe. Slight skirmishes arose, followed by regular battles, in which Helen was invariably defeated, and became, in consequence, bitter and defiant. Of course they were both wrong, but upon the whole George behaved wisely, and said but little; the storming was mostly on Helen's side. She concluded, at last, that it was too much for her to endure.

"I am going home," she declared.  
"Going home?"  
"Yes, home—to papa, and annt Emily, and dear old Jack; I will not submit to such tyranny—no, not for another day."  
"You need not go to your father to escape me," answered George, calmly enough, although he grew rather pale and his hand shook a little.  
"I am going away, myself, and leave you here, perfectly free and independent."  
"No, I won't stay here, I hate the place and all about it. I am going back to my own dear old home!"

"Very well, go where you please; you shall be provided for, and shall not be troubled by me. But, Helen, mark my words: your father's house does not contain your happiness. It will not seem to you as it used to; you have entered upon a new life, and you cannot retrace your steps. You were entirely happy with me until your vanity and self-will were aroused, and you determined to make my will subservient to yours. Were I meekly to submit to you, it would not make you happy. I should only become the despised slave of your caprices. Between husband and wife, it seems to me, there should be no thought of self, but each should look to the other's happiness. We shall never be happy apart; but go, you will have leisure to think of it undisturbed. You will learn the truth of what I say in homesick weeping."

"Weeping!" cried Helen, passionately; "as if I had not already shed tears enough to flood this—home!" with scornful emphasis upon the word.

"And yet," said her husband, "you do not know the meaning of homesick weeping. But I am going away now. I will not intrude upon you again. Good bye, Helen." Here his voice trembled a little. "When you are ready to return, you will find me here, unchanged. Good bye."

He was gone. At his first "good bye" Helen felt an awful clutching sensation at her heart. I think she would suddenly have yielded but for the unfortunate ending of his speech—"unchanged." That meant that she was to creep humbly back to her uncompromising lord and master—never!

Yet she was obliged to keep her rebellious thoughts pretty well exercised during her brief preparation; the house seemed filled with objects that appealed to her heart, and awakened the full tenderness of her love. She turned from them desperately and fled down the garden walk—where, again, her flowers seemed imploring her to stay—down the avenue of stately eucalyptus trees that sighed above her drooping head. She turned at the gate for one last look at the place she "hated." Oh! if there were but one tender look, or even gentle word of command, she thought, all should be forgiven. But no, she was free at last. There was not a shadow of restraint upon her. Ah, Helen, what tyrant so cruel as self-will! She entered the carriage, and, bitterly weeping, was driven away.

At her father's she was made fondly welcome. Her father, although deeply regretting her step, and grieved at the unhappy result of what he felt must be her own bad management, still followed his old fashion of soothing and caressing her, instead of giving her a good, healthy chiding.

"She ought to be chastised and sent right back again," said a friend of the family who happened to be visiting them.

"It's all simple enough," said Jack. "She has come home to have her own way; let her have it until she is tired of it, that will happen sooner than you think. It's only a lover's quarrel, but she ought to suffer long enough to prevent her from repeating it, and, unless I'm much mistaken, George will give her plenty of time for repentance."

"I suppose, then," said Mr. Castell, with an approving twinkle in his pale blue eyes, "it is our policy to be as subservient as possible."

"Exactly," answered Jack; "get right down and let her walk over us."

At first Helen was quite touched by their extreme anxiety to serve her; but in a little while she wearied of it. Their "fussiness," as she termed it, annoyed her; their indulgence seemed disgraceful weakness; she contrasted it with the fine dignity of her husband, his tender courtesy toward her, his thoughtful attention that never became obtrusive. The more she reflected upon his character, the more she admired the very firmness against which she had rebelled. She blushed for her own silly behavior, but she was yet too stubborn to acknowledge it to him. "If he wants me to come back," she said to herself, "let him ask." But alas, he never asked! Months passed, and not a word came to break the silence between them. Oh, how keenly she suffered! How she longed to fly to him and be forgiven. Nothing seemed

quite the same to her at the old home. But the change was in herself, as George had said. She realized now how truly her life was bound to his. There was no other home for her but where he was. The homesick tears he had predicted came, night after night, until she was worn and pale, with "eyes like moons," as Jack observed.

"Helen," he said, one day, "I believe you are secretly pining for the old man. Strange how a woman will stick to her husband in spite of everything! Now, I thought you had more spirit than to hanker after such a scoundrel."

It had been part of Jack's plan to speak disrespectfully of George. Helen always winced under it, to Jack's secret delight, and replied by speaking of him with an almost exaggerated respect. Upon this occasion her eyes flashed.

"Jack! how dare you speak of my husband in such terms? You are not worthy to—fasten his shoes."

"No, nor to pull on his boots; but I'll be hanged if I'll speak respectfully of a man that abuses his wife until she can't remain under the same roof with him, and has to come home to her father for protection."

"Protection!" cried Helen. "Perhaps you think he beat me! You know that George Cameron is too much of a gentleman to treat any lady with disrespect. If he did not weakly yield to my foolish whims and unreasonable demands, it was because he was too wise—too truly tender. I behaved very foolishly, and I was the only one to blame. I see it all now; and in spite of all your kindness to me, I have been so unhappy here. Oh Jack, I'm so miserable—I want to go home!" She sobbed hysterically.

Jack was sure, now, that the trouble was ended. How he laughed! And since Helen's pride had yielded, she would not stop there any longer. She was impatient to begin her journey. She would not even stop to write. "I shall reach home as soon as a letter," she said.

"Well, cousin," said Jack at parting, "we have had a delightful visit, do come again!"

"Not till George can come with me," said Helen, smiling brightly.

"Oh, bang George!" cried Jack, turning away in apparent disgust.

But Helen only smiled again, she was going home—she cared for nothing else; oh how her spirit flew on in advance, and hovered about the loved place, till at last she feasted her eyes on the familiar landscape, till wearied with excess of gladness she leaned back in the carriage and closed her eyes. So near home at last! The carriage stopped, and springing out she went with flying feet up the great avenue to the open space in front of the house; but oh, what sight was there—the house in ruins! Broken and charred by fire it stood a great black skeleton of a home, stretching out weird arms to the departing sunshine; the dismantled rooms seemed full of ghostly spirits that mocked at her consternation; the yard was strewn with fragments of furniture; bits of choice pictures and bric-a-brac stared at her from the debris; the trees were scorched and blackened, the roses bloomed, half withered, by the garden walls; all about the house the once luxurious vines and flowers lay crushed and—bleeding it almost seemed to her excited fancy. Under the window of her sitting-room some pansies lifted their little scarred faces and seemed to gaze at her reproachfully, here and there a pale daisy looked out, frightened, from the ruins. Alas, alas, her home—ruined and silent! The withered branches of the trees made shadows on the broken windows, waving her a last farewell. She felt as if it must be a dream—but no, there were the people hurrying up and down the road, there were the sunset tints just creeping up the sky, the sound of the wind in the trees, the sea-gulls hovering above the bay, the green waves curving and curling toward the shore, and far out a white sail, going almost out of sight as she watched it in a dull despairing way. There were no tears now, the shock was too great. Faint and sick, she made her way to the carriage and sent the driver to make inquiries at the nearest house.

"Wall," said he on his return, "as near as I can find out, the gentleman's wife left him quite a spell back, then the house burnt, and she kind o' give up. She says he's gone to his folks to New York, and the place is for sale."

Gone to New York—to his brother's of course—and thither she would follow him. She found some comfort in thought that she was his wife and had the right to follow him, if need be, around the world. People no longer talk of going to the end of the world—the jumping off place. The next day she was on her way East. There was plenty of time for reflection during the long, lonely journey, and Helen's heart was filled with remorse. By the time she arrived in New York she was abject enough in look and manner to appeal to the hardest heart.

Trembling with fatigue and excitement, she was ushered into the presence of her sister-in-law.

"I am Helen, George's wife," she said, in a gasping, hysterical way.

"George's wife!"

"Yes, I came here to find him."

"Poor child," said Mrs. Cameron, gently.

"You are so tired; sit down here and let me take off your bonnet."

"But where is George? I want to see George," she insisted nervously, feeling sure, from her sister's looks, that some fresh calamity awaited her.

"Poor child, George is not here; he left this morning for England. But don't fret about it, dear; we will telegraph him and have him back

in a few weeks—by the time you are rested. Now cheer up."

But, instead of cheering up, Helen had faintly "dead away."

"When things are at their worst they mend." Things must have been at their worst with Helen, for when she unclosed her eyes again she fancied herself in the other world—the old world—there, bending anxiously over her, was George.

"Missed the steamer, and spent the morning with some friends," was his laconic explanation to his sister-in-law.

"Helen," said Jack, when he visited them in their new house—which was, in the broadest sense of the word, a new house built upon the ruins of the old one—"I am glad to see that you and George have outlived that little unpleasantness. Who is commander-in-chief now?"

"Well," said Helen, after a moment's consideration, and holding aloft the chubby young Cameron, "I haven't given the subject much thought, lately, but it must be baby."

### Work, Work, Work!

The writer of "Household Hints" in the *Evening Post* has this to say on the policy of "letting things go": "Let things go; try to enjoy yourself these lovely June days," was the sage advice given to a tired woman who had already, from inability to do them, let things go, until she contemplated the increasing pile of unmade clothes, the disordered closet and pantry shelves, with a feeling approaching horror. To tell such a woman to go out and sit in Nature's lap and enjoy herself is about as senseless a proceeding as can well be indulged in. I am not a believer in the policy of letting things go; if you could let them go, it would be a different matter; if, to quote Macbeth, "twere done when 'tis done, 'twere well it were done quickly." If, when you pass out of your kitchen and leave in it the unwashed breakfast dishes, bread rising in the oven, and with dinner to prepare, the dishes would wash and wipe themselves, the bread bake itself and the dinner put itself on the table, then you might entertain the idea of letting things go. But, seriously, it cannot be done; one day lost out of the regular order of your work will leave traces of neglect sometimes through a troubled fortnight.

Housework is something that cannot stop; it is not like the work in a machine shop, where by slipping off a band the humming wheels are still, and nothing is injured. So long as there is a family to be fed and clothed, and got to sleep, the work must go on. In view of this, some impatient woman may feel as Falstaff did when he exclaimed, "Why shall I not take mine ease in mine inn?" There certainly are many ways by which this may be done. One may do it by living simply, by having fewer rooms to care for, having few courses at the table; dressing the children less elaborately, though not less neatly; learning to "save steps" and to economize strength (don't wait until you are old to do this, but begin while young, and thus form the habit, so that, by and by, you will do it unconsciously); but not by leaving any necessary part of the work undone. Almost any reasonable woman would prefer to meet Nature as a casual acquaintance; to make a formal call upon her now and then, with the tranquil spirit which a clean kitchen has power to bestow, rather than paying long visits to her with the uneasiness which comes from the knowledge of work undone. There is such a thing as seeing with the mind—as having June in the heart; and a fresh breeze blowing in at the kitchen window, or a bird's song coming to one bending over a wash-tub, may have sweetness and charm and give invigorating thought. Unless we can learn to enjoy ourselves while doing our work, and find satisfaction in doing it well, we do not know what life has to offer to any of us.

### A True Lady.

Wildness is a thing which girls cannot afford. Delicacy is a thing which cannot be lost or found. No art can restore the grape its bloom. Familiarity without confidence, without regard, is destructive to all that make women exalting and ennobling. It is the first duty of a woman to be a lady. Good breeding is good sense. Bad manners in a woman is immorality. Awkwardness may be ineradicable. Bashfulness is constitutional. Ignorance of etiquette is the result of circumstances. All can be condoned and not harsh men or women from the amenities of their kind. But self-possession, unshrinking and aggressive coarseness of demeanor may be reckoned as a State's Prison offense, and certainly merits that mild form of restraint called imprisonment for life. It is a shame for women to be lectured on their manners. It is a bitter shame that they need it. Do not be restrained. Do not have impulses that need restraint. Do not wish to dance with the prince unsought; feel differently. Be sure you confer honor. Carry yourself so lofty that men will look up to you for reward, not at you in rebuke. The natural sentiment of man toward woman is reverence. He loses a large means of grace when he is obliged to account her a being to be trained in propriety. A man's ideal is not wounded when a woman fails in worldly wisdom; but if grace, in tact, in sentiment, in delicacy, in kindness, she should be found wanting, he receives an inward hurt.

—Gail Hamilton.



## Chaff.

Now is the time to buy a row-boat, paint it green and name it after your girl.

WIFE—"Oh, dear; if he dies I shall go wild."

Friend—"After whom?"

When the time arrives for the baby to eat bread, you should break it to him gently.

PERHAPS it is the powder of the fair maidens cheeks that blasts the hopes of so many young men.

"EMBROIDERED crash is much used for piano covers," says a fashion exchange. That makes a terrible sameness about the instrument.

GRACIE'S first experience in eating a peach: "I've eaten it, cloth and all, mamma; now what shall I do with the bone?"

"O, LOOK LOUIS! Fred just sent me this sweet, little puppy. Wasn't he kind?" "Yes, dear, but it's just like him."

PASSING around the hat, says the New Orleans Picayune, is an old and excellent method of getting at the cents of the meeting.

A POLITICIAN in Kentucky recently attempted to shoot an editor who accused him of "being in the habit of imparting an unhealthy swelling to the truth."

SCENE at the college.—Prep: (to servant at the door)—"Miss——?" Servant: "She's engaged." Prep: "I know it; I'm what she's engaged to."

YOUNG clergyman at a church meeting: "I merely throw out the idea." Old minister: "Well, I think that is the best thing you can do with it."

"Did you find Mr. Spriggins, Patrick?" "I did, surr." "What did he say?" "Never a worr'd, surr." "Why not, Patrick?" "Because he was out, surr." "Out! I thought you said you found him." "I did, surr; I found him out."

A YOUNG man who went to Woodward's, and stepped too near the monkeys' cage had his arm seized and savagely jerked by one of the monkeys. He would have escaped safely, had he not said "it was only a monkey wrench," but when they heard that, the infuriated crowd threw him into the lions' cage.

## How to Select a Husband.

It has been profoundly remarked that the true way of telling a toadstool from a mushroom is to eat it. If you die, it was a toadstool; if you live, it was a mushroom. A similar method is employed in the selection of husbands. Marry him; if he kills you, he was a bad husband; if he makes you happy, he is a good one. There is really no other criterion. Some young men that seem unexceptionable, indeed very desirable, when they are single, are perfectly horrid as soon as they are married. All the latent brute there is in the heart comes out as soon as a sensitive and delicate being seeks her happiness in his companionship. The honeymoon lasts a very short time, the receptions and rounds of parties are soon over, and then the two sit down to make home happy. If she has married a society man, he will soon begin to get bored; he will yawn and go to sleep on the sofa. Then he will take his hat and go down to the club and see the boys, and perhaps not come home until morning. If she has married a man engrossed in business, he will be fagged out when he comes home. He may be a sickly man that she must nurse, a morose man that she must seek to cheer, a drunken man that she must sit up for, a violent man that she fears, a fool whom she soon learns to despise, a vulgar man for whom she must apologize—in short, there are thousands of ways of being bad husbands and very few ways of being good ones. And the worst of it is, that the poor, silly women are apt to admire in single men the very traits that make bad husbands, and look with contempt or ridicule upon those quiet virtues which make home happy. Men with very little personal beauty or style often make the wife happy, and sometimes quite the reverse. The number of ways of being a bad husband is almost as great as the number of ways of being ugly. No one can tell from the demeanor of a single man what sort of a husband he will be. However, she must marry somebody.

TWO BRAVE LITTLE GIRLS.—A long time ago, in the Indian country, two little girls slipped away from the fort, and went down into a hollow to pick berries. It was Emmy, a girl of seven years, and Bessie, her sister, not yet six. All at once, the sun flashed on something bright, and Emmy knew that the pretty painted things she had seen crawling among the bushes must be hostile Indians, with gleaming weapons in their hands. She did not cry out, nor in any way let them know that she had seen them. But she looked all about, saw that some of the creeping Indians already were between her and the fort, and—went on picking berries, as before. Soon, she called to Bessie, with a steady voice, "Don't you think it's going to rain?" So they both turned and walked toward the fort. They reached the tall grass, and, suddenly, Emmy dropped to the ground, pulling down Bessie, too. "What are you looking for?" asked the little sister in surprise. Then Emmy whispered to Bessie, and both of them stole silently and quickly on hands and knees through the long grass, until they came to the road, when they started up, ran swiftly to the fort, dashed through the entrance, and had the gate safely closed behind them. Those girls are quite old now, but they remember very well the day they saved themselves, the fort which their father commanded, and the soldiers and other people in it, besides.

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of fifteen letters.  
My 14, 8, 15, 9, is an animal.  
My 12, 13, 7, 10, 5, is a stream of water.  
My 13, 14, 2, is a feminine name.  
My 11, 2, 3, 4, is a Biblical name.  
My 1, 2, 1, 6, 9, is a publication.  
My whole is a well-known poem.

CARRIA.

## Hidden Rivers.

1. How long has Isabel been sick?
2. I should think a man of his age would be more discrete.
3. There I met an old acquaintance.
4. I will help Ruth as much as possible.
5. Shall we serve God or Mammon?
6. Towards morning I landed on a small island.
7. I will not dun a poor man.

MELANCHTHON.

## Amputations.

1. Behead and curtail to dislike and leave a preposition.
2. Behead and curtail to strike and leave a personal pronoun.
3. Behead and curtail a Latin verb and leave a number.
4. Behead and curtail a passage for water and leave a female animal.
5. Behead and curtail to talk senselessly and leave a small animal.
6. Behead and curtail a city of Europe and leave a fowl.
7. Behead and curtail a city of Massachusetts and leave a beverage.

JERRY.

## Charade.

My first is but a lowly thing  
That's trod beneath the feet.  
My second makes a kind of drink,  
And something good to eat.  
My third and fourth together, now,  
A very evil root is;  
Yet many seek for its bright glare,  
Neglecting other duties.

My whole's a great and mighty sea,  
Where many ships go down;  
Yet many more are eager still  
To sail e'en through their drown.

AUNT SARAH.

## Transpositions.

1. Transpose angry and form a wall to stop water.
2. Transpose a period of duration and form an individual article.
3. Transpose a conjunction and form a masculine nickname.
4. Transpose tardy and form a narrative.
5. Transpose a number and form a snare.
6. Transpose to pinch and form a pointed instrument.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—Darwinism.  
HIDDEN RIVERS.—1. Ash. 2. Yew. 3. Lime. 4. Elm.  
5. Aspen. 6. Maple. 7. Cedar. 8. Oak.  
CROSS-WORD ENIGMA.—Portsmouth.  
PROBLEM.—Seven, leaving none at last gate, and having one left in his basket.  
AMPUTATIONS.—1. Crow, row. 2. Fire, ire. 3. Cape, ape. 4. Gold, old.

## A Good Name.

[Written for Young Folks by JULIA M. GOODLETT.]

Human experience in every age has given abundant proof of the inestimable value of a good name.

Even the little boy realizes it daily in the family circle, in the school-room and at play; he well knows that if he has a bad reputation many offences are imputed to him of which he is guiltless.

The man in business is hourly reminded of it; if a merchant acquires a reputation for integrity, people manifest their confidence in him by bestowing upon him their custom.

The lawyer and the doctor must possess the confidence of the public if they succeed in their profession. Even the politician must secure the respect of those with whom he is associated ere he can hope for success in his vocation. He may make addresses without number, and by his eloquence entrance his audience, yet this will avail nothing if he possess a bad reputation.

Though a sermon be most eloquent and logical, yet if we have no confidence in the piety of the minister from whose lips it falls, it is but a stumbling block to us.

All men desire the respect and love of their fellow-men, and all seek in some way to obtain it. Some persuade themselves that the possession of great wealth will procure it, and spend their lives in the pursuit of wealth, hoping to purchase with gold this most precious of earthly possessions. Others imagine that by the possession of earthly love alone, they can gain the coveted prize; and many strive by stimulating greed to gain it. While it is true that a good reputation is often thus unjustly gained; when that is the case it is as fleeting as the rainbow's purple light. If it be a badness of character it must fade. To secure the lasting respect of our companions, we must live upright, honorable lives, thinking not alone of our own welfare. This requires constant sacrifice, but this, the gem is richly worth.

Our acts form the base of our reputation, and they live after we have passed away. It is impossible for us to live and act without forming a good or a bad character, that will live on, and aid others in climbing to the fair heights of Beauty, or in sinking far below.

How very careful we should be to make all of our acts worthy of the commendation of the good, to deserve and retain a good reputation. Then seek this gem with greater zeal than the diamond hunter of Brazil formerly sought that precious stone, when success secured to him something dearer than life—his liberty.

San Bernardino.

## GOOD HEALTH.

## How Milk Should be Taken.

Milk is a food that should not be taken in copious drafts, like beer or other fluids which differ from it chemically. If we consider the use of milk in infancy, the physiological ingestion that is, of it, we find that the sucking babe imbibes little by little the natural food provided for it. Each small mouthful is secured by effort, and slowly presented to the gastric-mucous surface for the primal digestive stages. It is thus regularly and gradually reduced to curd, and the stomach is not oppressed with a lump of half-coagulated milk. The same principle should be regarded in the case of the adult. Milk should be slowly taken in mouthfuls, at short intervals, and thus it is rightly dealt with by the gastric juice. If milk be taken after other food, it is almost sure to burden the stomach and to cause discomfort and prolonged indigestion, and this for the obvious reason that there is insufficient digestive agency to dispose of it; and the better the quality of the milk, the more severe the discomfort will be under these conditions.

Milk is insufficiently used in making simple puddings of such farinaceous food as rice, tapioca and sago. Distaste for these is engendered very often, I believe, because the milk is stinted in making them, or poor skimmed milk is used. Abundance of new milk should be employed, and more milk or cream should be added when they are taken. In Scottish households this matter is well understood, and a distinct pudding plate, like a small soup plate, is used for this course. The dry messes commonly served as milky puddings in England are exactly fitted to create disgust for what should be a most excellent and delicious part of a wholesome dinner for both children and adults.—*Popular Science Monthly.*

## Deaths from Industrial Pursuits.

Some startling facts respecting the amount of sickness and death which result directly from the circumstances under which industrial pursuits are carried on, have lately been discovered in England, where they have been brought to the attention of the authorities as a subject worthy of investigation with the view of amelioration. One statistician who compiled tables on this subject in 1877, giving the records of deaths and injuries by steam boilers, in mines, on railways and in factories,\* estimated the mortality in England from these causes, during the four years preceding 1877, at a total of 107,000 men, women and children; and he estimated, on the basis of these facts, that 500,000 workmen will lose their lives during the ten years from 1877 to 1886, from the following causes, namely, 300,000 in mines, 70,000 on railways, and 130,000 in factories.

Another writer on the same subject, criticising these figures, thinks they are altogether too small, and that the accidents reported comprise only a small part of those that actually take place. He is of opinion that not less than 100,000 persons are annually killed in England from causes directly resulting from the industrial occupations in which they are engaged. These statements, which are doubtless based on reasonably accurate data, are sufficiently appalling to arouse from its traditional *sans froid* even so inert and conservative a body as the British House of Lords. Taking even the lowest estimate of mortality from industrial accidents as the safest basis for estimating the number of yearly deaths from such causes the world over, and it will be found that the "horrors" of war, with its reckless sacrifice of human lives, become far less horrible when a comparison of the number of victims is instituted.

## How Koumiss is Made.

This article, sometimes called "milk wine," or "milk beer," which was sold quite extensively in this city some two or three years ago, and which has recently formed an important article of diet in the critical case of President Garfield, is made as follows: Into one quart of new milk put one gill of fresh buttermilk and three or four lumps of white sugar. Mix well and set that the sugar dissolves. Put in warm place to stand ten hours, when it will be thick. Pour from one vessel to another until it becomes smooth and uniform in consistency. Bottle and keep in warm place 24 hours. It may take 36 in winter. The bottles must be tightly corked and the corks tied down. Shake well five minutes before opening.

It makes a very agreeable drink, which is especially recommended for persons who do not assimilate their food, and for young children may be drunk as freely as milk. Instead of buttermilk, some use a teaspoonful of yeast.

It is the standard beverage of the Tartars, who almost live upon it in summer, and is also used largely by the Russians.

CAUTION.—the richer your milk, which should be unskimmed, the better will be your koumiss.

LIGHTING THE SUEZ CANAL.—A project is on foot for lighting the Suez canal by means of electricity, so that ships may pass up and down by night as well as by day. This certainly sounds well if it is feasible. The only question would be, would the Arabs and other pilferers leave the wires alone when the lights were installed.

## DOMESTIC ECONOMY.

CREAM OF RICE.—Beat the yolks of two eggs with three quarters of a cup of sugar and a pinch of salt. Dissolve a tablespoonful of corn starch in half a cup of cold milk, mix it with the beaten yolks and sugar, and stir in gradually two cups and a half of scalding hot milk. Cook this custard in a double boiler stirring constantly until it thickens, adding meanwhile a cupful of hot rice cooked in the following manner. Wash the rice through three waters, then boil it for fifteen minutes in salted water after which drain and set on the back of the stove to steam until done which will be in fifteen minutes longer. Use a cupful of rice, measured after cooking. Flavor with lemon or vanilla, turn into a pudding dish and set in the oven to slightly brown the top. Cover with a meringue made with the whites of the two eggs and two tablespoonfuls of sugar beaten stiff. Color a delicate brown and serve cold.

A RICH LIGHT OMELET.—I have discovered what may be a new way to make a rich and very light omelet. For a family of three, we heat the yolks of five eggs, adding a good teaspoonful of chopped parsley and five even tablespoonfuls of thick sour cream, with a very little soda in it. If the least too much soda the omelet will not be good. I put about the sixth of an even teaspoon of soda, and perhaps even less might do. When that is all stirred together, add the whites of the eggs, beaten to a froth and pour into the pan, which I put on the stove in advance with a lump of butter in it; put it back so that the butter will only become a very light brown. I cover the omelet and fold it over and dish it. It will be very light, and I think very good. I forgot to mention the small pinch of salt to the mixture.—*Cor. Germantown Telegraph.*

THE USE OF LEMONS.—I do not think there is an hundredth part of lemon-juice used generally as its valuable qualities would seem to commend. I know of nothing better as a stomachic corrective as well as a strengthener of the nervous system. We all know that it is used for rheumatism, and I have no doubt is also good for gout, if taken regularly three times a day and at least half a gill at a time. It can be taken in much or little water or no water at all. It is not unpleasant, one soon becoming accustomed to it, and would rather drink it than pure water. For headaches it is the best cure I have ever used. It will relieve it in from 10 to 15 minutes by a single dose. I would not advise less than half a gill at a time. I know of people who take it three times a day as a preventive of disease, and as a refresher in hot weather. It quenches thirst also better than anything else. No sugar.

POTATO PUFFS.—This receipt sounds good and I want to try it soon. Boil the potatoes in salted water, then drain and dry them a few minutes and mash them perfectly smooth. To a pint of mashed potatoes put two tablespoonfuls of melted butter and beat with a fork until the whole is light and creamy. Add the yolks of two eggs, a cupful of rich milk and lastly the whites of the two eggs beaten to a froth. Beat each ingredient in before adding the next. Put in a little salt if needed and pour the whole mixture into a buttered baking-dish. Bake in a quick oven until the surface is nicely browned. The success of this dish depends on the faithfulness with which it is beaten.

APPLE MERINGUE.—To a quart of sifted apple-sauce add the yolks of three eggs, butter the size of a small egg, a little nutmeg, a pinch of salt and sugar to taste. Put the mixture into a neat baking dish and cook until a light brown on top. Cover with a meringue made with the three whites of the eggs beaten with three tablespoonfuls of powdered sugar and a little lemon juice until stiff. Soft powdered sugar over the top, return to the oven long enough to color delicately and serve cold with sweetened and flavored cream.

PEACH TAPIOCA.—Soak a cup of tapioca over night in a quart of warm water. In the morning half fill a medium sized pudding dish with peeled peaches cut in halves. Pour the tapioca over them. Cover the dish and bake an hour in a moderate oven or until the fruit is done and the tapioca cooked to a jelly. Serve cold with sweetened and flavored cream. Apples peeled and cored may be substituted for the peaches.

FRUIT CREAM.—Mix a cup of peach or pineapple marmalade with a cup of sweet cream. Soak half a box of gelatine in a little cold water for an hour, then add a cup of boiling water and stir until dissolved. Mix this with the other ingredients, add sugar if not sweet enough, and when cold and beginning to harden stir in a pint of rich cream whipped to a standing froth. Turn into a wet mold and set away until firm.

CREAM CAKES.—First prepare the flour by sifting into one quart of it two teaspoonfuls of phosphatic baking powder, a lump of butter the size of a hulled walnut, a pinch of salt and as much cream, either sweet or sour, as will make a very soft dough. Handle with the tips of the fingers; do not knead at all; use a well-floured board, and hurry and get the cakes into the hot oven. This certainly makes the daintiest cream cakes in the world, crisp and sweet and puffing open like white roses.





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G. H. STONG.

SAN FRANCISCO:  
Saturday, September 3, 1881.

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## The Week.

Next week the agricultural fairs begin with the grand centennial exposition of the Southern California Horticultural Society at Los Angeles. Very wisely the date of the fair was made to coincide with the one hundredth anniversary of the founding of the pueblo of Los Angeles, and this will give the people an opportunity to celebrate a notable event in their history and, at the same time, encourage the horticultural interest, which is one of the brightest plumes in the cap of the southern capital, and which will wave the direction of her future advancement. We learn that there is a general disposition on the part of the flourishing neighborhoods in the southern counties to send delegates and their best products to the Los Angeles fair, and thus the exposition will be representative of the southern regions of our commonwealth. It will be a good time to see the southern people and their achievements.

It has been a peaceful week in California. The days have been a long succession of meteorological gems. The air and sun have brought new strength for work and new zest for leisure. The unfortunate Atlantic coast has fared worse, and the heat at the north and the hurricane at the south have vexed the people and overturned their habitations. The approach of our delightful autumn is heralded by the arrival of the first raisins from Mr. Briggs, of Yolo county, and soon the beautiful fruit in its handsome packages will be abundant. We may be able to spare our Eastern friends a portion of this year's curing.

SANGAMON COUNTY FAIR.—We are indebted to Phil. M. Springer, Secretary, for a ticket to the 28th annual fair of the Sangamon County (Illinois) Agricultural Board, to be held at Springfield, September 12th to 17th.

## The Event and Its Influences.

The case of President Garfield is becoming notable for its alternations of light and shade. On Saturday last hope well nigh departed, and the people prepared to mourn and to think upon fitting ways to express their grief and their respect for the memory of the dead. Quickly there was a reawakening of mind and strength, and the people again rejoiced at the chances of recovery. Thus the matter stands at this writing. The President is much better than he has been, and yet there must be much more progress gained before the President will be out of danger.

The incidents of the President's illness will not be forgotten during the present generation. Never before has the public mind dwelt upon the significance of symptoms and been led to study the relations between pulse, respiration and temperature. Never has the danger and distress of a gun-shot wound been so widely appreciated, and if the thought on this subject should lead to more restricted use of weapons in low as well as in high places, it would be a public benefit.

There has been running through the accounts of the President's sufferings which have come to the daily papers, veins of sickly sentimentalism as well as lofty heroism. The abundance of gush is, however, to be attributed to the reporters, who have free use of the wires, and it is hardly worth while to get excited about it, as some of our exchanges have been disposed to do. The debris of sentimentality may be overlooked, as the case has given the country some gleams of true sentiment, courage and bravery, which it will benefit all who contemplate them. The bravery of Mrs. Garfield, when the doctors were disposed to lose all confidence and hope, will pass into history. It appears that the surgeons, after learning the symptoms of the morning, decided that it was useless longer to continue the struggle, and two of their number were selected to wait upon Mrs. Garfield and inform her that medical science could do no more, and she must prepare for the worst. The interview which occurred between these surgeons and Mrs. Garfield will, if reports be true, be regarded as one of the most dramatic incidents in this extraordinary case. Captain Henry, Marshal of the District, and a friend of the President and his family, says that Mrs. Garfield heard the news, and smothering her emotion, arose and said:

"Gentlemen, you shall not give him up. He is not going to die. He is going to live. I feel, I know it. Go back to your post, and leave it not until every remedy is exhausted, and until death itself has set its seal upon him, for I will not believe that he is dying. Go back, and do what you can; you cannot do more; but don't give up. I am his wife, and I say we will not give him up until the end itself is upon us."

Mrs. Garfield has never surrendered more than a moment or two at a time to her grief, and then she has retired to her room, and, after a brief absence, returned to her post of duty at the President's bedside. The conduct of Mrs. Garfield is calculated to endear her to the hearts of the American people, for the love and respect for a brave spirit is irresistible. The fact that other women are just as brave and heroic in their obscure places as she has been in the face of the world does not detract from her glory, nor does her fame take from their nobility. Rather should she be gladly accepted as the exponent of the courage and devotion and trust which are characteristics of noble women everywhere, and all the praise which she receives should be taken as a tribute to all true womanhood and wifehood.

The President has suffered severely, but not in vain. The stroke at his life was the death blow of political policies which were gaining alarming prevalence, but are now abhorrent and everywhere denounced. Should he rise, as we trust he may, his opportunity for reforms will be immeasurable, for the people will be beside him in every true action and interested opponents will fly through alarm at their own weakness. Even should he die, his long weeks of torture will not have been endured in vain, for any change in administration will now be less dangerous than would have been an immediate transfer of power. We count it sure that the sentiment of the American people is much higher and the determination for a pure and disinterested administration of public affairs much stronger than it was three months ago.

SANTA CLARA VITICULTURAL SOCIETY.—The number of horticultural and viticultural societies organized during the last two years is large, and the dissemination of information among the members and the public generally great. The latest accession to the organized ranks is the Santa Clara Viticultural association, organized last week. Mr. J. P. Pierce was elected President, but he most positively declined the position. Hon. B. D. Murphy was then unanimously elected President. Capt. Merritt was elected Vice-President; Mr. Richard Pierce, Secretary.

THE BREEDERS AND THE STATE FAIR.—In this issue of the PRESS there may be found two letters referring to the issue between the Short Horn breeders society and the State fair. One by Mr. Ashbrenner may be found on page 147; another by Mr. Sturges on page 156. The two letters would have been placed together had not Mr. Sturges arrived too late for such an arrangement. We hope the matter will cool down as soon as possible.

## ENTOMOLOGICAL.

## Drenching the Dorthesia.

It may not be the *Dorthesia*; it may be *Icerya purchasi*, but whatever the entomologists finally make it, it is the miserable white "scale insect" which led San Rafael people to destroy their acacias, and which has since appeared here and there around the bay, and has finally sprung into hateful prominence in Santa Barbara. It will be shown up with engravings in Matthew Cooke's forthcoming report on injurious insects, so that those who do not recognize it by its name or description, may know the pest by its portrait.

We allude to this insect at this time for the purpose of introducing some valuable observations upon the insect and its treatment, which Geo. W. Coffin has prepared for the *Santa Barbara Press*. Mr. Coffin is in charge of Col. Hollister's property, and consequently has had abundant field for horticultural studies. He gives a popular description of the *Dorthesia* as follows:

*Dorthesia* is an insect about three-eighths of an inch long, and half as wide and deep, when fully grown, flat underneath and rounded over the back. It is covered with a kind of white felt, except the head, which is a reddish brown, and retreats from the nose to its junction with the body, to which it is closely joined. At the extremity of the head are two antennae, and extending back towards the body, three pairs of legs. With these legs and a sucker-like mouth, it clings to the limb or leaf, after its traveling season is over, and there feeds and grows, and finally brings forth its numerous family of active little insects. They may be seen without the aid of a glass, running off towards crevices in the bark, or out on the tender growth or along the midrib of the leaves, generally on the under side. At first they are flesh color, then brown in some instances, and finally take on the wool or felt, and become permanently attached. They multiply rapidly, and pass from tree to tree by some means not yet fully known. Bees may carry them, or birds, by lighting on the branches where they are, and have them cling to their feet. This latter method of transportation may account for their appearance on trees at remote distances in the orchard. While in the brown state they are actively seeking a permanent location, and no doubt travel over the space between trees, especially when some helping vine leads in the right direction. Taken early, they may be held in check or destroyed outright, but left till their seething millions swarm on your trees, and the conquest will be long delayed.

The insect is believed to have been introduced from Australia. At Santa Barbara they first appeared in a lime nursery of S. P. Stowe, afterwards it appeared on Mr. Hollister's place, and there they were given a warm reception, as Mr. Coffin's narrative will show. He describes the treatment which thus far gives best results, promising, however, that a method of warfare which Ellwood Cooper has under consideration may finally prove better. For the present Mr. Coffin advises the following procedure:

The first step is to prune severely, and burn the cuttings immediately. This gives an opportunity to make applications to what are left. Orange trees seem to be more infested with them than lemon, and lemon more than lime. But left too long they attack apple, fig and walnut trees, in fact almost anything green.

The remedy most successfully used so far is water, heated to 180°, or even 200° when first taken from the cauldron, and thrown on them by a syringe or hand force pump. By transferring the water to the bucket it will drop about 5° in warm quiet weather and should at first be thrown to the highest point of the tree, where it is, say 15 feet high, as it will cool some 20° or 30° in going that distance. A thermometer is in almost constant use, that it may not be thrown on hot enough to kill the foliage, or so cool as not to penetrate the white shield and woolly lining of the insect. At high temperature the stream should not be directed too long in one place, but passed away and returned again until the enemy shrivels and finally swings from his moorings by a fine web—his last hold. In several instances I have seen the old one contract its sides and hug the limb, and in order to ascertain its condition removed it, to find a dozen or more young ones nicely protected by hovering, as a hen hovers its chickens.

In experimenting, we have been to but little expense; a large kettle set over a fire-box near a hydrant in the orchard, is the method used for heating the water. A little wagon with a ten-gallon boiler is used to pump from—this is easily run about and under the trees, so the water may be thrown from all directions. When the temperature shall have run down to 150° at the point of contact, as near as we can judge, a fresh and warmer supply is secured, and so the work goes on. If some are left, as they will be from sheltering limb or leaf, the tree is visited a second time, or even a third time, but they are killed and must, or ruin follows. It will also be understood that the new growth of the tree will not endure as much heat as the older portions. The dormant condition is the best time to operate in. The black scale is killed by this application. So also is the fungus or black smut, which being a vegetable growth, is destroyed by a temperature of 140° to 150°.

## Coal Oil as an Insecticide.

EDITORS PRESS:—An old apple orchard on the Magnolia farm had been for some years badly infested with woolly aphis. A number of trees had been grafted over, and the tops being cut off, the trunks were well wrapped with sacking to prevent the bark scalding. Late in the fall, on removing these wrappings, they were found to contain myriads of these insects, being in some places covered with them a quarter of an inch thick, with almost as many of them on the trees. The wrappings were, of course, burnt at once, and I poured coal oil on the trees, carefully, and not allowing it to soak into the ground about the roots. This summer the orchard is almost entirely rid of the aphis, and the only reason I can give for it is that it was attracted in large numbers to the sacks wrapped around the trees as a convenient place to winter in, although it is generally supposed that they descend into the ground in the fall, and remain there on the roots until the spring.—LEONARD COATES, Yountville.

## Brine for Scale.

J. A. Caldwell gives the *Petaluma Courier* an outline of his experience with the use of

brine for scale insects. He makes the brine strong, and sprays it upon the trees with a force pump. The time to make the application is in February or March, when the leaves are off. Mr. Caldwell says that he and some of his neighbors have given this salt bath process thorough and repeated trials, and it has not failed to destroy the scale bug and prevent its ravages. He has tried concentrated lye and other remedies recommended, but has found nothing so cheap and effectual for the extermination of scale bug as the salt brine bath.

## QUERIES AND REPLIES.

## Black Leg in Nevada.

T. D. Parkinson, of Kelley Creek, tells the *Silver State* that what is known among cattlemen as "black leg" has made its appearance in the eastern part of Humboldt Co., and is proving very fatal to young cattle. Calves under a year old are its principal victims, and those in good condition seem to be more liable to catch the disease than poorer ones. The disease generally proves fatal in a few hours. Mr. Parkinson says he examined several, and died of the disease, internally, but could discover no signs of disease in their vital organs, though cattlemen say it affects the liver. The legs, however, appear as if they had been bruised or pounded, the flesh being quite black, hence the name "black leg." The disease first made its appearance in Eastern Nevada, about two years ago, and several young cattle died of it last fall up the Humboldt. Are there any possible precautions which can be taken against the spread of this disease? If so, stockmen should see to it.—*Reno Gazette*.

Last year we had inquiries for the causes and treatment of this disease from our New Mexico readers. As the Nevada berds seem threatened with the malady now, we cannot perhaps do better than reproduce for their information the main points as given us by Jno. Casewell, M. R. C. V. S., from his studies and experience in the subject.

The causes are very difficult to find out; we must look to the feed and then to the atmosphere; activity of certain organs may have something to do with it. It seems to be more prevalent in spring and autumn, and is seldom seen in summer or winter. It is not traceable to miasma in spring, but it may be due to it in autumn, but not entirely dependent upon it. It may also be due to inordinate feeding, producing plethora. He says also heifers are most susceptible. Young bulls seldom have the disease; they being more active, keep their organs in a state of health, thus their comparative insusceptibility.

In this disease the blood ferments and undergoes decomposition, produced by grass wanting in flesh-making materials, and in the salts necessary to keep the blood in a healthy condition. French veterinarians claim this disease to be due to an infection, to an active agent, which appears to be of cryptogamic (fungoid) nature, acting on the blood in the form of a septic ferment. This agent is a miasma that the animal finds about him; that is to say, and organic substance, a debris of vegetable matter suspended in the air and retained there by watery vapor. Sometimes this miasma is found in the waters, more rarely with the solid bodies, serving as food. The disease may proceed from infected animals; the infecting agent is multiplied then oftener after the fashion of a virus, and is communicated by fixed and volatile contagion. This disease is now being investigated both by the English and French leading lights of the veterinary profession, and I think, before very long, the pathology of the disease will be better understood.

The symptoms are as follows: It appears suddenly; the animal is dull and has no appetite; difficult respiration; great difficulty in moving; cold body; head poked out; grinding teeth; lameness in one limb (generally a hind one.) By manipulation a swelling will be found in the upper part of the limb, but sometimes it appears on the body, over the loins or the side of the neck. The swelling is irregular in form, and spreads with remarkable rapidity. At first it is very painful, but gradually loses its sensibility and feels like a bladder filled with air. By making incisions, it will be found to contain a black, pulpy, frothy substance. The respiration becomes more painful and hurried. The patient becomes feeble and staggers in his gait. The loss of power increases until the animal falls. The skin gets deathly cold, convulsions set in, and the case terminates in death, generally in from 24 to 48 hours after the first appearance of the symptoms.

Treatment in this disease can only be considered experimental, the disease runs its course so rapidly. If discovered in the first stage of the disease, give sulphate of magnesia, one lb.; nitrate of potassa, two ounces. If the pulse is strong, bleed freely. If the animal lives 24 hours, give hyposulphite of soda in two-ounce doses, with vegetable tonics, such as tincture of gentian, ginger, etc., in ounce doses, twice or three times in 24 hours, gradually reducing the dose as the patient improves. Make several incisions into the diseased part and separate the skin from the flesh between the incisions (the incisions should be made around the margin of the swelling). Then rub in a strong solution of nitrate of potassa. Afterwards dress with: Linseed oil, four parts; turpentine, four parts; carbolic acid, one part.

Prevention.—Insert a seton in the dewlap, impregnated with turpentine and croton oil. Bleed to the extent of about two quarts. Give to each animal two drams of sulphate of iron, one ounce nitrate of potassa, and one ounce sublimed sulphur once a week. Divide the animals into several lots and change the pasturage to higher ground, if possible.



## At the University.

Tuesday was a memorable day at the University. The occasion was the inauguration of the newly elected President, W. F. Reid, the dedication of the Bacon Art Building and the expression of thanks to several public spirited citizens who have made substantial contributions to the funds and facilities of the University. There was a large attendance of the friends of the institution from different parts of the State. The character of the exercises and the spirit of the occasion were gratifying to all. Governor Perkins presided at the meeting, which was held in the Harmon Gymnasium building, and made an eloquent address, setting forth the high position and usefulness of the University and urging upon all the duty of maintaining and advancing its character and its efficiency. He then entrusted to the new President the insignia of his office.

President Reid accepted the charge in a few well-chosen words, and then delivered his inaugural address, which was eminently practical in its character and its suggestions. Chas. H. Outman, of the Senior Class, followed Mr. Reid's address with an address on behalf of the students. He was succeeded by John R. Jarboe, who delivered an excellent oration, dedicating the Art Library building and acknowledging the gifts of the late M. Reese, the late L. A. Pioche, Chas. Mayne, A. K. P. Harmon, and the recent gift of D. O. Mills. Henry D. Bacon, the donor of the Art and Library Fund, closed the literary exercises with an address reviewing the steps which led to his gift to the University for the purpose of securing a center of art upon this coast, from which might emanate correct standards of taste and true views of beauty.

Upon the whole the meeting was one calculated to do the institution good, to encourage its friends and stimulate its forces to greater efforts for its prosperous future.

## The Census and Cotton Production.

An idea of the excellent work which the census of 1880 will do for the agricultural interest of the country may be gained from a study of a preliminary report on cotton production of the State of Louisiana, by Prof. Hilgard, of the California State University. Prof. Hilgard assumed the supervision of this branch of the census work because the Superintendent, Gen. Walker, decided that he could not get it done as well by other hands, and the Professor was granted such liberal assistance by the census office, that he was enabled to render this important public service without interference with his University duties. We count it complimentary to our institution that the Government should have come here to find the talent required to set forth the progress of one of the great industries of the country, the chief field of which is on the other side of the continent.

The review of the cotton production in Louisiana covers 100 large quarto pages, and is replete with accurate information concerning the topography, soils, etc., of the State, the showing being adorned with a new agricultural map of the State prepared by Prof. Hilgard, in which the chief classes of soils are designated by different colors. This is decidedly a new feature in the census report, and as there is to be such a map of each of the cotton growing States, including California, the foundation for an agricultural atlas of the United States will be well laid. Aside from the descriptions of soils, there are given a host of details on practical points in cultures, the effect of fertilizers, etc. When the reviews of the cotton States are all complete, there will be a general discussion of matters affecting the production of the staple. The whole report on the cotton industry will fill two large quarto volumes, and will constitute a notable piece of Government work in the interest of agriculture.

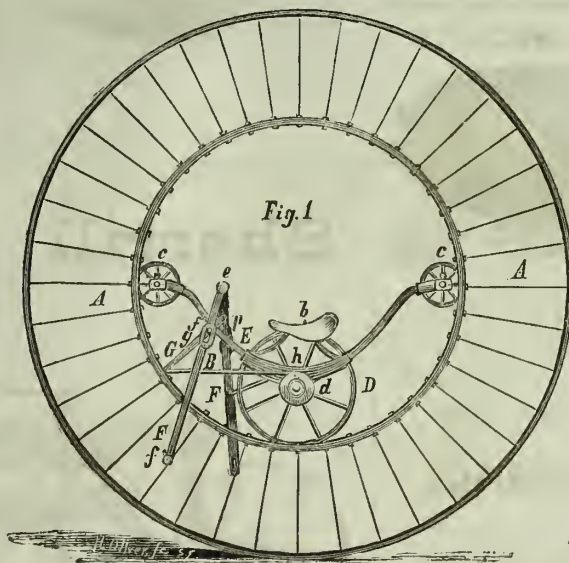
ENSILAGE.—The building of a new tripartite silo by Mr. Green of Hollister, was mentioned last week. He has this silo, which has a capacity of 500 tons, now filled with chopped-up corn fodder, and weighted down, as it will remain until November next. Mr. Green expects this year's experience to fully demonstrate the value of ensilage. His results last year with his 100-ton silo were very satisfactory. The *Advance* says that out of the 100 tons of food which he preserved last year, not 100 lbs. were lost. During the whole experiment it was perfectly preserved, and better, in his estimation, than when fed fresh and green from the field. Stock eat it up eagerly and clean, leaf and stalk, without any loss whatever, and stock thus fed, he finds, exhibit the highest condition of health and thrift. For milch cows, to which he mainly fed it, it surpasses any other food he has ever tried. It increases the quantity of milk much beyond dried food, and the quality is better than that produced from the same fodder, when fed fresh and green from the field—this, Mr. Green thinks, is owing to the fact that it does not scum or bloat the animals, while it retains its natural juices and nutritious qualities in the most digestible form. At any rate, his experiments this year will be conclusive, and will be watched with interest all over this coast.

## A Monocycle.

When people see the daring bicyclist perched precariously on top of his two-wheeled steed those who cannot ride imagine he is performing some wonderful feat. He has two wheels, however, even if they are in a row; but what shall we say of a man who rides one wheel only? There is really a one-wheeled velocipede, which is exhibited by G. H. Strong, in Dewey & Co.'s Patent Agency at the Mechanics' Fair, pavilion and the greatest peculiarity of it is that the rider is safer from a capsize than he is on two wheels.

The wheel shown in the pavilion and illustrated in the engraving is seven and a half ft. in diameter and has what may be called an open center hub, the central part of the wheel being sufficiently open for a man to sit where the hub would be in an ordinary wheel. An annular flange is formed on the inner edge for the grooved driving and guide wheels. The carriage carrying the saddle for the rider is formed of right angled bars having grooved guide wheels on their ends, and a centrally placed bearing wheel immediately under the saddle.

The shaft of the central bearing wheel is ex-

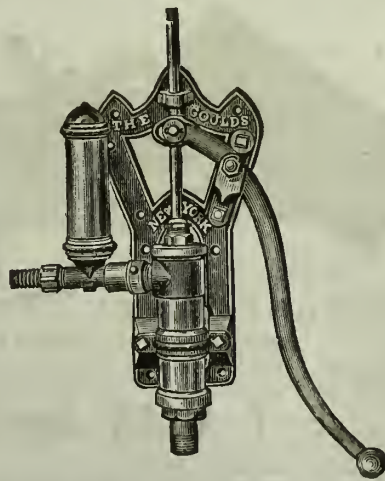


"AMERICAN CENTER VELOCIPEDE."

tended through both sides, and outside its bearing on each side is placed a clutch, arranged to engage with the shaft on the forward stroke of the levers and allow the shaft to revolve independently when the power is relieved.

On the forward bar of the carriage is a short standard carrying a hand bar, which forms the pivot for the levers, which are provided with treadles. To the lower ends of the operating levers are attached the cords which encircle and operate the friction clutches.

To operate the monocycle the rider mounts the saddle, places his feet on the treadle and



Force Pump for Orchard Use.

the hands on the bar. He is then on the center of the wheel, with the center of gravity below the actual center of the wheel. By moving the left foot forward, the lever, by its cord and connecting clutch, rotates the shaft and central bearing wheel, thus moving the carriage with its rider forward of the center of gravity of the big wheel, and causing the wheel to rotate and begin a forward motion. As the pressure of the foot on the lever is released and the lever comes back for its next stroke, the spring of the clutch rotates the clutch backwards and winds up the cord ready for the next stroke. Meantime the rider has pushed the right lever forward, which acts in the same manner, and, by working the levers alternately, the carriage is kept forward of the center of gravity and the wheel caused to keep up a continuous revolution, carrying the rider with it. The grooved central and guide wheels revolve on a flange so they cannot be displaced, the guide wheels serving to steady the carriage on which the rider is supported.

The wheel is guided in its forward motion by the movement of the body of the rider, who di-

rects the course by swaying his weight to one side or the other. The weight of the rider being always below the center of gravity of the wheel makes it run steadily when once in motion from well-known natural laws.

A velocipede of this form is not so difficult to ride as the ordinary ones, owing to the rider's weight being below instead of above the center of gravity. A very large wheel can be used, as the diameter of wheel is not regulated in proportion to length of limb as in bicycles. With the large wheel, and the rider sitting below the center of gravity, a slow motion may be maintained and the effort to propel it need not necessarily be great. To stop the wheel, the treadle motion is stopped, when the saddle carriage will roll back of the center of gravity and stop the wheel. This machine is the invention of two citizens of San Francisco, Frederick Langmaak and Peter Strieff.

In the engravings here shown of this wheel, which its inventor calls the "American Center Velocipede," E represents the large wheel, B is the carriage carrying its saddle, C, C are the guide wheels, D is the central bearing wheel. E is the standard carrying the hand bar, e wheel forms the pivot for the foot levers, F, having treadles, f. The levers, G, form parts of compound levers with the levers H, but in

the machine at the fair only single levers are used.

## The Williams Evaporator.

Taking advantage of a favorable opportunity recently, we made a visit to the new fruit drying establishment of W. W. Cozzens & Son, a short distance from the city of San Jose, where has been lately erected one of the Williams evaporators, a fruit drying apparatus, well-known in the East, but lately introduced here by Frank B. Seeley, of Oakland. The machine was at work on plums at the time of our visit.

The evaporator consists of a vertical trunk or tower 40 ft. in height from the foundation, and five ft. wide. This is divided into two evaporating flues by a partition which does not, however, extend quite to the top. At the top and bottom of the trunk are two wheels on the shaft; said upper and lower wheels being connected by means of chains, passing around the circumference of the wheels. Light frames are suspended between the wheels, supported by pins projecting from the chains. Each frame is constructed so as to carry from one to seven trays. Between each frame filled with trays is a space of 15 inches, forming a number of air chambers at intervals in the evaporating flues. There are doors on two sides of the trunk, at convenient height for putting in and taking out the trays. Those containing the green fruit are passed immediately down over the heater, and first subjected to a high degree of heat, then passed up the flue opposite the operator and down the other to the door, where it is taken out, and other trays inserted, thus making a continuous operation. The heaters are placed directly under the trunk, are of the best kind, heated with either wood or coal, and require no masonry. This evaporator holds 126 trays, in sets of seven. Each tray is 22x48 inches, made of white wire-screen cloth soldered at each joint in the most thorough manner. If this wire cloth is broken in any way it does not unravel, but can easily be mended. The machine, when full of French prunes, will hold about 3,300 lbs.

The Williams evaporator is constructed and operated on philosophical principles. As there is a partition in the center of the trunk, dividing the space into two sections or flues, and a damper by which the heat is thrown into either or both flues at will, the operator is enabled to control the heat as occasion may require. The greatest degree of heat is generally required in the flue opposite the operator. The trays containing the green fruits are inserted through

the small door about four ft. above the furnace, and passed downward, directly over it, heating the fruit rapidly to as great a degree as it will bear, without materially changing its color. When first put in, the degree of heat may be very high without injury, as the fruit is cool and contains all its original moisture, and hot air is free from vapor and will not penetrate and scald the fruit, as moist air would. It then rises gradually through the hottest flue, the hot air circulating through the fruit, the heated air passing off at the top. While rising, the greater degree of heat—the outside of the fruit received while passing over the heater—diffuses itself through the fruit, and while descending the other flue to the operator—the driest fruit preceding the moist—enters into the increasing heat, and arriving at the door, the operator removes it and inserts another tray of green in its stead, thus making a continuous operation. Thus having been dried in the least possible space of time, without injury from scorching or cooking, its original color and flavor is retained to a great degree. The peculiar construction and operation of the Williams evaporator enables the operator to evaporate at the same time different kinds of fruit which require more or less time and heat.

The agent of this evaporator claims that the ordinary furnace driers do not have the draft, and consequently, in order to do any quick work and large business, they have to heat their fruit to a higher degree than is good. This drives the juices to the outside, not only damaging the fruit, but rendering it sticky. In this evaporator by having a column 40 ft. high, an immense draft is created, accompanied by the heat from the furnace. This carries off the moisture from the fruit in the shortest possible time. The effect of this arrangement is plainly shown by the character of the prunes which we saw during our visit. They had a beautiful glossy finish but were free from stickiness.

The evaporator is easily manipulated. The fruit is put in and taken out at the same place, which is a great convenience. The mechanism is such that no shifting of sieves is required, as at the insertion of each sieve the whole 126 are moved an equal distance, passing down over the fire first, and thence up to the top of the tower or trunk, and down again to the place of entrance.

The building in which Messrs. Cozzens have their evaporators is a fine, new two-story one, 24x36. They built one of the evaporators and tested it thoroughly, and were so well satisfied that they duplicated it, and now have two running—both built this year. They have been running very free. Mr. Cozzens expresses himself as very well satisfied with the workings of the evaporators. The evaporator is put up ready for operation at a cost of \$1,000, and the parties instructed until they can use them properly. The machine can be run on prunes with two men for each 12 hours—one to dip and put the prunes on screens; the other, to operate the machine and keep the fire up. Any ordinary farm hand can do the work. As the weight is balanced on each side, it is very easy to turn the crank which runs the chains carrying the screens and fruit.

The capacity of each of the two machines at work is to dry 150 to 200 50-lb boxes of apples in 24 hours. A half-cord of ordinary black oak wood answers as fuel. Cozzens & Sons have made 100 tons of dried prunes this season.

## Spraying Pump for Insect Destroying.

We give herewith a small engraving of a spraying force-pump, which is now being widely used by orchardists in drenching trees for the destruction of insects. It is a pump of the well-known Gould manufacture, but was specially designed by the San Francisco agents, H. P. Gregory & Co., for the application of insecticides. We are informed over 100 of the pumps were sold last year, mostly to fruit growers in the Santa Clara valley, but numbers have been sent into other districts.

The working parts of the pump are of brass, and this is not subject to corrosion by the liquids used for insect killing. The pump proper is fixed upon a neat iron frame, and this, in use, is to be screwed or bolted to a piece of plank, which is then fastened to the side of the tub or barrel in which the solution is prepared. This receptacle is generally placed upon a wheelbarrow or on a wagon, and thus each tree is easily approached and drenched.

Since the awakening of the people to the need of zealously fighting orchard insects, the call for proper force-pumps to apply remedies has increased, and must still more increase, for the war has just begun in earnest. Those who have used the pump shown in the engraving assure us of its efficiency. Any further information may be obtained by addressing the agents, H. P. Gregory & Co., 2 and 4 California street, S. F.

FRUITS AT THE STATE FAIR.—We were lately informed by Secretary Smith, of the State Agricultural Society, that the horticultural products were to be placed this year in a much better part of the pavilion than they have been hitherto. He assures us that fruit exhibitors may expect as good light as the present structure can afford and that there are indications that this year's fruit show will be of marked excellence. This note may be of much interest to intending exhibitors.



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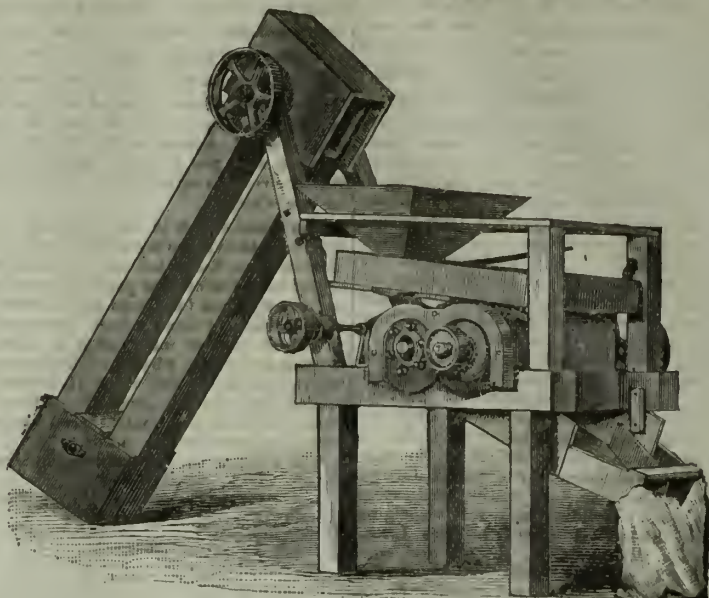
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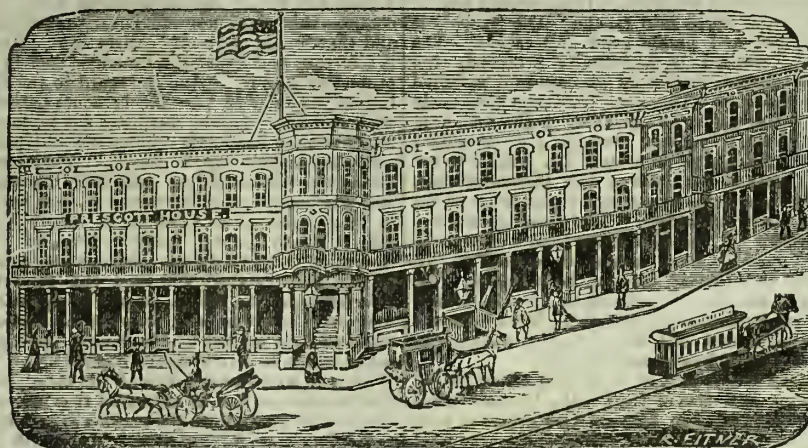
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One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

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ALBERT MONTPELLIER  
Cashier and Manager.

San Francisco, Jan. 15, 1881.

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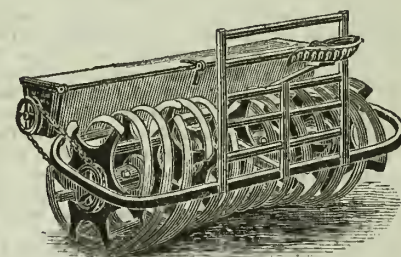
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Putting in summer fallow and volunteer can be done with six animals, at the rate of 15 acres per day, in the most thorough manner.

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For further information, address

H. P. NICHOLS,  
Pacific Coast Agent, Stockton, Cal.

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Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

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## PATENTS AND INVENTIONS.

### List of U. S. Patents for Pacific Coast Inventors.

From Official Reports for the "Mining and Scientific Press," U. S. and Foreign Patent Agents.

FOR WEEK ENDING AUGUST 16TH, 1881.

245,684.—PICK.—Thos. Williams, White River, Cal.  
247,709.—SPRING BED BOTTOM.—B. F. Farrar, S. F.  
245,614.—AIR COOLING APPARATUS.—H. J. Dykes, S. F.  
245,749.—HOISTING GRAIN INDICATOR.—I. M. Scott, S. F.  
9,340.—FEED WATER HEATER AND PURIFIER.—Reissner, S. F.  
245,795.—AUTOMATIC STOCK FEEDER.—I. L. Dias, Petaluma, Cal.  
245,708.—FLYING SHIP.—Wm. Beeson, Montana Ter.  
245,756.—GRIP FOR CABLE R. R.—H. Casebolt, S. F.  
245,918.—BUCKLE.—M. Dattlebaum, Virginia City, Nev.  
245,797.—FRUIT DRIER.—W. O. Doherty, Albany, O'g'n.  
245,627.—GRIP FOR ROPE R. R.—Grim & Low, S. F.  
245,622.—INSTRUMENT FOR CUTTING WASHERS.—Thos. Haggerty, S. F.  
245,632.—FEED AND SET WORKS FOR SAW MILLS.—F. A. Huntington, S. F.  
245,724.—ORR CRUSHER.—D. B. James, Visalia, Cal.  
245,891.—ATTACHMENT FOR COAL OIL BURNERS.—C. F. Thurman, S. F.  
245,896.—REMOVING AIR AND GREASE FROM FEED WATER.—J. D. Wass, S. F.  
245,659.—VENTILATOR AND CONDUCTOR.—J. N. Young, Sacramento, Cal.  
245,674.—TRAP.—J. T. Titus, S. F.  
245,755.—WAGON BRAKE.—J. C. Walker, Helena, Montana Ter.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**AUTOMATIC STOCK FEEDER.**—Isaac L. Deas, Petaluma, Cal. No. 245,795. Dated Aug. 16, 1881. This invention relates to a novel device for watering and feeding stock at stated intervals whereby, without the intermediate supervision of anyone, the required amount of food and water will be deposited in the manger. It consists of a peculiarly constructed receptacle, having a bottom or door in two parts, each secured by peculiar latches, said latches being connected with two alarm mechanisms of a clock, so that at the desired time the latches may be tripped and the feed deposited in the manger. It consists further in the employment of appropriate mechanism, operated by the bottom of the box in its fall, and connected with a receptacle or tank for water alongside of the manger, in which tank a common floating ball operates to regulate and close the flow of water.

**FLANGE CONNECTION.**—Irving M. Scott, S. F. Dated, Aug. 9, 1881. No. 245,403. This invention relates to an improved flange connection for joining the ends of pipes, and it consists in providing the ends of the pipes with peculiarly-shaped flanges and securing them with peculiarly-formed bolts. Pipes are ordinarily connected by bolts driven through simple flanges, and the bolt holes on each have to correspond. This is inconvenient when a length of pipe has to be connected with one already in place, because its position may render it impossible to make the bolt holes correspond. The object of Mr. Scott's invention is to provide such an intermediate connection as will permit the pipes to be easily joined in whatever position desirable.

**HEADER ATTACHMENT FOR HARVESTERS.**—Franklin R. Allen, Modesto. Dated, Aug. 9, 1881. No. 245,337. Mr. Allen's invention relates to an attachment for a combined header and thrasher; and it consists in the construction, hinging and balancing of the frame which carries the sickle and main draper, in such a manner as to permit it to be easily raised or lowered for high or low grain, the movement of the attachment being made independent of the main frame. It is specially adapted to be attached to such a combined harvester and thrasher as was patented in U. S. patent, No. 198,522, on which the heavy frame of the header is not moved with the hinged frame, the latter being moved alone.

**PICK.**—Thos. Williams, White River, Tulare county, Cal. Dated Aug. 16, 1881. No. 245,684. This improvement in picks consists in a novel means of securing and adjusting the points within the head, and in a peculiar construction of said heads for the reception of the points.

**HAMILTON SMITH**, President of the North Bloomfield company, while in Nevada city stated to a reporter that white labor only was being employed in the North Bloomfield and Milton mines. "Will those companies again hire Chinamen when the present agitation is concluded?" "No, sir. I can positively assure you that the change is a permanent one."

The following is the report of the Oregon salmon pack for 1881, so far as reported: Joseph Hume, Knappton, 20,255 cases; J. W. & V. Cook, Clifton, 30,000; J. West, New Westport, 12,000; J. O. Hanthorn & Co., Upper Astoria, 19,000; Elmore Packing Co., Astoria, 7,800; Astoria Fishery, Astoria, 26,000.

### Mountain Fruit.

EDITORS PRESS:—Yesterday I shipped you a sample box of peaches and grapes from the garden of Hugh Quinn, Tuolumne county. We claim for our county that we can equal the State for excellence of flavor, quality and general good points for orchard fruit. When visiting Mr. Quinn's garden we beheld one of the best displays of peaches possible. Forty boxes stood ready for the covers, the peaches packed in rows, two deep to the box, weighing some 22 lbs. Sixty boxes were shipped the day previous, and still the trees seemed to be well filled with the same quality of peach. The Muscat grapes are in splendid condition. What are not sent to market are made into raisins. The grape is extensive and under good cultivation. The peach orchard is artistically arranged, the trees trimmed so that all appears as if matched for exhibition. There are four men constantly employed, while two or three teams are kept constantly in motion marketing an abundant crop. Mr. Quinn requested Mr. Allison to exhibit some of the fruit at the Mechanics' fair, but refuses so far to attempt competition at the State fair, remarking: "Tuolumne county has no showing. The best fruit from a distance is ruled out by some means or other." This should not be, and may not be in future. We have a number of orchardists in this county making fruit raising a specialty. The conditions of climate and soil are second to none in the State when followed scientifically.

James Goodwin has been long famed for excellence and size of fruit. Mr. Quinn's place and Goodwin's join fences. Conditions of soil, etc., are much the same, consequently the fruit of each cannot be distinguished one from the other. The soil is a wash from the "Table mountain" black loam. The growth of trees, as well as fruit, is enormous. Eight cents per pound for peaches in San Francisco speaks for itself. I saw a Japanese plum tree, some 10 ft. high, set out a little over one year, with some five or six plums, size of an ordinary peach. Oranges were hanging to a Mediterranean tree not much stouter than a walking stick. Clear spring water sparkles at the kitchen door, while a noble fig tree shades the whole front of the dwelling house, situated in the middle of the garden. This same place was used in 1850 as a wayside hotel. Vegetables were produced in such quantities that the house was filled on Sunday by hungry miners, whose weekly fare savored of pork and beans. We were one of them. Now it blossoms as an Eden to cheer the visitors, producing fruit fit for kings. When we are provided with railroad accommodation, our fruit product will surprise the denizens of cold climates beyond the Rocky ridge. Until then we must of necessity limit our productions to a few choice locations, where quality commands the highest market price.

JOHN TAYLOR.

Mt. Pleasant, August 24th.

[The fruit was received in splendid condition and was strikingly large and handsome. Unfortunately, peaches have to be plucked so green to bear transportation, that the true flavor and richness are never developed, but it does not take much to induce one to imagine what such glorious peaches are when one can pluck them at the proper moment. The grapes were noticeably fine and ripe enough to show their true and delicious flavors.—EDS. PRESS.]

### Saving Their Necks.

Mr. H. L. Chapman, corner Tenth and Broadway, Oakland, certainly deserves honorary recognition from the Society for Prevention of Cruelty to Animals. Indeed, if the thousands of poor team horses in this city had the gift of language, they would at once move him a vote of thanks. Mr. Chapman has placed on exhibition at the fair, a neatly gotten up rubber spring for relieving horses' necks of the weight and concussion of wagon tongues and poles.

The device is intended to form a portion of the chain connection between the doubletree and forward spring-bar, or rocker, and it can be so adjusted as to support the pole at any desired height. The result is a perfect success. By this attachment the neck yoke is rendered entirely free from the sharp, vertical jerks imparted by the tongue or pole of a vehicle while the team is under a brisk trot. The invention especially commends itself to the drivers of two-horse wagons, as the contrivance saves their horses' necks from being pounded into gaping sores.

A similar device is made to be hooked into the chain extending from the forward spring to the reach. A moment's examination will convince intelligent teamsters that this article is the right thing in the right place. It relieves the vehicle as well as the team from all sudden strains incident to rough usage and fast driving. By attaching the brace-spring and pole-rest, the forward gear of a wagon can always be kept in proper position; the spring-bar will remain vertically over the axle-tree, and monthly blacksmiths' bills will be materially lessened; and besides all this, the cost of the article is much less than the expense of curing a horse's neck after it has been beaten into a jelly by overwork and carelessness.

THE COOS BAY NEWS says: Work on the entrance to the Coquille has been suspended, as the amount appropriated by Congress has been expended. If the necessity of more aid is properly represented to our members of Congress, another appropriation can easily be obtained.

### Short Horns vs. the State Fair.

EDITORS PRESS:—I see in your issue of the 27th of August, that Mr. Smith, Secretary of the State Board of Agriculture, accuses you of "jumping at conclusions without being posted as to the facts." Now, I don't see anything in your editorial of the 20th of August that Mr. Smith or any other gentleman could take exceptions to. You only stated, "that the Board of Agriculture, when preparing this year's premium list, materially reduced the cattle premiums," which is a fact that can't be contradicted, and all the gentleman needs to do, is to compare this year's premium list with last year's, and that would certainly satisfy him. And it is a further fact "that the Breeders' Society did protest against it." And in regard to the resolutions you refer to that the breeders passed at their meeting "binding members not to exhibit at the coming State fair unless the old premiums were restored by the Board." Such a resolution was offered by me and fully discussed, and was unanimously concurred in, but as one of the principal exhibitors of Short Horns (Mr. Wick) not being present, the resolution was withdrawn, and not voted down (as Mr. Smith states), and then the resolution referred to by Mr. Smith, passed by appointing committee to confer with breeders, as stated in the resolution quoted by Mr. Smith, and published in the RURAL PRESS of August 27th. Mr. Wick was written to by one of the members of that committee, and he answered that he would not exhibit his herd for the reasons as published in the PRESS of August 20th. Mr. Smith goes off in high dudgeon by stating that "without fear of contradiction, that, with the exception of Robert Ashburner and Mr. Wick, every prominent Short Horn breeder will exhibit at the next State fair, etc." I will state, without fear of contradiction, that, with the exception of Coleman Younger, there won't be another Short Horn breeder that attended the breeders' meeting last April that will exhibit at the next State fair, and time will prove it.

I hope this explanation will be satisfactory to Mr. Smith, and that the State fair will be a success.

M. B. STURGES.  
Centerville, Alameda county, Cal.

### Placer County Fruit.

EDITORS PRESS:—Being an old subscriber of your most valuable paper, I take the liberty to send you a small case of peaches, known as the Ward's Late Free, and also a case of grapes, known as the Purple Damascus. I am sending out from 40 to 60 cases of this fruit from my little place daily, and find a ready market.

Bluestone and Sulphur.

My grapes are not as good generally as I could desire. One of my neighbors told me last spring that he used bluestone on his grapes to prevent mildew, so I tried it on part of mine, and can say that I do not want any more bluestone in mine. Where I sifted on a good coat of sulphur, I am sure it did good, and where I put on two coats of sulphur it did the clean thing. The grapes I send to you were sulphured twice.

Newcastle, Cal.

[We are glad to hear of Mr. Elliott's continued success. He began a few years ago with the bare land and now has a fruit ranch of beauty and profit. The fruit specimens were very fine, barring the greenness of the peaches, which we who live so far from the trees must "grin and bear." The grapes were very large and handsome, but were either a little too green, or had had a little too much water. Mr. Elliott's experience with bluestone reminds us that it would be a good thing now if all readers who have tried bluestone as a substitute for the old sulphur treatment, should write us the results, while the experiments and results are fresh in their memory.]

A NARROW GAUGE PROPOSITION.—On another page may be found a map and description of a proposed narrow gauge railway in Los Angeles and San Bernardino counties. The movement was set on foot at a meeting of citizens of Los Angeles, on the 9th ult., at which Gov. Downey presided. The meeting appointed Gen. Shields, statistician, and Stanley P. Jewett, engineer of reconnaissance, to explore Los Angeles and San Bernardino counties, to ascertain what additional railways are needed and the cost of them. As the examination was projected in the interests of horticulture and general husbandry, it is well that each appointee combines the qualities both of engineer and husbandman. The collegiate course of the one, an agriculturist on the narrow gauge belt near the ocean, was extended to include the exact sciences pursued at West Point, and of the other, Mr. Jewett, a horticulturist on the narrow gauge belt near the mountain, is an alumnus in technics, and was a practical railway engineer of reputation East, as shown by letters read at the meeting from R. B. Hayes, ex-President of the United States, Hon. S. S. Davis, ex-Mayor of Cincinnati and a banker, and from the President and other officers of the Cincinnati and Portsmouth narrow gauge, of which railway Mr. Jewett was engineer through reconnaissance, preliminary, location, construction and division.

AN IRRIGATING TREE.—The Rural New Yorker has learned of a "rain tree" (*tamari capei*), which seems to be in most respects the opposite of the eucalyptus. The latter absorbs great quantities of moisture from the ground and exhales it into the air, thus drying up surrounding marshes; the former absorbs great quantities of moisture from the air and lets it drip on the ground beneath, thus converting the surrounding soil into a veritable marsh. The French Consul at Loreto, Mexico, says that the tree grows to the height of 60 ft. with a diameter of three ft. at its base; that it possesses the power of strongly attracting, absorbing and condensing the humidity of the atmosphere, and that water is always dripping copiously from its trunk, especially in summer when the rivers are all nearly dried up and the tree is most active. Lately, some travelers in traversing an arid and desolate tract of country in South America, were struck by a strange contrast, says Nature; on one side was a barren desert, on the other a rich and luxuriant vegetation which was due to the presence of the rain tree. It would be quick easy to get a start of this tree for trial here, if it has not already been introduced. Many San Francisco merchants have dealing with Mexican ports, and oranges said to be from Loreto are in our market every year.

PAINTING THE MISSIONS.—We learn that H. C. Ford, of Santa Barbara, who is an artist as well as a horticulturist, has been engaged for several weeks visiting the old missions in the different parts of the State, and preparing sketches or paintings of the buildings. It is believed the pictures will be published in some form, and they will no doubt be widely called for. Much interest pertains to these antique structures and their history.

EL DORADO COUNTY FAIR.—We acknowledge the receipt, from C. H. Weatherax, Secretary, of a complimentary ticket to the fair of the El Dorado District Association, to be held at Placerville, September 7th to 10th. We understand that the outlook for this year's fair is very flattering.

### The Value of the Rural.

EDITORS PRESS:—I wish to say a word in commendation of your paper, which I have taken since 1st of January last, by simply remarking that I consider any one of three articles in August 13th issue, viz., "Evaporation from Stirred Soil," "The Linnet Nuisance," and "Scale Insects at San Jose," to be worth to me fully the price of a year's subscription in information on those subjects. I shall save a good many "three dollars" next year by putting in practice the suggestions there made.—SUBSCRIBER, Anaheim, Cal.

THE RURAL PRESS IN MISSOURI.—A reader of the RURAL in St. Joseph, Mo., in a letter renewing his subscription says: "Of all the agricultural publications for which I subscribe, none is looked for and perused with such interest as the RURAL PRESS."

ALWAYS ALIVE.—THE PACIFIC RURAL PRESS, a paper that is always alive to anything that affects the interests of the farmer or dairyman.—Petaluma Argus.

### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. F. OSBORN—San Francisco.  
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### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sealions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

ANDERSON SPRINGS, in Lake county, 19 miles from Calico (over a grand, picturesque route, via Mt. St. Helena) are among the best in this State. They are situated in the midst of a natural park, full of beauty and interest to the naturalist. Good home-like accommodations at reasonable rates are invariably furnished by the Anderson family.

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ANNUAL STATISTICIAN OF 1881.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. F. McCarty, 816 California st. Price, 74c.



## S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 31, 1881.

Trade has been quiet this week and transactions small. Prices of grain have, however, been generally advanced, and holders are firm. Dairy products are also advancing.

Around the markets have generally advanced. The latest is as follows:

**LIVERPOOL, Aug. 30.**—Good and choice California Wheat, strong, at 11s 1d @ 11s 4d. Not much demand for cargoes at 53s 6d for just shipped and nearly due and 54s @ 54s 6d for off coast. Receipts of Wheat the past three days, 243,000 cts, including 171,000 American.

## Freights and Charters.

The following are reported: British ship *New York*, 2,794 tons, Wheat to Liverpool direct; £4—prior to arrival. British ship *Star of the Sea*, 1,437 tons, Wheat to Cork, U. K.; £3 2s 6d—prior to arrival. French bark, *Francois Joseph*, 506 tons, Wheat to Cork, U. K., or Continent, between Bordeaux and Antwerp; £4 5s. British ship *Trafalgar*, 1,006 tons, Wheat from Portland to Cork, U. K.; £4 5s. The *Trafalgar* is now at San Diego, and was before reported coming to this port to load.

## The Foreign Review.

**LIVERPOOL, Aug. 27.**—The leading grain circular says: The unfavorable weather has caused a further general advance in Wheat. Spot markets are one to two shillings dearer. Cargoes in all positions are similarly improved. At to-day's market there was a good attendance. Wheat is in fair demand, and prices are 4d better. Flour is 5 @ 6d higher, and bidders in some cases are checked thereby. Corn less is freely offered, and in better request, but closed at unchanged rates.

**LONDON, Aug. 27.**—The *Times* says with each day there is less hope of a good harvest. The weather has turned against us at a critical moment. The loss to the country from the late rains is to be reckoned by millions. It is impossible to gather corn, and it will soon cease to be worth gathering. The situation of our farmers is dismal, for to many of them a bad harvest means absolute ruin. Heavy rains prevailed yesterday in various parts of England and Scotland.

## Eastern Wool Markets.

**BOSTON, Aug. 27.**—The market for Wool has been quite active, and the business for the week has been the largest for some time, comprising 2,000,000 lbs of all kinds. Prices remain the same. California Wool has been quiet, with sales at 25@30c for Spring. In foreign Wool very little has been done. Australia is selling at 40@43c, and Montevideo at 33c.

**PHILADELPHIA, Aug. 27.**—There is an improved demand for Wool, the supply being reduced and prices steady.

## New York Dried Fruit Markets.

**NEW YORK, Aug. 23.**—Foreign fruits are quiet. Raisins are firm, and some holders are asking an advance. Prunes are very firm, with a fair demand. Dried apples are quiet and unchanged.

## Eastern Grain and Provision Markets.

**NEW YORK, Aug. 23.**—The week just closed though one of comparative steadiness and quietude commercially speaking, has nevertheless been one long to be remembered for unwonted excitement and fluctuations in the breadstuff markets. The continued and wide extended drought, coupled with the rumored scarcity of Wheat, has enabled the operators for a rise to manipulate the market here as elsewhere about as they have pleased, and there has been another radical advance for the week. The shippers are almost wholly out of the market to-day, having all in the past few days what they can take care of, although there were several orders yet on the market. Provisions are strong and in fair demand.

**BAGS.**—Grain Bags are still dull and low, and the advantage on the side of buyers. It is said that large lots can be had at 7½c, but some are still holding at 8½c. Another cargo of half a million arrived on Saturday from Calcutta.

**BARLEY.**—Barley is quiet, but Brewing and Coast Chevalier have advanced. Standard Chevalier is nominal. We note sales: 670 sds good Feed, \$1.17½, and 250 sds dark coast do, \$1.15 per ctl.

**CORN.**—White has sold as high as \$1.17½ per ctl. Other sorts are the same as last week, except that small round is held at \$1.22½ per ctl.

**DAIRY PRODUCE.**—Butter has experienced a sharp improvement, and fancy brands have sold up to 37½c per lb, while the run of choice butter goes at 36c. The market is, however, not quite so strong as three days ago. Cheese is unchanged.

**EGGS.**—Eggs have advanced to 32½c per doz for fresh Californians, and Utahs have risen to 25c per doz.

**FEED.**—Hay is a shade cheaper, the choice Wheat now not going above \$12 per ton. Bran has advanced to \$16. Middlings are unchanged, and Oil-cake Meal has been quoted lower, viz.: \$20 per ton. This material could be more generally used to advantage in dairy feeding.

**FRESH MEAT.**—Mutton is more abundant, and is lower, ewes going at 3c, and wethers at 3½c. Pork is a fraction higher. Beef is unchanged.

**FRUIT.**—Fruit has sold fairly, and prices are not materially changed. Canteloupes and Figs have advanced a little. Grapes are a shade lower than last week, and more abundant. Mountain Peaches are plentiful, and some sell as low as \$1 per box. German Prunes are lower. Blackberries and Strawberries are doing a little better.

**HOPS.**—There has little developed yet in now Hops in this market. The price is nominally at 13@18. A dispatch from New York, Aug. 23, says: Hops are quiet, with only a few sales to brewers. Early new Hops are moving in a small way, about 24@28c. Emmet Wells, in his circular of Aug. 19, says:

Exporters have taken 120 hales, while the demand from brewers has been nearly sufficient to take up the week's receipts. Prices are 2c off 21c now being the top figure realized for best State and Pacific Coast Hops. There are no really choice Hops on offer or in commission merchants' hands; a few small lots are held by Hop merchants for which late prices are asked. Home Hop news is of about the same tenor as last week. Nearly every district is expected to come down from a quarter to a third less Hops than last year. The vine is clean and bright, and almost entirely free from vermin; which, if not unfavorably changed within the next fortnight, will give us the finest crop in quality ever produced. English crop advances are less flattering; the extreme hot and droughty weather has caused irreparable damage to the vine in

many of the districts. A fair average yield of good quality, however, is expected. In districts where there are no signs of blight we would advise growers not to commence picking before Monday, Sept. 5th.

**OATS.**—Oats have continued to do well, and full prices have been obtained. We note sales: 300 and 200 sds good feed, \$1.55; 500 sds common do, \$1.45, and 300 sds do, \$1.40 per ctl.

**ONIONS.**—Onions are unchanged.

**POTATOES.**—Potatoes are doing a little better this week, excepting sweets, which have fallen to \$1 per ctl. **PROVISIONS.**—Prices are still maintained at full figures and the trade is fair.

**POULTRY AND GAME.**—The Poultry market is quite sensitive this year. The slight improvement last week led to increased shipments, which were not cleared up, and this week's values are low again.

**VEGETABLES.**—Carrots are low again, and Cucumbers have rallied a little. As a rule, however, the market is unchanged, supplies large and prices low.

**WHEAT.**—Wheat has reached \$1.70, but there is now a temporary lull, and shippers are holding off. Freight, are still very high; in fact a charter on Monday for Cork for orders was at £4 5s 6d. Sales have been as follows: 15,000 sds new, Port Costa delivery, and 1,000 sds old No 1, \$1.67½; 600 sds slightly weevilly milling, \$1.66½; 1,200 sds do do and 3,000 sds No. 2, \$1.65; 80 tons off grade, \$1.60, and 300 sds do, \$1.55.

**WOOL.**—The Wool trade is quiet, and prices mostly nominal. There are small sales of lambs' Wool, but nothing of much moment as yet.

## Domestic Produce.

## WHOLESALE.

WEDNESDAY M., August 31, 1881.

## BEANS &amp; PEAS.

Bayo, cts. 1.00 @ 1.15  
Butter, 1.20 @ 1.40  
Castor, 3.00 @ 3.50  
Pea, 2.00 @ 2.50  
Red, 90 @ 1.20  
Pink, 90 @ 1.20  
Small White, 2.00 @ 2.50  
Lima, 2.00 @ 2.50  
Field Peas, bly eye, 40 @ 50  
do, green, 1.35 @ 1.40

## BROOM CORN.

Southern, 3 @ 34  
Northern, 4 @ 6  
California, 4 @ 4½  
German, 6½ @ 7

## DAIRY PRODUCE, ETC.

## BUTTER.

Cal. Fresh Roll, lb. 35 @ 36  
do, Fancy Brands, 37 @ 37½  
Pickle Roll, 27½ @ 30  
Firm, new, 27½ @ 30  
Western, 20 @ 25  
New York, 20 @ 25

## CHEESE.

Cheese, Cal., lb. 13 @ 14  
Eggs, 32 @ 34  
Cal. Fresh, doz. 25 @ 26  
Ducks, 25 @ 26  
Oregon, 25 @ 26  
Eastern, by exprs 17 @ 24  
Picked here, 22 @ 25  
Utah, 22 @ 25

## FLOUR.

Extra, City Mills, 5 @ 25  
do, City Mills, 4 @ 25  
do, Oregon, 4 @ 25  
do, Walla Walla, 4 @ 25  
Superfine, 2.75 @ 3.50

## FRESH MEAT.

Beef, 1st qual'y, lb. 5½ @ 6  
Second, 4½ @ 5  
Third, 3 @ 3½  
Mutton, 3 @ 3½  
Spring Lamb, 4 @ 5  
Pork, undressed, 5½ @ 6  
Dressed, 8 @ 8½  
Veal, 7 @ 7½  
Milk Calves, 7½ @ 8  
do, choice, 8 @ 8½

## GRAIN, ETC.

Barley, feed, cts. 1.15 @ 1.20  
do, Brewing, 1.25 @ 1.35  
Chevalier, 1.17½ @ 1.20  
do, Coast, 1.17½ @ 1.20  
Buckwheat, 61 @ 62  
Corn, White, 1.10 @ 1.12  
Yellow, 1.10 @ 1.12  
Small Round, 1.15 @ 1.20  
Oats, 1.10 @ 1.12  
Milling, 1.50 @ 1.65  
Rye, 1.10 @ 1.12  
Wheat, No. 1, 1.67½ @ 1.70  
do, No. 2, 1.62½ @ 1.65  
do, No. 3, 1.40 @ 1.50  
Choice Milling, 1.70 @ 1.75

## HIDES.

Hides, dry, 19 @ 19½  
Wet salted, 10 @ 11  
Beeswax, lb. 23 @ 25  
Honey in comb, 13 @ 15  
Extracted, light, 9 @ 11  
do, dark, 8 @ 8½

## HOPS.

Oregon, 13 @ 18  
California, new, 13 @ 18  
Wash. Ter., 13 @ 18  
Old Hops, 13 @ 18  
Walnuts, Cal., 8 @ 9  
do, Chile, 7½ @ 8  
Almonds, h'd sh'l lb 8 @ 10  
Soft shell, 14 @ 15  
Brazil, 10 @ 12  
Pecans, 10 @ 12  
Peanuts, 14 @ 15  
Rhubarb, 4 @ 5

## ONIONS.

Red, 50 @ 65

## SIGNAL SERVICE METEOROLOGICAL REPORT.

SAN FRANCISCO.—Week ending August 30, 1881.

## HIGHEST AND LOWEST BAROMETER.

Aug. 24 Aug. 25 Aug. 26 Aug. 27 Aug. 28 Aug. 29 Aug. 30  
30.046 30.111 30.183 30.120 30.033 29.956 30.035  
29.953 29.995 30.045 30.033 29.934 29.887 29.928

## MAXIMUM AND MINIMUM THERMOMETER.

61 61 63 64 65 66 68  
54 53 54 54 53.5 52 54

## MEAN DAILY HUMIDITY.

75.3 81 74 70.3 72.7 76.7 74.7

## PREVAILING WIND.

SW W W W W SW W  
WIND—MILES TRAVELED.

319 358 446 277 241 235 207

## STATE OF WEATHER.

Fair Fair Clear Clear Clear Clear

## RAINFALL IN TWENTY-FOUR HOURS.

Total rain during the season, from July 1, 1881, — inches.

## Fruits and Vegetables.

## [WHOLESALE.]

WEDNESDAY M., August 31, 1881.

## FRUIT MARKET.

Apples, bx. 50 @ 1.25  
Bananas, bnch. 2.50 @ 3.00  
Cantaloupes, cts. 60 @ 25  
Coconuts, 100, 6 @ 7.00  
Crab Apples, 50 @ 1.00  
Cranberries, bbl. 50 @ 1.00  
Figs, bx. 50 @ 1.00  
Grapes, 65 @ 1.00  
do, Malvoise, 75 @ 1.00  
do, Rose Peru, 75 @ 1.00  
do, Hamburg, 75 @ 1.00  
do, Muscat, 75 @ 1.00  
Limes, Mex., 12 @ 12.50  
do, Cal. box, 60 @ 7.00  
Lemons, Cal. bx 60 @ 7.00  
Sicily, box, 12 @ 14.00  
Australian, 100 @ 1.25  
Nectarines, 100 @ 1.25  
Oranges, Cal. bx 1.75 @ 2.50  
do, Tabiti M 20 @ 25.00  
do, Mexican, 40 @ 75  
do, Loreto, 40 @ 75  
Peaches, bsk. 75 @ 1.00  
do, Mount'n, 1.00 @ 1.50  
Apricots, 100 @ 1.25  
do, Bartlett, bx 2.00 @ 2.50  
Pineapples, doz 7.00 @ 8.00  
Plums, bx. 40 @ 75  
Prunes, German, 50 @ 75  
Quinces, bx. 40 @ 75  
Blackberries, cts. 60 @ 7.00  
Raspberries, cts. 10 @ 11.00  
Strawberries, cts. 5.50 @ 7.00  
Sugar Cane, bbl. 5.00 @ 10.00  
Watermelons, 100, 5.00 @ 10.00

## PEACHES.

do, pared, 13 @ 16  
Pears, sliced, 8 @ 9  
do, whole, 7 @ 8  
Plums, 8 @ 10  
Pitted, 11 @ 13  
Prunes, 9 @ 11  
Raisins, Cal. bx. 1.25 @ 1.50  
do, Halves, 1.75 @ 2.00  
do, Quarters, 2.00 @ 2.25  
Eighths, 2.25 @ 2.50  
Zante Currants, 8 @ 10

## VEGETABLES.

Asparagus, bx. 10 @ 12½  
Artichokes, doz. 10 @ 12½  
Beets, cts. 65 @ 75  
Beans, Lima, lb. 5 @ 5  
do, String, 1 @ 1  
do, Wax, 1 @ 1  
Cabbage, 100 lbs 75 @ 1.00  
Carrots, sk., 25 @ 40  
Cauliflower, doz 60 @ 65  
Cucumbers, bx. 25 @ 30  
Egg Plant, bx. 1 @ 2  
Garlic, lb. 1 @ 2  
Green Corn, doz. 10 @ 12½  
Green Peas, lb. 1 @ 2  
do, Sweet, 1½ @ 2  
Gr'n Pepp'r, bx. 50 @ 60  
do, Chile, bx. 25 @ 50  
Lettuces, doz. 10 @ 15  
Mushrooms, lb. 10 @ 15  
Okra, lb. 5 @ 6  
Parsnips, lb. 5 @ 6  
Horseradish, 5 @ 6  
Rhubarb, box, 50 @ 75  
do, chest, 50 @ 75  
Squash, Marrow 8 @ 10  
do, fat, 8 @ 10  
do, Summer, bx. 40 @ 50  
Sprouts, lb. 1 @ 1  
Tomatoes, 20 @ 25  
do, Bay, 20 @ 30  
Turnips, cts. 10 @ 15

## DRIED FRUIT.

Apples, sliced, lb. 5½ @ 6  
do, quartered, 1 @ 1  
Blackberries, 10 @ 11  
Citron, 23 @ 30  
Dates, 9 @ 10  
Figs, pressed, 5 @ 7  
do, loose, 4 @ 5  
Nectarines, 14 @ 15

## Retail Groceries, Etc.

WEDNESDAY M., August 31, 1881.

Butter, California 25 @ 30  
Choice, lb. 25 @ 30  
Cheese, 17 @ 25  
do, Eastern 25 @ 30  
Lard, Cal. 18 @ 18  
do, Eastern 20 @ 25  
Flour, ex. fm. bbl. 8 @ 9  
Corn Meal, lb. 12 @ 13  
Sugar, wh. crushd. 12 @ 13  
Light Brown, 8 @ 9  
Coffee, Green, 23 @ 35  
Tea, Fine Black, 50 @ 100  
Finest Japan, 55 @ 100  
Candles, Adm'to. 15 @ 25  
Soap, Cal. 7 @ 10

## Bags and Bagging.

## [JOBBER PRICES.]

WEDNESDAY M., August 31, 1881.

Eng. Standd. Wheat, 8½ @ 8½  
Cal. Manufacture, 8½ @ 8½  
Hand Sewed, 22x36, 8½ @ 8½  
20x36, 12 @ 13  
24x40, 12 @ 13  
Machine s'd 22x36, 8½ @ 8½  
Flour Sks, halves, 5½ @ 6½  
Sugar, wh. crushd. 12 @ 13  
Hessian, 60 inch, 12 @ 12½

## Commission Merchants.

MILLER & CO.  
J. P. HULME.

## Wool and Grain

## Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

Liberal advances made on all consignments, and prompt personal attention given to all sales.

PAGE, MOORE & CO.,

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## HYDRAULIC RAM!

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Amount

On Grain Receipts.

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For sale coming season, from one to three feet high, consisting of leading varieties of Apples, Peaches, Nectarines. These trees if cut back in spring and treated as dormant buds will make first-class trees by the next season. Buds taken from bearing trees, also general nursery stock. Prices on application to DAVE TURNER, or to R. F. CUNNINGHAM, Riverside, Cal.

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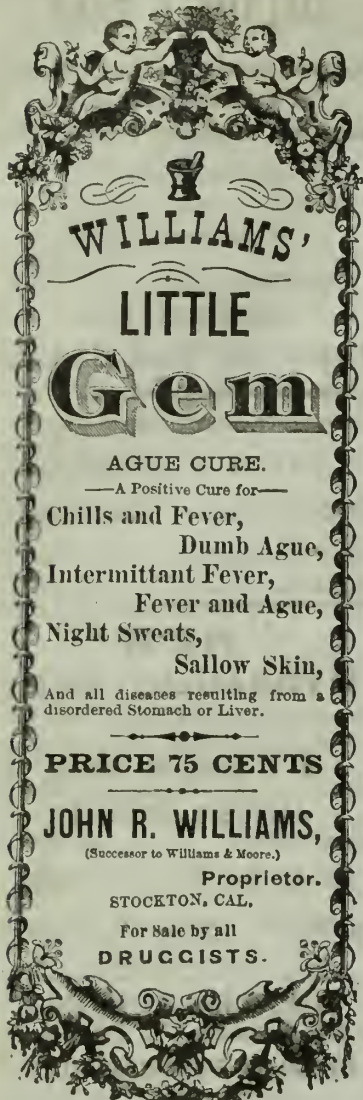
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**WILLIAMS' LITTLE Gem**

AGUE CURE.  
—A Positive Cure for—  
Chills and Fever,  
Dumb Ague,  
Intermittant Fever,  
Fever and Ague,  
Night Sweats,  
Sallow Skin,  
And all diseases resulting from a  
disordered Stomach or Liver.

**PRICE 75 CENTS**

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IMPROVED, GALVANIZED IRON,  
PORTABLE, FIRE-PROOF,  
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IN FUEL. CURES THE FRUIT IN  
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It has the approval and hearty indorsement of nearly  
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Got —, by Grand Commander..... (12065)  
1st dam, Duchess 9th, by Baron Airdrie..... 9476  
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4th dam, Henrietta, by Sir Alfred..... 969  
5th dam, Lucilla, by Imported Romulus..... (12019)  
6th dam, Helen, by Bertram 2d..... (3144)  
7th dam, Ruby 2d, by Bertram..... (1716)  
8th dam, Ruby, by Young Mr Dimples..... (971)  
9th dam, Daisy, by Wellington..... (678)  
10th dam, Beauty, by Duke..... (224)  
11th dam, Lucy, by Young Cornet..... (905)  
12th dam, —, by J. Brown's Red Bull..... (971)  
Grand Commander 12065, by Imported Royal Commander  
10914, out of Imp. Goody Two Shoes, by Lord Lyons (26677)  
Baron Airdrie 9476, by 12th Duke of Airdrie 5534, out of  
Baroness 6th, by Royal Oxford (18774).  
This splendid Bull is in fine condition and warranted kind  
and gentle. A child can handle him. Address  
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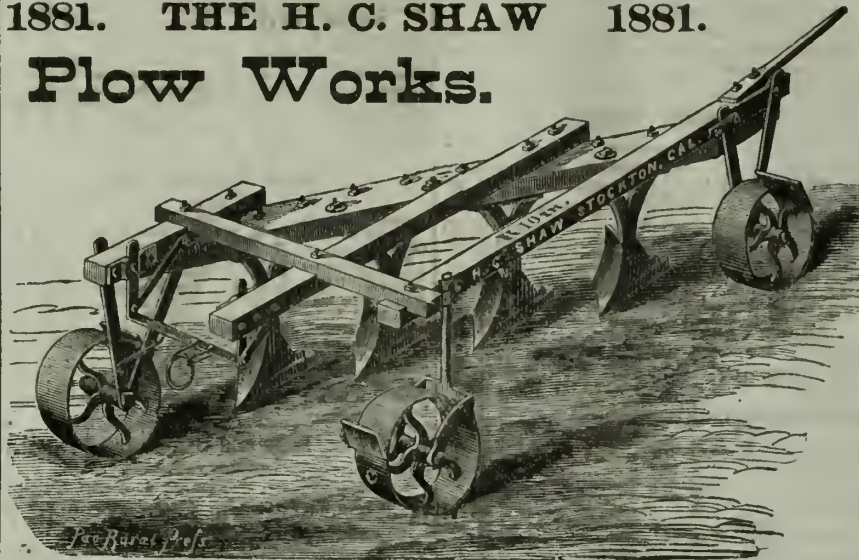
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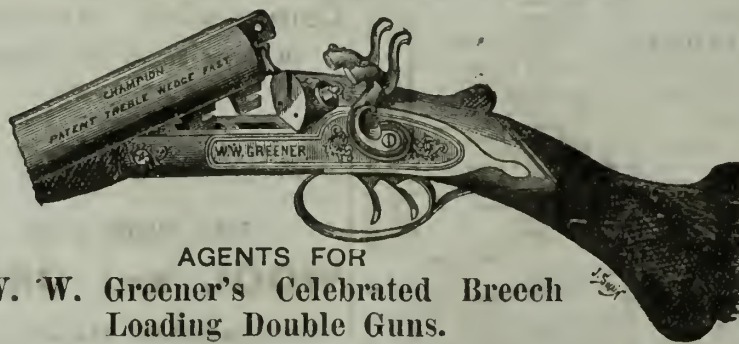
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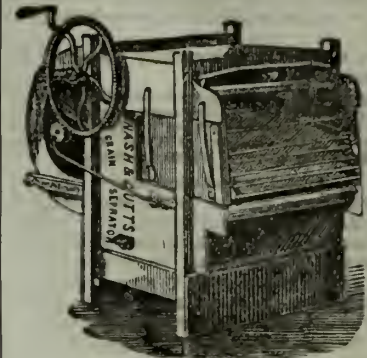
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Five sizes, warranted to clean from 50 to 200 bushels per  
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Diploma that has been offered by the State Agricultural  
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OUR NEW WHEAT GANG,

Composed of perforated zinc and patent rolled wire. The zinc  
is not punched as of old, with all holes of a size, but they  
grow gradually larger as they reach the lower or out end of  
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suppose, being rolled after it is wove, it is perfectly smooth,  
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Notwithstanding the extra expense incurred by the pur-  
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We also make a Cleaner to attach to Threshing Ma-  
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**California State Fair**  
**FOR 1881.**

**Sacramento, Cal.**

**SEPTEMBER.**

The Twenty-Eighth Annual Fair  
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**Over \$30,000 in Premiums!**

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**SHEEP WASH.**  
\$2 per Gallon.

After dipping the Sheep, is use-  
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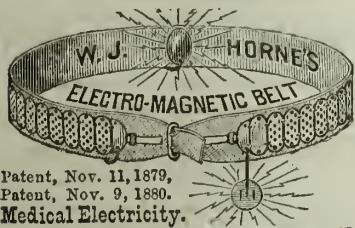
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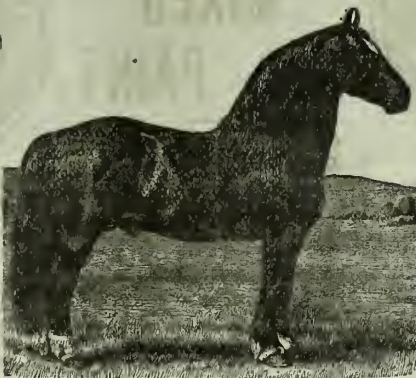
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Apply freely to the parts af-  
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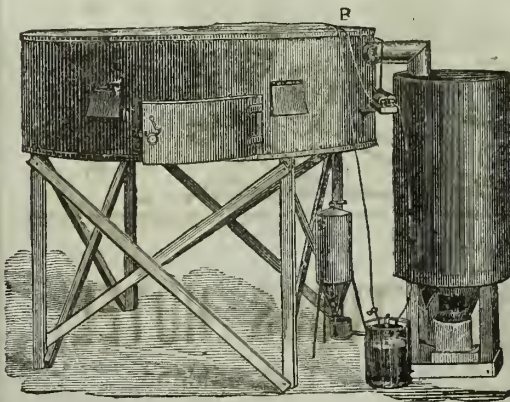
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Is warranted to saw a 2-foot log in three min-  
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HAY PRESSES (Price's and Dederick's),

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## Farm Machinery.

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ONE OF MANY TESTIMONIALS.

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It is an excellent Greenhouse Syringe to drive minute insects from Strawberry and Pot Plants. As a Fire Extinguisher it is ever ready, successful, simple, cheap, durable. Satisfactory trial sought. Orders solicited by D. N. DILLI.

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Orders by Mail solicited.





Volume XXII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 10, 1881.

Number 11

### The Nurserymen.

California nurserymen are up to their eyes in business. They are undergoing another rush on much the same classes of trees which were in every buyer's mouth last year, namely, apricots, canning peaches and plums, Bartlett pears and Petite prunes. Those who have gone about looking up trees of these sorts tell us that the demand will far exceed the visible supply. There is every prospect, too, that the rage will continue on these fruits, for the outlook for each of them has indications of permanence. The result is that all available stocks are being bidded to the popular fruits, and many trees of this summer's budding will no doubt be set out in orchard this winter.

The prosperity of the nurserymen is a subject upon which nearly all talkers delight to dilate, but to one who knows the business there comes a thought of the thousands of good trees which will be burned up as unsalable, and the entries which must be made on the wrong side of the nurseryman's profit and loss account. Hardly any business is more subject to eccentricities of demand than that of the tree grower. He may do his best to propagate the long lists of really good fruits, and there will come a demand for a few sorts and the others be left to be plowed out and burned. He may concentrate his efforts on a few which seem to be "coming fruits," and the demand will come upon a few which he neglected. There are many lines of production which seem to call for the gift of prophecy, but none more than the industry of the nurseryman.

There is, however, one encouraging feature about the present turn in the demand. It seems to rest upon a far better foundation than many rushes which have been based upon a sort of an epidemic fancy. The fruits which are now coming into such prominence, rest upon a trade which at present yields splendid profits, and which seems to have an almost boundless field before it. Each of the fruits has some well defined use in the export traffic, either in cans to go into all the world, or dried to turn back some of the millions of dollars which the Eastern States are paying for imported dried fruits, or in a fresh state to enjoy the profit in the rapidly extending overland shipment of California fruits. All these profitable outlets foreshadow success in the present mania for certain classes of fruit, and give the nurseryman more data for the choice of specialties for propagation than perhaps he ever had before in this State.

Sermons on tree planting do not now seem to be called for in California. We used to preach them and throw into them all the sentiment and eloquence which we could master, but now the coin is mightier than the pen, and the impulse to plant is almost universal. It is to be hoped that planting for forest will not be overlooked, and that some attention will be given to waste lands as well as orchard sites. The vast amount of money which our orchardists and vine growers will aggregate this year should be partly expended for the ornamentation of the landscape, the breaking of the winds, and the fuel and lumber supply in parts where these features are conspicuous by their rarity. Help the nurserymen with their stock of "shade and ornamental," while you are thinning their rows of "choice fruits."

SIXTH DISTRICT AGRICULTURAL FAIR.—We acknowledge with thanks receipt of a complimentary ticket to the second annual fair of District Agricultural Association No. 6, at the park, Los Angeles, Cal., Oct. 31st to Nov. 5th, inclusive, 1881. Commendable efforts are being put forth to make this exhibition a success and it should receive the attention of our southern country friends, who have live stock and farm products generally, which they think creditable to themselves and to the district. This fair should not be confounded with the horticultural fair, which is being held in Los Angeles this week. The exhibitions are wholly distinct, each managed by its own society. Of the Sixth District Society, F. J. Barreto, of Downey, is President, and W. J. Neeley, of Los Angeles, Secretary.

FRUIT INDICATIONS.—The scattering fruit trees which were set out years ago to yield fruit for home use and with no thought of profit on the part of the planter, are becoming of great value to the prospectors for orchard locations. The growth and bearing of these trees are being scanned as closely as the indications which attract the attention of the prospectors for the precious metals. For if these trees have done well, it is the best evidence which can be had of the promise in a new region in which it is proposed to plant orchards. We know of a number of farmers who have gone into horticulture during the last few years, being led

THE EAST INDIAN WHEAT FIELDS.—Some idea of the extent of the East Indian wheat ventures may be gained from the Indian journals. A Calcutta newspaper represents that there are now nearly 7,000,000 acres of land under wheat cultivation in the Punjab, and that the English wheat market is being narrowly watched. At Lahore the average price of wheat is about 25s per quarter, and the bulk of the grain is said to be of a very fine description, scarcely inferior to the choicest growths of Australia and Pomerania. The *Civil and Military Gazette*, published at Lahore, in an article on the subject, states that it has been unable as

### The Bidwell Strawberry.

Our illustration shows the Bidwell, one of the latest well-tested Eastern varieties of strawberries, and one which has achieved a very satisfactory record among the leading strawberry growers at the East. E. P. Roe, of Cornwall-on-the-Hudson, New York, well known to our readers as a propagator of small fruits, has great confidence in the Bidwell, and is planting it largely to furnish fruit for his large berry trade in New York city. We are indebted to Mr. Roe for the engraving we use on this page, which was made from fruit grown upon his place. He says of this variety: "I regard the Bidwell as the coming strawberry. It will not interfere with the Sharpless, since it is much earlier. It has given me berries five and six inches in circumference. The fruit averaged as large as the Sharpless, and was more abundant, firmer and much better flavored. The plants set an enormous quantity of fruit and carried it well to perfection. I now think that there is not a berry in existence that will pay better for high culture, that will do better under neglect. It has a rich meaty flesh and the genuine strawberry flavor. In color it is of a bright, glossy crimson, and often with a glazed neck. The berry is regular in form. Foliage, light green. Mr. Chas. Downing, and others who had seen it, thought it the most promising of the new berries."

Mr. Roe believes that the Bidwell is a seedling of the hardy native species—the *Fragaria Virginiana*—and will therefore prove to be adapted to a wide range of country. The seedling was grown by B. Hathaway, of Michigan. As is true of nearly all the larger varieties, the first berries are occasionally cockscombed, but the great bulk are very uniform in the shape indicated by the cut, and the entire crop averaged large. A tendency to a green tip when the rest of the berry was red, was the only fault mentioned by Mr. Lyon (who first sent out the Bidwell), but this fault did not occur during the last hot, dry season on Mr. Roe's place, but which, on general principles, is almost inseparable from long, conical berries. He is satisfied of this, however, that the Bidwell will redder thoroughly if left on the vines until ripe. He has never seen the slightest tendency to a hard, tough end, that deforms some kinds. It is not according to nature that a conical berry should color at the tip as soon as near the calyx, and all fruits deserve time to ripen.

At Cornwall the Bidwell is an early berry, following, but a few days later, the Duchess and Wilson, and thus it does not interfere with the larger and later berries, and supplies the need of an early showy market berry. One of its peculiarities is a tendency to make an enormous stool, even in the propagating beds. Under hill culture on rich land it would produce a superb crop of magnificent berries, that would bring the highest price. That the Bidwell endured last summer's unparalleled drouth at the East better than any variety on Mr. Roe's place, and thrived splendidly on light soils, speaks well for its prospects in the South as well as the North.

The foliage of the young plants of the Bidwell is of a light green color, and unmistakable to one familiar with it. Like the Jucunda and Crescent, the young plants are rather small and slender-looking at first, but have great vitality. Even in the matted row they tend to develop into enormous stools. On potted plants, set last August, there were counted 24, 17 and 18 fruit stalks respectively, and on one potted plant set last August, they counted 122 berries.

GOING EAST.—Hixon, Justi & Co., of this city have issued a circular that J. M. Hixson, senior member of the firm, is going East soon, with a view of canvassing the States and finding new openings for California products which will stand the expense of overland transportation, and he invites correspondence from anyone who has anything fine which he wishes to bring to the attention of Eastern people.

THE Los Angeles pork packing company expect to handle 30,000 the present year.



A FAMOUS EASTERN STRAWBERRY—THE BIDWELL.

thereto by the condition of the few trees which were by chance planted some years before. R. J. Trumbull, who has lately purchased a tract of land for orchard purposes, near Elmira, Solano county, brings us a sample of Bartlett pears plucked from some old trees on the place, on ground which has not been plowed for five years. In spite of this neglect the fruit is very praiseworthy—so good, in fact, that a fruit dealer said he would give "\$2 per box for 1,000 boxes of such pears." Such fruit, produced without care or cultivation, naturally convinces Mr. Trumbull of the adaptions of the land he has selected, and encourages him to proceed with the extensive orchard planting which he has planned.

NOR SO SOON.—In a letter from Washington Territory, printed in last week's PRESS it is stated that the railway from Spokane, W. T., to Bismarck, in Dakota, will be completed in three months. The writer intended to say that the prospects are good for its completion in 30 months.

yet to ascertain the exact price at which Punjab wheat could be placed on the English market, but it is convinced that at present rates the charges for transmission, brokerage and insurance would leave a fair border of profit. The industry, it should be added, has acquired a bad name through the dishonest practices of the De-jarat farmers, who, it is said, habitually mix the wheat they export with all sorts of refuse.

THE VENTURA COUNTY WOOL INTEREST.—The *Free Press* gives the following statistics: According to the best figures we can get, there are 290,000 sheep owned in this county, which are now being clipped. The fleeces will average 4 lbs. a piece, giving 1,160,000 lbs. as the clip, which at the low rate of 12 cts. a pound will yield the nice little sum of \$139,200 for a half-year's clip; and doubling it for the year (though the spring clip is worth much more) the total is \$278,400—exclusive of an increase of much over 100,000 lambs.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Tulare County Sierras, Mineral King, Mt. Whitney.

#### A Small But Productive Mountain Ranch.

EDITORS PRESS:—Readers of the PRESS had a number of details given them last summer and fall about the new and very interesting mountain region of the Tulare County Sierra, known as the Mineral King mining district; also, an attempt to describe the superb mountain scenery in the ascent to this high region along the precipitous and grand canyon of the east fork of Kaweah river. Miners peak, or Sawtooth, the lofty tent-like peak so distinctly seen on clear days from the Tulare plains, crowning the great western divide of the Sierra Nevada, was faintly described with the extensive and magnificent mountain scenery visible in every direction, and especially the fine view from there of the grand valley of the upper Kern river, and Mts. Whitney, Tyndall and Williamson on the tall eastern divide, from 16 to 20 miles distant, slightly north of east.

As a small party of us are now on the way to this Kern river valley, in an effort to reach the top of

#### Mt. Whitney,

This and other letters will seek to record what it is hoped will prove of some interest for your columns. And first, let me assure your readers that pressure of other business is the only reason why your old-time correspondent from this region has not sent you more letters for some months past. During the next few weeks, devoted to mountain travel and observations, I shall try to make some amends.

This letter will be devoted to a condensed description of the natural and cultivated growth, and other facts pertaining to the isolated, cosy little mountain

#### Ranch of J. H. Trauger, Esq.,

More familiarly known in all this country as Harry Trauger. His place is on the southern slope of the deep canyon of the east fork of the Kaweah, which lies on the north side of the river, and immediately north and adjacent to the Mineral King road. It is 13 miles west of Mineral King, or some 42 miles slightly north of east from Visalia. Here he has cleared, and in thorough cultivation, by aid of his good wife, between three and four acres of coarse granitic soil, well mixed with vegetable loam among huge granite masses and boulders. The slope varying from 20 to 45 degrees on its surface, is cultivated in natural and artificial terraces. It is just about

#### 4,500 Feet Above Sea Level.

As I find by a very accurate aneroid barometer with which I supplied myself early in June, from Mr. John Roach, the well-known optician and instrument maker of San Francisco. Your readers would be astonished to see the vast amount of useful and ornamental plants produced on this small acreage by the energetic and intelligent industry of Mr. and Mrs. Trauger. This small tract (Trauger) is kept thoroughly irrigated by a ditch from a reservoir they have made high up the charmingly picturesque gorge in which this attractive garden spot is located. They built their neat little home here in February, '79. All the timber and shakes for the purpose were packed considerable distances where there was only a rugged trail to Mineral King, either on their backs or by Burt Smith's pack train. To clear this small acreage they had to cut and grub out live oaks, white oaks, mountain mahogany, manzanita, Fremontia, or the mallow tree, laurels, willows, chaparral, buckeyes, wild plum trees, and immense quantities of large ferns. Mr. Trauger had to dig down two feet in places to get rid of the matted roots of these ferns. All the work of cultivation has been done with

#### The Pick, the Spade and the Hoe

Now, after two years and a half of improvements, the variety and abundance of vegetables, flowers, grasses, fruit trees and vines, is something truly wonderful. Their garden this year has supplied most of the vegetables for the mining town of Mineral King, and Smith's dinner house, half way from Visalia. Almost every kind of vegetable common to California is grown here successfully. From one sack of Irish potatoes planted by Mr. Trauger last year, he got 16 sacks. They had this year large quantities of the finest sugar corn. Tomatoes of large size are produced in greatest abundance. Sugar beets, of which the seed were planted in April, now measure 13½ inches around. We measured a turnip to-day that is 23½ inches around it, and a cabbage, the head of which is 7½ inches in diameter, and the spread of leaves 41 inches. Few insects trouble their plants. The first seed are planted from the middle of April to May. But when one crop is gone, another is planted in its place. For instance, they have the fourth crop of peas now blooming. They raise the finest of peanuts. Rhubarb or pie plant, grows luxuriantly. In short, all garden vegetables and melons thrive well here, merely

#### Ripening a Little Later

Than in other localities. From one hop vine they got enough hops for their yeast and beer. They have a strawberry bed two rods square, which yielded abundantly this season. Some of the

berries measured 3½ inches around, and they are all without so large a core as they have in the valleys below here. Their raspberries began bearing last year, their blackberries, currants and grapes this year. They had quite a number of fine peaches this year. All their fruits and vegetables are of the richest flavor. To show the mildness of their climate, because of the slope of their land to the southward, thus receiving the almost perpendicular rays of the sun, and producing at times nearly a tropical heat, accumulated and retained by the surrounding rocks. We should note, that a peach tree in a little niche among the rocks, did not shed its leaves the last two winters, and a fig tree was not at all injured by the severe cold of last November, which killed so many fig trees on the plains of Tulare and Fresno counties. Orange and lemon trees have not been tried yet, but because of these facts they propose to try them soon. Again, because of these

#### Direct Rays of the Sun

And accumulated heat, snow, which falls more or less every winter, melts away so rapidly as never to cover the ground entirely for 24 hours. Their deepest snow, about two ft. in April, 1880, melted away within that time, so that the water ran down the gulch east of and below them in torrents. Their few frosts are not severe. Yet on the opposite side of this huge, deep canyon, that is, on the northern slope, snow covers the ground continuously from November till May, and some patches remain there as late as July 4th. This illustrates forcibly the contrast between the northern and southern exposures of mountain slopes.

A few plants of Egyptian (or seven-headed) wheat, also Club, and White Chile, and barley have produced large heads of plump grain. One head of the Egyptian wheat has 10 branch heads. Timothy, red-top alfalfa and red clover grow luxuriantly here. The heads of timothy grass vary in length from 3 to 12 inches. They have also blue grass and ribbon grass doing well. Sorghum does not thrive here. And then

#### The Wilderness of Beautiful Flowers.

Mrs. Trauger has 14 different kinds of roses, large quantities of dahlias, verbenas, pinks, straw flowers, sweet Williams, snapdragons (yellow and purple), double sunflowers, portulacas, marigolds, petunias and wall flowers. She has also geraniums—housed in winter—the ice plant, dew plant, hollyhocks, chrysanthemums, four-o'clocks, garden violets (blue and white), purple beans, fire beans, Madeira vines, a lilac that bloomed this spring, pampas grass, mint, sage, a century plant, poppies, nasturtiums, gladioli, and prince's feather.

Apple, pear, plum, cherry and almond trees, English and black walnut grow well here, but are not yet old enough to produce

#### Permit me to close this letter with a

#### Brief Summary of the Native Growth

Of this rocky gorge, at different points from 4,000 to 5,000 ft. above the sea.

Besides the trees and shrubs already mentioned, are elders, alders, sugar pine, mountain cedar or giant arbutus (*Licocedrus*), California nutmeg (*Torreya Mexicana*), maples, hazel nuts, dogwood, white azalea, wild coffee or buckthorn (*Frangula Californica*), mountain holly, poison oak or ivy and wild plums, very much like the Chickasaw plum of the older States. The latter trees, from 6 to 12 ft. high, now have their fruit ripening. Some measure three and a half inches around. They are of a bright red color, and their flavor is an odd combination of the sweet, the sour and the bitter—a brief epitome of life. Speaking of taste reminds me that the twigs of mountain mahogany have exactly the flavor of wintergreen.

Other wild plants and flowers are mimulus or monkey flower—some yellow, some orange—soap-root, Clarkia elegans, small eschscholtzia, pink trailing Brodiaea, white and purple Collinsia, thimbleberry, deer brush, goldenrods, immortelles, Claytonia perfoliata or Indian lettuce, white, blue and yellow violets, tiger lily, wormwood, *Megarista Oregona*, or big root, *Hugelia*, epilobium, alfilerilla, calycanthus, wild pansy, a small black currant, love vine or dodder, wild potato or bindweed, orange-colored columbine, pennycuyl, gooseberry, wild rye, yerba buena, heart-leaf, godetia, castilleja, woodbine with small yellow vine and red berry. Ferns here are from two to six ft. high. In the canyon, several hundred feet below the ranch, yucca or beer-grass abounds. This is sometimes incorrectly called cactus.

#### There are Few Wild Animals

Here of any size now. Deer show themselves occasionally. Cotton-tail rabbits, ground squirrels and our beautiful gray tree squirrels are also found here—no jack rabbits. Gophers abound and have to be trapped. They kill hundreds of them annually.

Eagles, hawks, owls, wild pigeon, grouse, valley quail, robins, doves, mocking birds and water ouzels are the chief of the feathered tribes that frequent these rocks and deep gorges.

I should mention that the main canyon of the east Kaweah, a

#### Grand Mountain Gorge

From 2,000 to 2,500 ft. deep here, runs down nearly east and west at this point, and in its general course. The transverse canyon, called the Last Chance, runs down from northeast to southwest, at angles varying from almost perpendicular to 45, 30 and even 10 and 15 degrees. About 1,000 ft. below the ranch, and half a mile distant, the mad current of the river dashes down its rocky bed, almost unfrequented, except by bears, California lions, wildcats, raccoons, wolverines, foxes and deer. There are

no fish whatever in this stream. Its current is very rapid, a mere series of small cascades and falls. Wild clover (red and pink varieties) and burr clover abound in small meadows there. Of this black and cinnamon bear are very fond. There many of them make their homes. Two years ago several bears were killed near the ranch, and now their tracks and those of the California lion and of a grizzly are once in a while seen on the Mineral King road which winds along the granite cliffs about 150 ft. below the house. A few weeks ago the tracks of,

#### Perhaps, a Grizzly

Were found one morning, where he had evidently been watching at night the camp of some hunters that were sleeping unconscious of his presence at a small camping spot on the cool, pure stream that runs through Last Chance canyon, but a few feet below and east of Mr. Trauger's house. Crowning the precipitous, bare and wild granite cliffs, at least 1,000 ft. above the ranch, and about half a mile away in a direct line, is a heavy growth of excellent pine timber, some from four to eight ft. through. Libocedrus, juniper and large oaks are also found there. Farther back are groves of large redwoods, though Redwood canyon, with its huge trees 25 ft. and more in diameter, is four to six miles farther up toward Mineral King. Upon these heights and their various spurs bear, deer, panthers and other wild animals abound. Below these cliffs and on Last Chance creek, just above the ranch, is a glade rank with vegetation, now known as

#### Cedar Glen.

Mr. Trauger raises many fine chickens here. They are disturbed but little by wild animals, and not at all by vermin. A small tick is one of the few annoyances here of animal life. Rattlesnakes are sometimes, though rarely, met with. A few have been killed near here that had from 10 to 15 rattles, and were between four and five ft. long. Such are some of the productions of nature and of human toil in these secluded regions of our Tulare County Sierras.

J. W. A. W.

Trauger's Ranch, Aug. 24th.

### Mountain Valley Farms.

EDITORS PRESS:—I thought I would give you a few items from this part of the world, as I see all other parts of the State are written up occasionally in your valuable paper. Some tell of the fine orange and lemon groves of Lower California; others speak of the boundless and productive grain fields of the Sacramento and San Joaquin valleys, while others write up the coast counties, with their mighty forests of redwood and their grass-covered hills and valleys, supporting vast herds of dairy cows, stock cattle and sheep. I shall only attempt to outline a description of this section of the country.

The valley in which I live is one of a chain of six or eight of fair-sized valleys, besides a great number of smaller ones, commencing in Nevada county, north of the C. P. R. R., and extending to the northern line of Lassen county, through the heart of the Sierra Nevada mountains, situate at an altitude varying from 4,200 to 5,550 ft. from the sea level. The mountains surrounding these valleys are high, and covered with snow all the year round in some places.

These mountains, for the most part, are covered with an almost inexhaustible forest of splendid sugar and yellow pine, spruce, fir and cedar. The larger of these valleys include Sierra, American, Indian, Honey Lake, and Long Valleys, Mountain and Big Meadows.

Those valleys lying at the lowest altitude are by their rich soil and abundant facilities for irrigation, well adapted to raising large crops of cereals, vegetables and fruits, such as apples, pears, plums and peaches; the apples, most especially, are not excelled anywhere in the State for their size and flavor. The valleys which are located higher up are well adapted to grazing and dairying. There is considerable butter and a little cheese made in those valleys. In 1880 there was made in Sierra county 60,000 lbs., in Plumas, 235,000, in Lassen county, 52,000 lbs. The dairymen here find a market for most of their produce in the surrounding mining towns, some is shipped to Reno and Virginia City, Nevada, and some finds its way to Marysville, Oroville and Chico. Owing to the great altitude of those valleys the winters are quite cold, about like that of northern Missouri and southern Iowa. The snow falls to a depth in places varying from six inches to four ft. Winter usually commences the first of January, and lasts until the middle of March, during which time the farmers have to feed their stock, for which they make ample provision by laying in a large store of hay, which is raised here in great quantities in a wild state, and only requires cutting and hauling. It is no uncommon thing for a rancher to put up 200 or 300 tons of hay and some go as high as 1,000 tons. The ranches, for the most part, are small, not averaging more than 250 or 300 acres to a ranch. The arable land, for the most part, is pretty thickly settled, although land is not high, good improved land running from \$10 to \$50 per acre, according to the location. The ranchers generally have made themselves good homes, with good barns, out buildings, etc.

There is a project under way to tap Eagle lake, quite a good sized body of water located about 15 miles northwest of Susanville, Lassen

county. When that is done there will be about 20,000 acres of land ready for settlement. It is all of the very best kind of land, producing the finest kind of grain, fruit and vegetables just as soon as water is to be had for irrigation, of which there is an abundance in the above named lake.

Occasional frosts were the only drawback the farmers had to contend with until within the past three years, when we have been overrun with the grasshopper in Sierra, Long and Clover valleys, destroying thousands of dollars worth of grain and hay. But the pest seems to have abated, for there has been a splendid crop of grain and a fair one of hay raised this year.

There is quite a stir and talk of railroads here just now. The Nevada and Oregon road will run within three miles of this valley, from which point there is a road being surveyed out to run to Quincy, the county seat of Plumas county. The primary object of this road is to afford transportation to and from a splendid iron mine which is located about 20 miles from this valley. The mine is pronounced by experts to be one of the richest in the United States. Mr. Caleb T. Fay is one of the prime movers in both the mine and road. There are a great many rich quartz and hydraulic mines near these valleys, but space forbids me speaking of them at this time.

GEORGE W. FREEMAN.

Rocky Point, Sierra county.

## SHEEP AND WOOL.

### Wool Washing.

We notice that colonial wool growers are now being urged by English authorities to wash their wool before shipment, and they are told about soaps which can be made without boiling or heating at all, and thus ranch soap making for wool washing is pronounced practicable and urged upon the colonists. The profit in washing wool is a mixed one, as buyers, as a rule, do not allow the grower enough more for the cleaned wool to pay him for his trouble and loss of weight. For this reason most California wool is sold just as it comes from the shears. Whatever is proposed by authorities is, however, worthy of consideration, and for this reason, we quote the following article from the London journal called *Wool and Textile Fabrics*, for July 20, 1881:

There are many marked advantages in making soap where wool is grown, and washing it at once with this article on the spot. In the first place, soap can be produced in a wool region at about one-third the cost, as compared with England, for the simple reason that the cost of a pure soap in this country consists almost entirely of the tallow or oil with which it is made, always an expensive article in England, as compared with tallow often actually worthless on a sheep station. Secondly there is an enormous saving in freight and carriage on the difference in weight between scoured and greasy wool, never less than 50%, and often as much as 75% of the entire weight. Thirdly, there is the increase in value between greasy wool and wool not only simply scoured, but washed with the most suitable article for the purpose, that is to say, a pure potash soap. The key to this subject, as applied to the colonies, is the new cold process of making soap, by the simple mixing of a pure caustic alkali (potash or soda) with water and melted tallow, in proper proportions. The old boiling process, with its large boiling pans, special knowledge, and amount of fuel required, would simply be impossible on a wool station. Pure caustic potash and 98% powdered caustic soda have rendered all this unnecessary, and reduced the art of soap making to so exceedingly simple a matter without either special plant or skill being required, that the finest quality of either potash or soda soap can now be produced anywhere. This process has been aptly illustrated at the Wool exhibition, now going on, by a Lancashire firm of alkali manufacturers, the Greenbank Co., of St. Helen's, and to which we drew the attention of our readers in a recent issue.

Before, however, describing the best way of making soap by the cold process for colonial wool washing, some consideration with regard to the nature of wool, and the action of the various cleansing substances employed, will enable our colonial readers to better understand the whole matter.

It is not generally known by sheep farmers that wool, and in fact all animal fibers, differ in construction from vegetable fibers, by instead of possessing a fairly smooth surface, they are built up and composed of numerous concentric rings overlapping each other. In the case of wool these delicate projecting rings are lubricated and preserved by nature with what is called "grease," but which really is an emulsion, or mixture of fatty substances, with carbonate of potash, hardly a trace of soda being present. Now before the wool can be used for spinning this substance so profusely used by nature for the protection of the fiber, must be removed from the surface of the wool. The best means of doing this has been the subject of careful study on the part of the woolen manufacturer. It has been long ago established that a soap is the best thing to use for this purpose. More recently, it has been found that if the maximum amount of luster, softness and brilliancy of color are to be obtained, that a potash soap has very decided advantages over a soda soap. This practical experience on the part of the woolen



manufacturer is certainly supported by the consideration that if potash is so largely used by nature, to the exclusion of soda, in the composition of the lubricating and preserving substance (grease), supplied for this purpose to the wool growing in its natural state, a potash soap certainly should be (as it is actually found to be) superior to a soda soap for washing wool.

The action of a potash soap is to remove the grease from the outside of the fiber of the wool, and chiefly also from the interstices of the overlapping rings or scales composing it, and yet at the same time it lubricates and preserves the fiber with the oil or tallow with which it is made. If an alkali alone is used, such as soda ash, soda crystals, or caustic soda, every trace of oily or greasy lubricating matter is removed. Nothing is substituted, and the result is an unnecessary reducing of the weight, and at the same time the fiber is rendered harsh and brittle, and the brilliancy destroyed by the entire absence of any lubricant. A moment's consideration of the delicate structure of the wool fiber just explained will very readily account for this, by the rings being weakened by the violent scouring, and the absence of any lubricant removing all transparency. It will be evident, therefore, that the use of soda ash, or soda crystals, which are often used abroad for washing wool, are very unsuitable for the purpose, besides being financially a mistake, as the wool is unnecessarily reduced in weight.

It is an undoubted fact that a wool once injured by improper scouring never can be restored again to its former condition. This is one of the reasons why many of the best English and foreign woolen manufacturers never will buy a colonial scoured wool, unless fleece washed, and therefore necessarily not scoured with soda. Practical experience has taught these manufacturers that the fiber of the wool for fine spinning has been injured, and that it cannot afterward be restored again by any oiling process.

## THE APIARY.

### Introducing Queens.

EDITORS PRESS:—I am very often applied to for information as to the most safe way for introducing a queen to a strange colony. To save time and accommodate as many as possible I will, with your consent, use the columns of the RURAL.

Make a block 2x3 inches square,  $\frac{1}{2}$  inch thick. Fit a strip of tin  $\frac{1}{2}$  inch wide, and 10 $\frac{1}{2}$  inches long around the edge of block so as to lap  $\frac{1}{2}$  inch, and solder it. Cut wire cloth No. 12 or 18 mesh, 2 $\frac{1}{2}$ x3 $\frac{1}{2}$  inches; bend over the edges and solder to the tin strip at one edge all around for a top. There is no bottom. Cut four pins or use four  $\frac{3}{4}$ -inch brads; fasten one at each corner with solder. This makes the cage.

Find the queen to be replaced and cage her, in a roll of wire cloth; place her on the top of frames in case you might want her, or better, place her in cage with  $\frac{1}{2}$  dozen of her own bees, and feed in case an accident should happen to the new queen, when she may be let loose at top of combs and be saved; smoking the swarm first. Always use a hollow smoker.

Take a comb with hatching brood and honey (if not unsealed, uncup it) near the hatching brood, shake or crush all bees from the comb into the top, or at front of hive. Take comb in a room before a closed window, not in the sun. Place the queen on comb, place cage over queen so as to include hatching bees and unsealed honey (no bees to be with queen). Press cage to fit comb closely, then replace comb carefully in the hive, and the combs in place. After taking out a share outside comb to avoid crowding, leave space, just enough for bees to feed queen between cage and next adjoining comb, if so disposed, through the wire cloth. Close the hive for 48 hours, then, with hollow smoker, smoke lightly, then open carefully and remove cage. The queen may have been released by that time and on the comb, laying. I have found them so at different times, and have not lost one, and have introduced them at all seasons of the year.

After taking out the cage the hive must be kept strictly closed for a week at least, to make the queen perfectly at home in the hive, when any queen cells that might have been started may be cut out, and the extra frame replaced.

If one is careful there is actually no risk. I consider this the safest plan of all I have tried; have introduced many and never lost one by this plan, the credit of which I give to the *American Bee Journal*.

It is not necessary to use much smoke; a very little answers; only be sure to give each and every bee a taste. They will fill themselves with honey and not miss their old queen, nor scarcely note the change. The new queen also gets the smell of the smoke. Use rotten wood for making smoke; some kind of oak is the best.

Before introducing a queen the bees should be transferred to movable frame hives, then given an Italian queen after they have mended their combs. In a short time all will be Italians.

J. D. ENAS.

Napa, Cal.

ACID PROOF CEMENT.—Finely powdered glass, mixed with soluble silicate of soda will be found to answer this purpose.

## HORTICULTURE.

### California Nurserymen and Florists.

EDITORS PRESS:—In keeping my promise of two weeks ago, I must speak of our veterans in the noble work of horticulture. I believe Mr. John Lewelling, of St. Helena, established the first nursery of fruit trees in California, as he had previously planted the first in Oregon. This was on the Beard place, at Mission San Jose. His next planting was on the beautiful property at San Leandro, well-known to many readers of the PRESS. And now, with the dear life companion of their manifold labors, each wearing the silver crown of age, he looks toward the nearing sunset of life, from the hills above St. Helena, over orchards and vineyards in full fruition.

Another name, that of Bernard S. Fox, which in the esteem of his peers stood among the highest of American pomologists, has lately been erased from the catalogue of our living nurserymen and florists. A recent number of the RURAL PRESS contained a description with an excellent figure of one among his numerous additions to the catalogue of desirable pears. Mr. Wilder, who has named more pears than any man living, spoke in the highest terms of Mr. Fox's life work in pear culture, in an address before the Pomological Society in 1872, and of the special fruits created by him.

Does not the Ameshury poet speak truly of "The glad, creative skill,  
The joy of him who toils with God?"

Red letter days indeed were those in which I have been a learner in that nursery school on the Milpitas road. There one found old cypresses, acacias and other trees which are ordinarily shown on y in their fresh youth. What a sight is that long row of pampas grass in full plumage—the oldest, I believe, in the State. It was interesting to see the work of propagating our California conifers carried on upon so vast a scale, and with success, because natural conditions were supplied. Full suits of these could be obtained from him, and will doubtless continue to be supplied there. The collection of roses is immense, and the greatest pains taken to prevent confusion in their nomenclature. Dahlias are another specialty. Mrs. Dix, a crimson scarlet dahlia of fine form, Pluto, a dark purple edged with white, Mrs. Thornhill, white, feather edged dahlias, are indeed incomparable, as I have seen them in the nursery. The little pompon dahlias were also excellent for decorative purposes.

At Fox's I first saw a large collection of double flowered geraniums, and though not favorites of mine, I was forced to acknowledge their great beauty. It was among the palms that I most frequently lost myself in admiration. Mr. Fox had in his palm house good representative specimens of over 40 different species (nearly all of these offered by George Such), and five of the genus Phoenix, to which our date palm belongs. The most graceful palms for home decoration are found in the genera Kentia, and Seafartheria—of these there is a considerable supply for sale. Mr. Fox did not often exhibit fruits or flowers at the fairs, and therefore the extent and variety of his collections were little known outside of the locality where he lived.

It will be a great loss to California if the work begun by this pioneer be not continued. I wish the nursery of Mr. Fox, with its greenhouses and rare collection of trees, might become the foundation of a noble public park, such as the growing city of San Jose will ultimately require. It would be an appropriate monument to a most useful man.

Many of the palms, and other ornamental species enumerated above, are offered for sale by another San Jose florist, Mr. John Rock, whose nurseries are in the neighborhood of Fox's, and well worth visiting. Mr. Rock has, besides the ordinary lists of ornamental plants in request, copper beeches and other varieties in the tree line. He has had better success than any nurseryman I am acquainted with in raising palms from seed, and offers them at very reasonable rates.

Another old and reliable nurseryman and florist, Mr. James Shinn, of Niles, Alameda county, has won a high reputation in the same general line of ornamental work, while extending his sales of fruit trees year by year. The variegated Japanese maples are among his specialties. His nurseries have the same standing in the hay counties that those of Wm. B. West, in Stockton, have for the San Joaquin valley; or of Mr. R. B. Williamson (Wm. Strong & Co., of Sacramento), for that of Sacramento. All these gentlemen publish annual catalogues.

Not only my neighbors, but frequently persons from a distance inquire "who are the most reliable parties to order from." These inquiries are often accompanied by a confession that the writers have been victimized by itinerant tree peddlers. Rose peddlers, persimmon peddlers, and agents of Eastern speculators circulate freely in the rural districts, setting traps for the unwary. As a rule, it is better not to risk one's time, money and affections by patronizing them. Rather order from our own florists whose success is identified with yours. I have never lost a tree obtained from Mr. Williamson, Fox or West.

Among specialists who deserve patronage, I would direct growers of lilies to W. C. L. Drew, of El Dorado, who keeps on hand an ample

stock of all our native hulhs. As these should be planted in September, this may prove a timely suggestion.

Felix Gillet is best known in fragariculture and that of the nut-hearing trees. His limited stock is always in demand, so that one must be in season who orders from him. There is much instruction to be found on his hillside at Nevada City.

Were I asked from whom to order furniture for a bay window or cool greenhouse, I should hardly know how to answer, but would advise my purchaser to spend a day at least with Mr. Nicholson on the San Pablo road, Oakland, or in looking through the greenhouses of James Hutchinson on Telegraph avenue. The latter has the larger stock; the former the rarest and finest specimen plants. There are other establishments on that side of the bay deserving mention, and of the dozen or more large houses in San Francisco I cannot write in so brief a paper. My object is mainly to show new comers in those rural neighborhoods which are filling up so rapidly that our own nurserymen and florists are wide awake and ready to meet any reasonable demand.

Mr. Leonard Coates, of Truebody's station, Napa county, makes it possible to have the finest hedges of our native wild cherry by offering this and other desiderata in quantities. Our excellent friend Sanders, of Kingsburg, Fresno county, keeps everything that is rare and curious—gingerworts even, and all sorts of ham-hoos and grasses. Botanically, he is making Fresno the hub of the Pacific coast. The Thomas Bros., of Visalia, are doing excellent work with a very profitable class of deciduous fruit, propagating to the point of early ripening while attending carefully to other essentials.

In Los Angeles we have Messrs. Stengel and Wanholt, florists; the former doing a rapidly enlarging business. Santa Barbara is a Rose Emporium; if one wants James Sprunt or Marshal Neil or Setina, there is no better place to obtain them than from John Spence of that city. There are other Santa Barbarinos reserved for a future letter, noting the successes of our Sonoma and San Diego county culturists.

The proposed exchanges between lady amateurs is an excellent thing, but I would say to my sister "diggers" that one rare shrub or shapely tree, is worth an acre of the perishable things in present demand. There is such a thing as "hardware and jewelry" in plants; one of Mr. Shinn's Japanese maples, should be the emerald or ruby of your daily admiration; more camellias, gardenias, fewer petunias and canterbury bells.

Can there be a more charming pursuit than our nurserymen and florists have chosen? I know it has its very prosaic side; but of how few men can it be said, as lately of Charles Downing, who, "though feeble and aged, continued a benefactor to the whole country;" "growing old has no terrors for such men, and all who emulate their spirit, will find in co-working with nature pleasures that never fail, and preparation for the future Paradise of which Eden was only the shadow and prophecy."

JEANNE C. CARR.

Pasadena, Aug. 20, 1881.

### More About Dates.

EDITORS PRESS:—The subject of an article in one of your recent numbers was the date palm. So valuable a tree will perhaps hear having a little more light let in on its life and usefulness. The principal species of the date palm is "Phoenix dactylifera." It is a native of North Africa and Southwestern Asia, where its fruit is the principal article of food and the trees the main wealth of the people, for they make from it their dinners, baskets, ropes, sugar and the beams of their mud hovels; and the dinner means not only the date itself which contains 56% of sugar, but also wine and spirits from the sap, vegetables from the immature leaves, an oil from the crushed seeds and a kind of coffee made from the seed when roasted. The word "toddy" is the Indian name for the juice of the *Phoenix Sylvestris*, a date palm almost indistinguishable from the *dactylifera*. The word was introduced into England probably during the palmy days of the East India Company.

The date palm grows freely in Southern Europe and bears well. The two towns of Elche and Orihuela in Spain, depend almost entirely on their date groves. The date also forms an important staple at Murcia. The kind grown in Spain is the large farinaceous sort. The climate of this district is very similar to our California climate. Many delicate plants which do very well here out of doors are wintered there in conservatories; such, for instance, as heliotropes, lantanas, abutilons, etc. The soil is generally a calcareous loam, sometimes containing a great deal of silica. The only radical difference is that their dry season is in winter. The fruit in those countries is ripe in the spring, and is perhaps ripe at other seasons too, and a dry winter may therefore mean a great deal. I noticed, however, while in Egypt that the greatest pains were taken in the spring, when the tree flowers there, to take the flowers of the male plant and place it by hand in contact with that of the female plant. Darwin came unavoidably into one's mind while watching the Arah urchins, dark and scantily clothed, chattering in the palm tops on this service.

The great care of the Egyptians to fertilize their trees would indicate that it is a very important part of the culture of the date, espec-

ially if one desires a regular crop. Another important feature of date palm growing is its demand for water. The tree grows best when water is naturally near the surface, otherwise it demands a great deal of irrigation. An Arab saying on the date palm is: "It must have its feet in the water and its head in the fire."

There are fine date palms growing in many places in Southern California, and doubtless there are spots where this valuable fruit would come to maturity and bear well. That they are a valuable tree will be indicated by the fact that in Egypt every date palm tree pays an annual tax of from 20 to 60 cents, according to its age and sex. The garden of acclimatization at Berkeley is hardly a fair place to try the date palm in reference to its adaptability to the southern counties, but failing a better place, it would be well to try the tree there, irrigating it properly in the right soil, and having it fertilized, thus demonstrating beyond a doubt as to much of California whether a date crop could be relied on or not.

ABOTT KINNEY.

Kinneyloa, San Gabriel, Cal.

### Strawberry Growing in Los Angeles County.

A writer in the *Anaheim Gazette* gives the following notes from his experience in growing strawberries in Los Angeles county: In setting out a bed of strawberry plants, it is of primary importance to see that the rows are so laid out that when they have to be irrigated there will not be too great a fall. The longer time it takes the water to run the length of a row, the better will the ground be soaked, and if well soaked, that is all they will probably require (unless the ground is very poor or sandy) to mature a crop of berries, supposing the plants are blooming when irrigated. I have found it a good plan to set out the plants in double rows two ft. distant, with the plants 12 or 15 inches apart in the rows. If the entire surface of the ground has not been deeply plowed, it is a good plan to mark out where the plants are to be set, and, taking a hoe, draw away, on each side, the soil, until a good ridge is thrown up, 18 or 20 inches wide at the base. This ridge will constitute a raised walk between each double row of plants, and also keep the water in each row irrigating. Between these ridges the ground must be well and deeply dug, and if some well-rotted fine manure is added, the product from the plants will be all the greater, and they will continue to bear a greater length of time. Another important point consists in pinching off all runners when going around every couple of days picking the fruit. Done at such a time, the labor is easier—it is like killing two birds with one stone. I find it an excellent plan to spread some fine kind of mulching, like hay that has been well trodden on a road or in a corral by horses' feet, or dried leaves from under trees, and spread over the entire heds an inch or so thick. This mulching keeps in the moisture around the plants, and by shading the ground from the sun's rays, it perfectly prevents the weeds from starting after each irrigation, which is an easy matter, seeing the ground is always ready for it. With such management I do not hesitate to say that an astonishing amount of large, good fruit will be raised.

For keeping up a good supply of fruit (all through the spring, summer and fall, it is well to set out an early, medium and late variety, and the three best are doubtless the Duchess, the best early standard; the Cumberland Triumph, the largest and most easily grown medium berry; and the Sharpless, the largest late strawberry. The first of these varieties is said to be very productive, as many as 237 berries having been counted upon one plant. The Cumberland Triumph is said to be the delight of the amateur, which is doubtless true since it is a sort that is easily raised with little care, and produces fruit of a large and uniform size, beautifully colored, and quite a picture when in full bearing. The Sharpless is an exceedingly fine large berry, many specimens picked during the past season measuring seven inches in circumference. A leading grower of undoubted probability of character says he has had specimens of this variety that measured 9 and 10 inches in circumference. It is not only large and productive, but its flavor is exquisite. The usual price of these and other standard varieties is about a cent each plant, but they can be got for half that price in lots of one 1,000 or more plants. Nothing would give the writer greater pleasure than to see inaugurated the time when every garden and each homestead will be embellished by its strawberry patch, as it is in the old country, where its culture is attended with far greater difficulties and its products reduced fully 50%.

TO REMOVE RUSTED JOINTS AND NUTS.—Kerosene oil or naphtha, or even turpentine, will in a short time penetrate between minute crevices in joints that have been long in contact, whether bolts or nuts or steam joints. They should be ignited when possible, when the effects of heat and diffusion will soon loosen the metals. Nuts rust so tight sometimes that no wrench will remove them without breaking off the bolts. A gentle hammering on the sides and top will sometimes start them a little. A driven joint, or rust joint, between flanges, formed by cast iron borings and sal ammoniac in solution in them, can not be parted by any means short of destroying the castings. The scrap heap is the only remedy.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Healdsburg Grange.

Healdsburg Grange held an open meeting on Saturday, August 27th, which, according to the report in the *Flag*, was well attended and interesting. C. P. Moore made a vigorous address against the present reciprocity treaty with the Sandwich islands, arguing that the price of sugar to the consumers was not reduced, but that all the profits of working under the treaty went into the hands of the sugar monopolists. This position was sustained in many ways, and the discussion was heard with interest.

The *Flag* writes in favor of open Grange meetings for the discussion of subjects of interest to producers, as follows:

#### Importance of Grange Work.

It is to be hoped that the public meeting held at the Grange Hall in Healdsburg last Saturday, will be followed by many others of a similar character. Business and commercial men have their boards of trade and produce exchanges; manufacturers and bankers have their well-organized associations where are discussed all those questions that have a direct special bearing upon these different interests; and why should not farmers thoroughly organize in an association that has for its object the advancement of their interests?

We, here, in Sonoma county, are on the eve of new experiments and great changes in the products of our soil. It is safe to say that the statistics of the next decade will show an increase at the lowest estimate, of at least 100% in the value of the product of our farms. How much more rapid and satisfactory would that progress be if all the tillers of the soil would meet, at least once a month, and give each other in open Grange the results of their experimenting, and discuss freely and thoroughly new plans, and improved methods of treating the soil. What a fund of information might be gathered in this way and what a new impetus would be given to all our farm labors. It would be but a few years before the whole face of the county would be transformed, and the increased prosperity would be felt by all classes.

### Martinez Grange Gathering.

We received a visit from Worthy Master Spilman, Wednesday, who obligingly gave us the following brief notes of Tuesday's exercises.

The Grange opened in due form in Alhambra's pleasant hall at 10 A. M. Good delegations were present from Walnut Creek, Danville, Vallejo and Temescal Granges, having been invited by Alhambra to meet and counsel with the Worthy Master, who was unable to meet the Granges singly.

Bro. Spilman, we know, gave them interesting facts of the meeting and late doings of the National Grange and the Order generally, with good reasons and encouragement to earnestly and faithfully progress in the noble work of the Order. Bro. H. M. La Rue, of Sacramento, urged the importance of wheat growers to unite solidly for their interests in farming, and especially in the marketing of wheat co-operatively, as there is now clearly great encouragement for so doing.

Bro. J. V. Webster, among other things remarked on the duties and benefits of attending the approaching session of the State Grange. Bros. Nelson, of Butte, Overheiser, of Stockton, and others, spoke equally earnestly for the good of the Order.

The Grangers' feast, prepared by the sisters, with good taste and abundance, was highly and practically commended by all present.

"Friends" joined with "Patrons" in the feast and an open meeting thereafter. An interesting essay, concerning "Young Girls," was read by the Sister Chaplain, of which we expect our readers to hear further.

Bro. Spilman will visit Grass Valley and Magnolia Granges, in Nevada county, as noted, with others in his list of appointments republished in this issue. From information given us in a few minutes only, we are sure Bro. S. is full of Grange news, and will not disappoint those who attend his appointments.

The Executive Committee will be in session in San Francisco, on Saturday and Monday, before the opening of the State Grange at Santa Rosa, October 4th.

### Temescal Grange.

Four applications for membership were received at the last meeting. The mining debris question was discussed and the Wheatland Grange resolutions (same as published in the *Rural* August 20th) were adopted unanimously.

A petition, signed by members of Alhambra Grange, Martinez, in favor of a free market in Oakland, was received, with a well-written letter from the Secretary, inviting the Temescal Patrons to visit Alhambra, etc.

Many regrets were expressed for the removal of Bro. John S. Collins and wife from their residence, at Mountain View cemetery, to their 600-acre farm adjoining the town of Ventura, in Southern California. Bro. Collins is a charter member, and up to his election as Master had served the Grange ably and faithfully, as Secretary, most of the time from its organization in 1873.

On Wednesday evening of last week almost the entire Grange gave Bro. and Sister Collins a hearty surprise at their home, and a very enjoyable time it proved to all. A large supply

of choice fruit, nuts, cakes, etc., mysteriously appeared, and with excellent coffee, a sumptuous feast was served.

With much feeling the Grange parts with Bro. and Sister Collins, who have done so much in their quiet, faithful way to sustain the barmoury and strength of the organization. The lasting good wishes of all remaining attend the new home makers in Ventura. May that contemplated 100 acres of apricot trees blossom and bear in beauty and abundance.

### Worthy Master's Appointments.

Suisun—Friday, Sept. 9, 1881.  
Montezuma (Bird's Landing)—Saturday, Sept. 10, 1881.  
Elmira—Monday, Sept. 12, 1881.  
Dixon—Tuesday, Sept. 13, 1881.  
Grand Island—Thursday, Sept. 15, 1881.  
Grass Valley, Nevada county—Monday, Sept. 19, 1881.  
Magnolia Grange, —Tuesday, Sept. 20, 1881.

### The Wheat Owners' Meeting.

The meeting of wheat owners was held according to our announcement, on September 4th, at Grangers' hall, corner California and Davis streets. Hon. H. M. La Rue, of Sacramento, presided.

The first order of business was the receipt of the report of the committee appointed last April to consider the advisability of forming a wheat shipping association and other matters. The report was signed by the President, Mr. La Rue, and Messrs. Woods and Ostrander of the committee. It was as follows:

#### Report of Committee.

Your committee, appointed to report to this adjourned meeting a plan of organization, having in view the promotion of the interests of the wheat growers of California, beg leave to report that, since the adjournment in April, much thought has been bestowed upon the proposition to form a separate organization of grain growers, and the more that is bestowed upon it, the more intricate and doubtful seems the proposition. The diverse opinions expressed at the April session, as to the means to be employed to attain the end, were such as would appear to render all attempts to unite the wheat growers upon any one method that might be proposed impossible. Success in this enterprise means responsibility; means business experience and capacity; means tangible capital; and the question is, can we command these in sufficient quantity to inspire confidence in business circles and the support of the farming fraternity? The difficulties experienced in the organization and the putting of the Grangers' Bank and Grangers' Business Association into successful operation, avowedly for the same objects and under the stimulus of Grange enthusiasm, which was at the time at fever heat, would answer the question in the negative. Those of us who are familiar with the inception of these institutions, know full well with what zeal the preliminary steps were taken to form these organizations, and they also know how the zeal ebbed when farmers were asked to put down binding signatures to furnish money to place them on the necessary financial basis, and a less favorable result even is feared should we attempt the formation of a new and separate organization. But if it be inexpedient, if not impracticable, to build up this separate organization, let us see if the machinery is not already at our hands to accomplish the very objects sought by this convention.

The Grangers' Bank and Grangers' Business Association of San Francisco were created solely for the benefit of the farmers—to give them additional capital and facilities for holding their products for a reasonable market, and for handling their crops. These institutions have been under the eye and direction of honest, practical men, in the interest of agriculture. They are now provided with ample storage and shipping facilities in the system, with experience and sufficient capital, and whatever a new organization could accomplish can be as well or better done by these agencies, belonging to and managed in the interest of farmers. If these institutions are a success, and their present standing in financial, commercial and farming circles indicates that they are, then there is no need of forming a new one for the same purpose. If not a success, it would be idle to attempt to do what has proved a failure under much more favorable circumstances. If the wheat growers would unite to sustain the houses owned, managed and controlled by themselves, would not the benefits anticipated by this Convention, arising from a district organization, be secured? So it seems to us.

The present state of the wheat market requires some attention from this convention. The most reliable reports received from all parts of the world make it almost absolutely certain that grain crops are much below the average. When it is also known that not above one-third, certainly not to exceed one-half, of an average crop has been raised this year in this State, when there is more than double the tonnage in the harbor and to arrive than there was one year ago, and when, further, the high rates to Europe are stimulating every vessel possible to head this way for cargoes. Our farmers pursue the suicidal policy of pouring into the San Francisco market more wheat than is wanted to fill the ships, thereby keeping up freights to an exorbitant figure, and depressing the price of wheat correspondingly. With storage already a fixed charge, what must be paid in any event with interest at seven to nine per cent per annum, it is simply a question of endurance, if inclined to make it one, between the farmer and ship-owners or ship-brokers. It is believed the farmer can hold out the longest with his wheat in the warehouse, than the ships lying in the harbor. It should be a cardinal principle never to crowd the market with wheat when ocean freights are above and wheat is below a reasonable rate. In conclusion it is recommended that a resolution be adopted by the Convention declaring its conviction that relief from the present exorbitant ocean freights can be secured only by withholding wheat from sale until more reasonable terms are conceded.

The report was adopted.

#### Discussion.

Mr. Amos Adams spoke of the necessity of the farmers co-operating, and concentrating their wheat so it could pass through one channel. He explained that the farmers were their own enemies, for every time they held a meeting in San Francisco, they had their pockets filled with samples of wheat, which they exhibited to various dealers and urged them to buy. He stated that when these meetings were being held, the business associations could not secure half so good a price for wheat. If they had one agent whom they could trust, their wheat could be held until the price of freight were reduced. It was unreasonable at present, being \$4 65. \$4 35. The farmers could save \$5 or \$10 a ton by co-operating. If they resolved to hold their wheat, they could live up to their resolutions. The association was erect-

ing wharf and storage capacity near Port Costa, capable of accommodating 50,000 tons, and they had plenty of wharf room for their vessels.

The Chairman explained that he visited San Francisco on June 26th, and at their meeting it was represented that there were 600,000 tons of wheat on hand, and only 400,000 tons capacity was in port and on the way. Believing the information, he sold \$20,000 worth of wheat. Subsequently he had ascertained that the amount of wheat on hand had been exaggerated. If he had received correct information he would not have sold his wheat. The farmers wanted

#### Statistics as to the Crops.

Mr. McPike contended that the wheat crop was considerably less than it was last year. At the present time there were in port and on the way shipping facilities for 500,000 tons, and by the 1st of November half of the wheat in the State could be accommodated. If the farmers would hold for 60 days, he believed they could get two cents for their grain. The farmers should seize their opportunity. There were not 900,000 tons of wheat in the State, and by the 1st day of March they would not have enough left to load a ship.

Mr. Adams explained that grading wheat was a thing that farmers could not reach. They could not remedy that. When they sold their wheat the shippers had a right to do just as they desired with it. The Business Association had facilities for shipping 7,000 tons a day. They could load three vessels at once, having three tracks, and in 15 days cars would be running on their wharf.

#### Port Costa Warehouses.

Mr. Ostrander believed the Business Association had studied the farmers' interests in erecting the warehouses at Port Costa. If the farmers sent wheat to them, he had no doubt that the sweepings would not be as much as elsewhere, and doubtless the wheat would be honestly weighed. At present a contest existed between the farmer and the ship-broker. The brokers and their hirelings was continuously declaring that wheat is bound to go down, and the farmers are constantly reminded that there would not be ships enough to transport it. The farmers should not believe them. There was enough tonnage on the way to carry off 600,000 tons; enough in port to carry 120,000 tons, and since July 1st, 160,000 tons have left. It seemed to him that the farmers could easily combine and control 500,000 or 600,000 tons of wheat, and then they could dictate to these grain men. The Liverpool market was high enough at the present time to allow the farmers to sell their wheat for two cents, if they only managed things properly.

#### Holding Wheat.

Mr. J. V. Webster believed for the last two months that the farmers have been masters of the situation. He alluded to the enormous waste in loading grain and the chances of dishonest weights, and maintained that by selecting a warehouse at deep water they could have their own agents to weigh and handle their own grain. The Business Association could see to that, and he believed that by adopting such a course they could save enough to pay for storage.

Mr. Upton, a large wheat-grower, stated that he was inclined to hold his wheat, provided they all agreed to do likewise.

Captain Nelson of Butte declared that the man who held his wheat would get a high price. He inquired what were the port charges.

The Chairman explained that San Francisco was considered the most expensive port in the United States.

Captain Nelson declared that monopolists controlled San Francisco. He asserted that they had squeezed everything they could out of the interior of the State to build up San Francisco, and they had done the same for the whole coast. Instead of doing like other cities, building up the country, they have been robbing the country to build up the city.

#### Milling Wheat.

Mr. Beckett maintained that to encourage the milling of wheat, free tonnage should be granted. If free tonnage was not granted for flour, he would patronize Port Costa or elsewhere.

Mr. English, of Contra Costa, said he was holding his wheat. The wheat crop, said he, was a total failure in England, and she would need all of our surplus. The freights should be five or six dollars less. He was willing to let shippers have 60 shillings a ton, but they were now getting \$5. Low interest and a fine prospect ought to induce the farmers to keep their crop. If San Francisco had been acting in favor of speculators, the farmers ought to support Port Costa. Their freight was 50 cents less; dockage very low, and there was room enough for all the wheat in the State. Insurance money and port charges were also cheaper.

Several motions were introduced fixing a date to which the meeting was to adjourn. Finally it was decided to re-convene on Wednesday, September 14th.

On motion, a committee was appointed to ascertain the amount of wheat on hand, the amount of tonnage, etc., on the way, the surplus of wheat for shipping, and to prepare a circular to be sent to farmers, urging them to hold on to their wheat, and to attend the meeting to be held on the 14th inst.

The meeting then adjourned.

THE GRANGE at Pennington, Butte county the home of W. M. Spilman, has resolved and has taken steps to keep the new town free from liquor-selling saloons.

### Resolutions of Respect.

SAN LUIS OBISPO GRANGE has adopted resolutions of respect to the memory of Sister Sarah M. Johnson, who died August 23d. Mrs. Johnson was one of the charter members of the San Luis Obispo Grange, a most active and faithful worker, and while in health a constant attendant at the meetings.—Miss J. ROCKFORD, Assistant Secretary.

THE MONEY ARISTOCRACY.—Labor is wealth in this country; it develops everything; let it be actuated by intelligence, as well as directed by it; let nothing be done or taught in our schools that will have any tendency to impress upon the minds of our children that it is more reputable to belong to one of the professions or some other class than a farmer. The tendency of the times is in the centralization of money, and with it the "hoasted independence of the farmer" becomes a myth. Examine the different reports of the census bureau and you will find an increase in percentage of those who control the money or moneyed interests of the country has been going on with fearful rapidity. What does this portend? We have but to examine history; the results have been the same; an aristocracy owning their thousands of acres, and the farmers tenants, subject to the will of a landlord; then where will be the independence of the American farmer? It can be answered by a child, and it will be a thing of the past.—Isaac W. Nicholson, Master New Jersey State Grange.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

BET SUGAR.—E. H. Dyer, in *Sugar Beet*: We are well satisfied with the result of our last campaign, and can see no reason why our next will not be better. We have an abundance of fine beets growing. The prospect of a large yield could not be better. We have furnished seed for several years in succession to parties from San Diego to British Columbia, and in many places the results are all that could be desired, both as regards cheapness of production and richness in saccharine. If California capitalists would invest the same amount of money in the production of beet-root sugar on this coast that they have invested in sugar plantations in the Sandwich islands, and the refineries for converting the product into white sugar, a sufficient amount of refined beet-root sugar could be produced to supply the demand of this coast at a price not exceeding the cost of raw sugars imported from Manila, Central America, and other sources. But the business has been so unsuccessful in the United States that it will be years before this will be accomplished, but the time is sure to arrive sooner or later. We have over 1,000 acres in beets; expect a yield of 15 tons per acre. Do not want the yield to be greater. If it is, the beets will be of poor quality. One of the mistakes has been in this country to obtain a large yield per acre regardless of quality. We are making some additions to our machinery. This will enable us to work about 80 tons a day.

#### FRESNO.

FRESNO COUNTY'S TIMBER LAND.—*Expositor*, Sept. 2: As yet the great value of the timber belt of Fresno county has received but little consideration from the public. True, one corporation has spent an immense sum in building a flume from the mountain forests to the railroad, and is now conducting a lumbering enterprise nearly as large as any in the State, while several smaller mills are also at work cutting lumber for local consumption. Still, as compared to the vastness of the timber region, it can be truthfully said that its value has yet been scarcely estimated. There is probably more timber, and of a quality not surpassed in the State, in Fresno county than in any other in California. The timber belt extends along the Sierras a distance of fully 200 miles and varies from 20 to 40 miles in width. When the timber in the more accessible sections is exhausted, this valuable belt will be attacked, and its almost inexhaustible supply will give employment to thousands of persons, and will require millions of capital to handle it. The first incentive will be the California Central railway. This will tap the same belt now being worked by the Madera Flume and Trading Company, but in time other roads will be built to tap the pineries on the south side of the San Joaquin and of King's rivers. There are millions of dollars in the piney forests of Fresno county.

#### LOS ANGELES.

BEE FEED.—*Express*: Mr. C. N. Wilson, one of the progressive bee-keepers of the county and President of the San Fernando Valley Bee-keepers' Association, takes exception to the article which we reprinted the other day from the San Diego *News* on the subject of bee-feed. He states that the sole dependence of the bees this year for sweets has been upon the flowers of such trees and shrubs as the California walnut, blue gum, acacia, willow, sumac, manzanita and upon the wild hickweed, while the usual feed—white and black sage—have been a complete failure in the production of nectar. He speaks in an especially commendatory manner of the blue gum, from which, he says, the bees make an excellent quality of honey. Mr. Wilson is of opinion that bee-feed can be cultivated by the apiculturist for the salvation of his bees and for profit and satisfaction to himself.



**LONG PRUNING AND WINTER IRRIGATION.**—Gen. Stoneman's grape crop this year will be the largest and best he has ever had. He will have 30% more than last year, and he considers this fact due to copious irrigation and long pruning—that is, leaving more buds on a spike than usual. His vineyard covers about 185 acres.

#### MARIN.

**SAN RAFAEL FRUIT.**—*Journal*, Sept. 2: Good fruit has been very rare in our market this season. Peaches have been dear in price, and poor in flavor. Indeed, we have had many very handsome peaches, sold four for a quarter, that were as tasteless as cork. The canneries are charged with producing the high rates, and the poverty of taste is attributed to the cold spring. Whatever the causes may be, they do not appear to apply to the peaches grown in San Rafael. We have seen peaches from R. J. Trumbull's nursery, which are as rich and delicate in flavor as our boyhood memory of the old New Jersey article, and that is all that need be said for any fruit. Everyone will ask, if this is so, why don't we raise more fruit? It is the old question, applying with equal force to many other undeveloped resources, and hard to answer. But Mr. Trumbull is making a start. He has gone extensively into fruit trees, and has some varieties in bearing already, while next year he will have plums, prunes, peaches, pears, apricots, apples, and many other kinds, the quality of which, judging by those now matured, will be very superior. Mr. Towne, at Point San Pedro, raises excellent pears, but the Bartlett should not be allowed to ripen on the trees. An industrious man could support a large family in San Rafael, on the product of three acres judiciously put out in fruit.

#### MENDOCINO.

**HOPS.**—*Dispatch*, Sept. 2: Our hop growers are busily engaged in the work of picking this year's crops, and in all the fields large numbers of Indians can be found earnestly and as happily employed as are bees when gathering honey, as well as many white men, women and children. The crop is turning out much better than was anticipated, and if the present prices are maintained—18 cents to 22 cents per lb.—there will be no cause for any grumbling on the part of those who have the enterprise and industry to raise hops.

#### SAN MATEO.

**THE HORTICULTURAL SOCIETY'S SHOW.**—*San Mateo Journal*: This society, which is composed, along with others, of the most prominent gardeners and horticulturists of the county, proposes to establish a system of yearly exhibitions and displays of fruit, flowers, plants, etc., and for this purpose will open with its first annual exhibition on Thursday, Sept. 27th, in Germania hall, this city. The President of the society is G. Goertz; Secretary, Dr. L. D. Morse, of San Mateo. Correspondence with the latter named gentleman will elicit full information and plans of the proposed exhibition. There will be three premiums given for the best specimens of the following kinds and classes: Plants in pots, cut flowers, fruit and vegetables, in value according to the receipts of the exhibition, which will be divided in fair proportion, making a suitable premium for each. The hot-house collections of many of our noted private places throughout the county, including those at Menlo Park, San Mateo and Milbrae, will, if brought out and displayed, make a feature of the show at once so attractive and important as to insure perfect success to the undertaking. It is well known that some of the finest conservatories in the State exist in this county. The display of flowers, fruits and vegetables ought not to be second in value to any in the State. The coast county should not be behind in exhibiting its mammoth vegetables, and the mountains their luscious fruits.

#### SONOMA.

**CROPS AND PROSPECTS.**—*Santa Rosa Republican*: Harvest is over. Grain is not up to the average yield; but it sells for a good price. Fruit is plenty, with ready sales. Several driers and one cannery (at Santa Rosa) are at work consuming the surplus, and there are increasing demands for everything we grow. More trees and vines will be planted this year than ever before, stimulated by the near prospect of an outlet by rail for these products. Potatoes are reported an average crop, which means a good deal of money for the Bodega, Bloomfield and Green Valley neighborhoods, where they are raised extensively. The grape crop is fair. The area of new vineyards coming into bearing justifies the estimate that the yield will equal last year. The coming vintage promises remunerative prices, and everywhere throughout the land where the volcanic soil of the foothills and the favorable situation of the valleys warrant, preparations are making for planting more vines. The profits of the dairy interest are considerable this season. Butter and cheese have sold at round prices above the average. Lumber, cord wood, bark and other timber products find readier sale, at better prices, than for several years. All along the coast, and in the interior, there are many people directly and indirectly profited by this revival. The fall clip of wool and the crop of hops are both material aids to swell the footings of the products of Sonoma county.

**NEW INCUBATOR.**—Last Saturday we spent some time in a personal inspection of an invention by T. R. Jacobs and Dr. I. L. Dias of Petaluma, for the more perfect regulation of heat in an oven for hatching chickens. The incubator

presents as a whole a neat appearance. The egg chamber is octagon in shape, having a door in each space so as to give access to the pans, eight in number, which are so arranged that any pan can be removed without disturbing the rest. The advantage gained is that a large quantity of eggs can be divided so as to be handled with great ease. It stands on four turned legs, which also support the heater that supplies the hot air; coal oil being used for generating the heat. The hot air enters the oven directly in the center from the heater below, passing through an ingeniously constructed valve, which is acted upon by an electric magnet in connection with a regulator in the incubator, so as to perfectly govern the heat. When the hot air in the oven reaches the desired point, the regulator, which is more sensitive than mercury, completes the circuit, the magnets draw the valve shut, confining the hot air in the drum of the heater, allowing none to go to waste. At the same time fresh air passes through an opening in the side of the valve and up into the oven above, thus supplying fresh air to the growing chicks every time the valve works. When the oven cools a 16th of a degree the circuit is broken, the fresh air is shut off, and the hot air ascends until the regulator acts, and the valve works as before. The draft is from the bottom of the machine. The heat entering the center is compelled to pass over the entire length of the pan and under before it can escape, keeping the eggs nearest the door at the same temperature as those in the center. It is now incubating a quantity of eggs for exhibit at our coming fair, where all interested may view the wonders of artificially hatched eggs.

#### YUBA.

**ROLLED BARLEY FOR FEED.**—*Appeal*, Sept. 3: W. T. Ellis has for sale a lot of rolled barley, which he purchased from W. H. Perdue of Colusa. The barley is prepared for feed by a comparatively new process, in which the grain is not ground but simply crushed between rollers. The rolled barley seems to be much cleaner than ground barley. This is believed to be the first lot of rolled barley ever brought to this city. Teamsters are recommended to try it.

#### YOLO.

**COYOTES AND WILDCATS.**—*Mail*, Sept. 3: A gentleman from the country, well acquainted with the wants of the rural districts, suggests for the consideration of our Board of Supervisors at its next meeting the importance of offering a small premium for the scalp of every coyote and wildcat killed within Yolo county. The neighboring counties, we understand, have such a premium for the benefit of their inhabitants, and why should not Yolo county be added to the list? We have a long tract of grazing and hilly land stretching along our southern and western boundary, where such a premium offered would gradually rid the farmers and landowners of a very serious pest. Let it be tried for a year and see how much good would result. The cost would be but a trifle.

#### NEVADA.

**INDIAN AGRICULTURE.**—*Virginia Chronicle*: Mr. McMasters, the new agent at Pyramid reservation, who succeeded the late Mr. Spencer, is giving satisfaction to nearly all of the Indians, who think he is doing about right. Nearly every month he sends 14 wagonloads of provisions to Wadsworth for the Indians there. The agent has built a large dam across the river, with stone foundation, for irrigation, and has carried a flume across the river. Next year the Indians expect to raise a large quantity of grain. About two weeks since Sides saw grain growing on the reservation ground, 4 ft. high, without having been irrigated, which makes him think they will get big crops with irrigation. They are raising a good deal of barley. The hay crop is better this season than ever before. Corn, where irrigated, has come out well. Most of the Indians will stay there working on the ditch. Some have gone after pine nuts, and will be away about two months. The agent says he will have clothing for the Indians in the fall. About three weeks ago a camp meeting was held at the reservation. Over 1,000 Indians were present, and everything passed off quietly. They concluded that they did not mind what difficulties the Indians further north had as long as they were doing so well themselves.

**NEVADA AS AN AGRICULTURAL STATE.**—At first the rancher confined himself to the natural meadows of the well-watered valleys, and was slow to discover that in the adjoining sagebrush desert a more prolific soil was found, which, by irrigation, would produce abundant crops of grain and vegetables. So the sagebrush of the valleys and plains (deserts) is slowly and surely disappearing, to be superseded by large areas of grain, alfalfa and vegetables. In western Nevada there are streams that afford water enough, properly utilized, to irrigate ten-fold the area of land now under cultivation. In less favored parts of the State, reservoirs may be constructed and artesian wells bored that will afford water enough to irrigate hundreds of thousands of acres of these desert wastes, but the time has not yet come for their reclamation. Our population, for obvious reasons, increases slowly. Give us a steady, industrious people, who will be content to labor and improve farms, and Nevada may claim honors as an agricultural State that all New England could never hope to attain.

#### OREGON.

**SORREL KILLING.**—*Northwestern Farmer*: A little experience with a very bad sorrel patch of 20 acres might be permissible right here: The ground was plowed very late—the middle of

May—a chain being used to turn the weeds under. There was as thick a coat of weeds, it seemed, as could well be sprouted on ground about evenly divided between sorrel and wild pinks, and the field had been in continuous cultivation for nearly 30 years. About the time the field was plowed, the road supervisor called upon, and "warned us out" to work the road, and would not be put off until we could harrow down the field as had been our wont in summer-fallowing. Ten days time was spent on the road, which, by the way, were very hot ones, and when we returned to our summer-fallow it was thoroughly dried out, and scarcely a living thing growing upon it. It was then harrowed down and cultivated several times. The result the following year was most satisfactory. Instead of getting a yield of about eight bushels of oats to the acre, as in the year previous to the summer-fallowing, an average of about 25 bushels of wheat was obtained after a large amount was wasted in the starting of a new thresher in harvest. But very little sorrel or pink is now visible on that field, and a very fine stand of barley covers part of it. Be it remembered that the sorrel and pink were just in bloom when the ground was plowed, and furnished quite a good dressing of green manure, and the ground being thrown up loose, and the weather being so hot that it thoroughly cooked the weeds. It was replowed before sowing in the fall, after there had been sufficient rain to sprout all foulness that might be on the surface of the soil. Dry plowing and midsummer cultivation, we are satisfied, will greatly injure, if not permanently eradicate sorrel and pink.

#### American Grape Vines.

**EDITORS PRESS:**—My own experience in importing grape cuttings from the States last season may be of some benefit to some of your readers. I ordered last fall one lot from Missouri, one from Ohio and one from New York, and by thus doing, was better able to judge upon the comparative methods of packing, all differing in this particular. The season was an unusually bad one for importing, owing to snow blockades and floods, and the cuttings were therefore tried to their utmost, all being from 40 to 45 days on the road. One lot was very carefully packed in damp sawdust, the box being lined with several thicknesses of stiff, oiled paper and moss, also moist, around the butt ends. The cuttings, however, were not in good condition, many being too dry, and some having turned black, probably from the effect of frost. Other lots were boxed up with little or no packing whatever; although full instructions had been given that this should be attended to with the greatest care. Some of them I managed to resuscitate by standing the whole lot, without untying the bundles, in a stream of running water, being covered three-fourths of their depth. In eight days the buds of many were swelling, and they were then planted in furrows which had been previously laid off and sub-soiled. A great portion were, however, "lost beyond redemption."

The lot which arrived in the best condition—which was, in fact, in perfect condition—were packed in damp shavings, with wet moss plentifully applied at butt end of cuttings, which were tied up in small bundles of one hundred each. The boxes were such as are commonly received by importers of dry goods, and contained each about ten thousand cuttings. These were forty days in transportation. All these were ordered early in the Fall, but one box failed to put in an appearance until June 4th. The season in the States was, undoubtedly, a very trying one, but I certainly would order no more except under the condition that they be shipped not later than, say, December 1st, for if left longer than that, a long continuance of severe weather may defer their shipment until late in the spring, when, floods and washouts being in order, they are liable to be delayed still longer.

The cost of freight as the tariff at present stands, is about \$4 per thousand cuttings, this to be added to price of cuttings at the nursery. The railroad companies have been petitioned by Messrs. Bush & Son and Meissner, of Missouri, and others, and by individuals on this coast, to reduce this extortionate rate—\$6 per 100 lbs.; but, so far, to no purpose.

I imported most largely of the "Clinton," but also of the "Wild Riparia" and "Taylor," the former has given the best satisfaction, and I have a large number that are rooting well. Besides these, I imported a few of the best cultivated Eastern varieties as an experiment.

In talking with Mr. Lewelling, of St. Helena, on the subject, he was strongly of the opinion, that by experimenting, good phylloxera-resisting varieties might be produced, which would compare favorably with, and perhaps excel, the best European varieties. To attain this end he suggested that good varieties of the *Riparia* class be planted with those of the *Vitifera*, with a view to their natural cross-fertilization, he being of the opinion that this method was preferable to the more artificial one of dusting the hollow of one on to the pistil of the other with a fine camel's hair brush, plants being raised from the seeds of such cross-breeding.

LEONARD COATES,

Magnolia farm, Napa Valley, Aug. 25.

THE California Southern railroad track is now laid seven miles north of the San Diego wharf. Work is proceeding at the rate of a mile a day.

#### News in Brief.

DELMONICO, the famous New York caterer, is dead.

THE *Free Press* calls for an ice factory at Yuma.

THE disturbances in Tunis are constantly increasing.

SOLANO county has 500,344 acres, assessed at \$6,156,720.

ONLY white labor is employed at the North Bloomfield mines.

BORING for oil has begun at Sargent's tar springs, near Gilroy.

THE public schools of Jersey City are closed on account of the intense heat.

AT present there are about 126 prisoners confined in the Nevada State Prison.

GATHERING wild plums is one of the occupations of picnickers in Sierra county.

FOUR bears were killed at Webber Lake last week. The biggest weighed 400 lbs.

BEEES and birds are ruining the early grape crop in parts of Los Angeles county.

THE Miners' Union is about to erect a hall in Batte, Montana, at a cost of about \$8,000.

A PLENTIFUL rain has fallen in Mysore, India, and the harvest prospects are much improved.

AT Truckee, robins are rated as game birds; at Virginia City doves are in the same category.

THE 30 miles of water ditches at Cedar creek, Placer county, are being inspected and enlarged.

THE Chinese denizens of Stockton are building a new Joss house which will cost \$10,000.

IT is estimated that the wheat product of Minnesota this year will amount to 33,771,511 bushels.

NOTHING important has yet been discovered in regard to the attempted train robbery in Placer county.

ENERGETIC movements are being made by the German government against the Anti-Jewish outrages.

IT is said that 35 families from the Oneida community of New York have purchased lands near Santa Ana.

SHERMAN & Reynolds, St. Johns, Colusa Co., have thrashed 42,000 sacks of wheat from their rented lands this year.

A WOMAN rode 10 miles at Council Bluffs, Ia., Saturday, in 21 minutes and 49 seconds—the fastest time on record.

THE reported massacre of Carr's command in Arizona turns out to be not true, that officer so reporting at headquarters.

THE 100th anniversary of the founding of the Pueblo de Los Angeles was celebrated at Los Angeles in grand style.

THERE are 17 tax-payers in San Joaquin assessed at over \$100,000, and 15 assessed at between \$50,000 and \$100,000.

PLACER county contains 330,298 acres of land of a total assessed value of \$4,238,038. Total value of all property is \$8,887,921.

IT is reported that the North Pacific Coast railroad has been sold, and that its new owners are to make extensive improvements.

FLOWING wells of good, soft water are being struck at various points in the town of Santa Barbara, at a depth of from 45 to 72 feet.

THE drought continues in certain sections of the South, and in Virginia and North Carolina great damage to the crops has been sustained.

THE new town of Garfield is located 16 miles northeast of Colfax, W. T., and 8 miles southwest of Farmington, on a beautiful plot of rich, level land.

IT is said there is a band of from 100 to 150 antelopes on the north side of Kern river, and that they come within eight or ten miles of Bakersfield.

THE grain receipts at New York by rail are 5,000,000 bushels more this year than last, though the total receipts by rail and water are about 7,300,000 less.

VANDALS have destroyed most of the guideboards in the Yellowstone National Park, and the Montana papers ask to have new and more substantial signs erected.

THE mountain regions of Utah, Montana, Idaho, Wyoming and Arizona are crowded with explorers and surveyors, looking for passes and locating routes for railways.

AN unknown man was lately bitten by a rattlesnake, near Banning, San Bernardino county. Copious libations of whisky were poured into him, but he succumbed to the poison.

GRIZZLY DAVIS says the terror of the mountains, the old bear Clubfoot, has been dead at least four years. He saw his track in 1858, and it was as big then as it was in 1876, when he saw it last.

SIXTY thousand Americans visited Europe last year, spending on an average \$3,000 each. This year it is estimated that there will be at least 100,000, spending at least on the average from \$4,000 to \$5,000.

THE hot earth in the vicinity of Linkville, Or., is a great curiosity. Through this earth is constantly ascending a hot vapor, and both earth and vapor are strongly impregnated with remarkable curative properties.

THE St. Louis people are anxious for the summer to come to an end. They have had no such hot weather for twenty-five years as has been experienced there in July and August, and the heat was undiminished at last printed accounts.

THE Tucson *Stars* says: The loss occasioned by the recent washouts on the Southern Pacific railroad in Arizona will probably not fall short of \$2,000,000. More than 80 miles west of Tucson will cost more than the original building.





### Growing Old: An Ideal.

[Written for RURAL PRESS, by HOPE HATWOOD.]

Growing older? growing better;  
Casting aside the spirit's fetter;  
Seeing a light on a far off height,  
Choosing each day the path of right.

Growing old gracefully? gliding to power;  
Seeing the way with a clearer sight;  
Learning to live with a happier dower—  
Charity wise, and patience sweet.

Who would go back to milk for babes?  
Grow old we must—then why not sooner?  
There is always younger contrast that fades—  
And we must e'en pay our debts to Nature!

But have not we a recompense sweet,  
In flower and fruit from experience' tree?  
Charity wise, and patience sweet—  
Apple blossoms of gold to be!

Bread from the tree of life,  
To feed who need at her door;  
Now hath our Adam a better wife—  
With garments of light for her poor

Spinning a precious diamond thread,  
She weaves on the warp of time;  
While sweetly down her spirit's way,  
The bells of memory chime.

Her beauty lives, and grows  
Upon the food of soul;  
'Tis colored by her changing thought—  
As the moth's cocoon roll.

O happiness! so young and fair!  
Thou art beauty's silent sun;  
Transparent—tho' thy shining air—  
Perpetual youth is won!

San Diego, Cal.

### The Power of Good Grit.

[Written for the RURAL PRESS by MRS. RANCHER.]

There once dwelt in our bay city a poor widow with six children. I was about to say six small children, but that one can scarcely call the oldest of six, small. Yet at the time when my story opens, this lad, Harry, was but 13, and the other five ranged down to little two-year-old May, who was born just one week after the terrible accident that had made Mary Reid a widow. There were kindly friends to give aid in the time of distress and sickness, but almost without exception they decided that Mrs. Reid must give up a part of her children, while that good woman decided that this was not a necessity, and should not be done.

What a strange way we have of looking at matters! Scarce an acquaintance but seemed to think that the hardest part of Mrs. Reid's affliction was the burden of these six children; while in truth, it was in this very burden that she found her greatest consolation. For how could she dwell on her grief while she had a boy of 11 to guide and amuse. How could she weep and look sad, when the twins were bursting in from school, full of the importance and incidents of school-girl life? How could she refuse to laugh and play and beguile the hours with stories, while Tom and Fred were laughing or crying, or begging for "Old Mother Hubbard," as only children can?

At night, perhaps, when all the bairns were asleep, the bitter tears would fall; but busy, toilsome days bring hours of sleep; and so it was that while Mrs. Reid loved and mourned for her husband, she did not spend the hours in unavailing sorrow, as she would have done, had the blessed burden of children been denied her.

While May was still very young, she had met her wants from day to day by selling some of her furniture which, now that they were restricted to two small rooms, was no longer necessary. But as soon as possible, Mrs. Reid, who was really a good sewer, obtained needlework from some acquaintances, while Harry picked up occasional dimes out of school hours.

Yet, despite the strictest industry and economy, it was a precarious living they had; for while work and health were uncertainties, monthly bills came in with unerring precision. So, notwithstanding her cheery disposition, Mrs. Reid could not forbear an occasional heart-sinking as she considered the possibility of sickness and consequent separation from her little ones. Had it not been for the good grit that was part of her nature, she had sometimes been well nigh discouraged.

Besides, the constant click, click, click, of the busy machines that was such a necessity, was a great hindrance to the proper training of a family, while the steady wear on her nerves made the mother irritable, and she realized with keenest pain, that not long could she keep Harry from the groups that gathered nightly on the corners.

But blessed be necessities, for when they come heavy and hard upon us, oftentimes they sharpen our wits and compel us to cast about for some remedy, whereas, were they more tolerable we would continue to jolt along in the same old grooves, from the very inertia of our minds and bodies.

So in this pressure of circumstances Mrs. Reid's memory turned naturally to the days of

her childhood, to life as it was in the old homestead 'mid Hampshire's hills, where want and wealth were both unknown, but where comfort dwelt throughout the year; and the desire to give her little flock as good a cote, caused her to wonder if in all our great stretch of farms there was no home for her. Now those who really possess the quality and grit generally act as well as think.

First, Mrs. Reid went to the few friends of influence that she possessed, but like the guests to the wedding of which the good book tells us, they all, with one accord, began to make excuse. For one said she could not possibly succeed, and another that she would deprive her boys of their only opportunity for a business education; and a third, that no one could be found to give her a home while she was burdened with such a family; all of which so raised the spirit of obstinacy in the little woman, that she resolved to find her home by herself.

"Help yourself, help yourself," sang a voice in her ear, and she went home resolved to try what an advertisement in a certain agricultural paper would do. This is how it read:

"A widow woman, with six children, desires a home in the country; will do the usual work of a house, and take faithful care of whatever pertains to it, for the board of herself and children, provided that she can have an opportunity to raise fowls. Satisfactory references given."

Now this, though not an exactly alluring statement, was at least a truthful one, and the truth will give its own ring, and have its own weight. So this caught the eye of good grandpa Wrightmeyer, as he sat reading his paper aloud to the Dame. "What d'ye think o' it, Katie?" he said, wiping his glasses with his red silk handkerchief.

Now lest some of the readers of the PRESS imagine that Katie was some young girl, I must explain that while all around called the dame "grandma," or "auntie," she had always been Katie to him since the days when he had waited on her home from singing school.

"Wall, Obed," responded she, "it does seem an answer ter what I was sayin' not three nights gone, thet it seemed as ef there was so leetle poverty about us, we scurcely could claim the blessin' of given. No doubt the poor cretur' needs a hum."

"There's that there house down in th' sand field, where I keep a Chinaman five months o' the year," continued grandpa. Th' house ain't much, but its got a tight roof, an' a family could make themselves quite so-so if the woman has any gumption."

"Stands to reason thet she must have some thrift, or she'd scurcely hev thought o' thet idee of the fowls," replied the dame.

"Thet's so, Katie, thet's jes' so, and ef you've no objection ter it, I dunno but I'll write ter the widow and maybe give her a show."

"So do, Obed," replied the dame. "I'm glad ter hev yer fur it's been on my mind how th' Lord has blessed us in basket an' in store, while we seem ter make small return."

So this is how it came about that in the course of a few weeks Mrs. Reid found herself established in the sand-field house, where Harry, with so new and varied a field for employment and interest opened before him, forgot the allurements of the corner grocery, where the twins, with Tom and Fred for escorts, romped and frolicked, and worked, too, till I fear me, that could Mrs. Kittridge have seen them, she would have pronounced them, as she did her own, "a parcel of wild asses' colts."

Even little May grew so round and rosy that Grandpa Wrightmeyer called her "Apple Blossom."

The sand-field house contained four rooms. They were fairly-sized comfortable rooms, and in one was that source of much good cheer and sociability—an open fire-place.

Out of doors there was no fence and no trees, but a good barn, a good well of water, and a small old-fashioned windmill, which, though rather rickety in its movement, still furnished them with plenty of water.

Now, grandpa Wrightmeyer was indeed a charitable man, and the Dame was not behind in this sweet virtue. This was not their first act of helpfulness to others. But with all his kindness, grandpa was a thorough business man, and well he liked to find the same trait in those with whom he had to do. So Mrs. Reid, who was by nature and training exact in her dealings, found much favor in his eyes.

Nevertheless, he made no great promises, nor did he add any improvements until he was confident that they would be appreciated. Yet when a thing was really needed, Mrs. Reid found that he seemed aware of it as soon as she was. To illustrate this, let us walk in with the Dame this bright spring afternoon for a friendly chat.

"Good afternoon, Mrs. Reid," she says, shaking hands, but not kissing, for grandpa despised the modern habit of kissing all persons and at all times.

But there was a kiss for little Apple Blossom as she comes bounding in, and with the confidence of a child looks longingly at the old-fashioned bag on grandpa's arm.

Yes, there is the knitting work, and underneath are the peppermint drops, of which the bag seems to have a never-failing supply.

"I suppose you know that school opens shortly," begins the Dame, as she plies her busy needles, while Blossom sits on the floor and watches them as they click, click in and out.

"Yes," assents Mrs. Reid, "Harry was speaking of it at noon. He saw the teacher when she called at the Grove to-day."

"Yes, yes," says the Dame, "an' it is about her call that I kem over this afternoon, though

I've ben wantin' to come these several days. Th' schoolm'as wants a boardin' place. Now when I was a gal, Mrs. Reid, and you, too, fur thet matter, th' schoolm'as hed no reg'lar place, but jes' boarded round. Times is changed, and they want their steady hum now, like all th' rest on us, an' I don't blame 'em. Still there's no one in th' deestric't reely wants ter board 'em, and I thought, ez th' rest on us hed hed our turn, maybe you'd take yourn this year."

"To be sure, willingly," replied Mrs. Reid; but wouldn't it be too far for her to walk? Two miles and a half, I believe, you call it."

"Jes so," says the Dame, speaking slowly and by jerks, as she binds off the toe of the pretty striped stocking she is knitting for Blossom, "but it's mos' too far for the youngsters, too. So Obed, he thought ez how he'd no pertikular use fur Nellie this summer—she's scarcely stout enough for harvestin'—he'd let Harry hev her and th' old buggy to drive 'em all ter school. Thet is, ef you approved—here, Blossom, pull off yer shoes, and let Grandma see how these fit the little fat footsies." And the busy fingers almost mechanically began casting on the stitches for another pair for one of the twins.

"I surely could not disapprove of what will be such a benefit to my children," says Mrs. Reid, but will the young lady find this a lonely home, think you?"

"I should say not, with this little Blossom about," and the Dame's face was full of contempt for anyone who would not appreciate her pet.

Ten years have flown away since Mrs. Reid changed her city home for one in the country. The years have brought many changes; some of joy, some of grief; but whatever of education and culture, and ease of manners her children would have gained in their former home above what they have acquired in the country home, is far more than recompensed, in their mother's eyes, by their robust health, their independent life and their freedom from street manners.

Besides, as they were situated, would they have found time to have taken advantage even of the free means of culture which a city affords. As for a business education, do you call it no advantage for a young man to be daily in the society of a man of strict business principles, such as were possessed by Mr. Wrightmeyer?

Truly, Mrs. Reid missed her church privileges, for the services were irregular, and the preaching often greater in sound than in sense. But for the Sunday-school they could claim great results; because each one could not but feel that they had an individual responsibility in its success, and where all are workers, there is no failure. Financially, too, Mrs. Reid had succeeded fairly. But for this, both she and the children had been obliged to work, though not beyond their strength.

They had at all times of the year the care of place and of their fowls. For about two months in winter they had two men to cook for. Commencing with the haying season, they had in all about three months' cooking for harvest hands, varying in number from six men in heading to two in wheat-hauling time.

When Mrs. Reid had men to cook for, she required Harry to take charge of all out-of-door matters. So, too, of mornings and nights in school time. But when it fell out that there was no extra work at home, and no school, then he was given his time to work for himself. The greatest trial that Mrs. Reid had with this, her first-born child, was to keep him in school, when he longed to be earning something in the harvest field. Not that Harry was naturally better than other boys, but the responsibility that had been thrown on him by his father's death; the fact that there were younger children to look to him for an example; the habit his mother had of taking him into her confidence; and the example of strict business integrity set him by Mr. Wrightmeyer, all combined to make him a young man of more than usual promise. Moreover, grandpa and the dame would have adopted him, because they had no son; only one daughter, who was married and lived in the orange groves of Los Angeles. And as they could not do this, because the good mother would not give up her boy, and the boy would not leave the good mother, they played a little game of strategy by bringing a winsome granddaughter to the old homestead; and lo! the young man walked into the trap, and never even knew there was one. So now he lives at the Grove and manages grandpa's estate; and it is to be hoped that there will be some more Apple Blossoms to pet, for our particular one is sadly in danger of being spoiled.

As for the twins, they were bright, intelligent girls, and their mother, with a mother's fondness, longed to give them every advantage. The schools were very good, and by a little firmness she managed to have them gain rather than lose in the long vacations.

Then Mr. Wrightmeyer told the little girls that he would add a fence to their home if they would try to raise some "garden sars;" though I doubt if he had made this proposal, had he not seen with how much care they tried to succor a few trees and plants which they had already set out. So the fence was built, and Harry, with the help of Tom and Fred, spaded and manured and laid off the beds; while the dame, who was a famous gardener, gave instructions, which Mrs. Reid made sure were faithfully followed. No small task, indeed; for, though the little girls entered into the work with zest, their ardor cooled; and while they

they always found great delight in the growth of leaf and flower and fruit, they quite detested such humdrum work as weeding and hoeing. Nevertheless, they did it; sometimes with cheerfulness, sometimes with grumbling and excuses. But their mother knew too well the value of labor to bring up her children in idleness.

But there seemed to be no opening whatever, for the little twins to learn to play on some musical instrument, and greatly their mother deplored it.

Not that they displayed any especial ability in that direction, but that it had become so common among girls to study music, that their education seemed greatly lacking without it. So much so, that they well nigh forgot that there are other accomplishments quite as desirable as music. But one day Belle was reading an account of an entertainment in which the readings by Miss — were highly praised, and she wondered if they too could not excel in this matter. For Alice and Belle and Fred inherited from their mother, fine, full voices, a clear distinct pronunciation, and an ease of inflection that was quite remarkable.

Strange that their mother had not thought of this, for now she remembered that when a girl, her gift of reading and declamation had won much praise.

So it was, that Belle and Alice never learned to strum, and the world was deprived of hearing them pound out the marches and rattle off the symphonies of the great composers. Music is elevating and charming, but is it music to be able to jingle off a given number of notes in a given number of seconds. Would it not be better to find wherein a child's gifts really lie, and cultivate them accordingly.

By means of their study of these accomplishments, they became familiar with many fine authors, whose works they would scarcely have perused in ordinary reading. The whole family derived much pleasure and information; and when, as young ladies, they joined the Grange and the temperance society, they were quite as entertaining with a declamation or a reading, as were others with a song or sonnet, and much more so than they could have been in that way.

Tom and Fred are rollicking fellows yet—not as much sobered by cares as was Harry at their age; not as responsible, either, as good Grandpa Wrightmeyer has often proved. "But boys will be boys," he says to the dame, "and we can't expect them all to be like Harry."

So let us leave them, as Longfellow leaves his "Village Blacksmith,"

"Toiling, rejoicing, sorrowing,  
Onward through life he goes;  
Each morning sees some task begun,  
Each evening sees its close.  
Something attempted, something done,  
Has earned a night's repose."

Oskdale, Cal.

### Death of Mary Mountain.

Many a heart will be sad at the tidings of the death of Mrs. Mary J. Locke (Mary Mountain) which occurred at Berkeley last Friday. Readers of the "Home Circle" have known of her prolonged illness, and have missed her bright and wise "Farm House Chats." They will sincerely mourn the death of Mary Mountain as the loss of a true and beloved friend. As she had so endorsed herself to our Home Circle we shall take an early opportunity to pay a fitting tribute to the value of her life and her work. Mrs. Locke was buried in Lone Mountain Cemetery on Sunday, Sept 4th, being attended to her last resting place by a group of mourning relatives and friends to whom her departure is an acute bereavement.

### Our Workers.

EDITORS PRESS:—A very large percentage of the human family live, labor and die, without being noticed or known by the world of letters or popularity. Often we come in contact with superior minds, gifted in all that makes up a model manhood, quietly plodding through life, as if life depended upon fidelity in their own special sphere of action. No matter how well they perform their daily routine of useful labor, only those in their immediate surroundings know of their worth. Only at death or marriage is their name recorded, soon to be forgotten by the busy throng. But are these busy workers really neglected? Do not their achievements remain as monuments of skill and industry?

It is to those plodding everyday workers that we are indebted for all the great creations of civilization which are everywhere apparent. It is seldom the world's workmen are heard of in press or pulpit, and if flashes of genius from some unknown one brings his name into the popular papers of the day, the question is asked: "Who is he? what is he?" etc. Opinions or principles advocated by the world's workers find little favor from those who pander to wealth, influence or position. How different is it with those gifted with an abundance of gold-high positions, titles, etc. The productions of weak brains become the brightest gems of wisdom, and the world drinks in the weak mass because of the gilded fount from whence it flows.

Oh! how we admire the middle pillars of our social fabric—the real workers in humanity's busy hive. Go to their comfortable homes, which industry and genius have produced. Sacred indeed is the altar there established. Broad



the acres, golden in their wavy grains; peace and plenty, industry and frugality are apparent everywhere. Here it is that are firmly planted the true foundations of a nation's greatness and a nation's strength. If honor rests upon any one arm of society, to the workmen belongs the prize.

Man has a grand helpmate in woman. The casual observer cannot appreciate the influence of woman in her home sphere when mated with an intelligent worker, be he farmer, artisan, or a producer of what is useful or ornamental. Whatever honor the workers may be clothed with, woman stands out in bold relief as an inspiration to noble endeavor and higher achievement. When the world begins to fully appreciate and honor labor, however humble, we may look for that millenium which is recorded in the good book. When rich and poor will fare and share as one grand brotherhood. This pandering to those who own all, yet create nothing, is a good sign that the world is still afar off from her millenium, or that "man considers himself his brothers keeper." But this is moralizing. My subject is to display the line drawn between the sayings and doings of the poor genius and the man of wealth and position. Every passing day reveals the slights put upon the one and the flunkysim displayed toward the other, while the honest respectable producer is the peer of money bags in all which constitutes a noble, God-like manhood. The day is not far distant when the producer will occupy that station in society which his merits demand. True wealth is created, not hereditary. True manhood is the result of persevering industry, honest principles, a settled purpose and a heart alive to all philanthropic movements and whatever tends to ameliorate the condition of humanity.

Mt. Pleasant, Cal.

JOHN TAYLOR.

### Chaff.

NEVER pud off dill yesterday vot can't be done some oder dime.

Der vos many a slib bedween de upper lip, und de dibber.

Der vos no smoking vere der didn't vos a bundle of fire.

LUNA is referred to as the "silver moon" because it takes four quarters to make one moon.

WHEN a cat gives a concert from our garden wall, its not the cat that worries us; its the vaul.

BUT few men can handle a hot lamp-chimney and say there is no place like home at the same time.

### Homes and Their Influences.

EDITORS PRESS:—Mr. H. W. Hand, writing in a recent issue on the "Needs of Civilization," says:

"All we need is elevation; this is our demand, and must be supplied." And in proceeding to tell where this supply must come from, he further says: "We therefore need better teachers in our public schools.

This we consider a broad expression, including every grade of teacher, from the highest down to the lowest grade, who, unfortunately, sometimes scarcely deserves to be recognized as a teacher, and whose qualifications consist only in the name. And though this expression be modified ever so much, I do not favor the opinion that all the evils of Christendom should be laid at the door of the school teacher, the preacher and the magistrate.

Parents of children have a responsibility which must not be overlooked. It seems to me a pitiable state of affairs, when the responsibilities of parents can be rolled upon teachers, who undoubtedly have already both hands full. The child of to-day must be the man of the next generation, and if this child is nourished with the milk of malice, jealousy and dissension, it will be impossible for teachers or preachers to cure him of his crooked ways. We do not gather figs from thorns, nor grapes from bramble bushes; nor may we expect honorable offspring from dishonorable parents. To illustrate, take the "Bender" family, who were all natural-born desperadoes, perhaps the worst of which we have any record. It would undoubtedly require much persuasion to make either of them submissive and law-abiding citizens. I could mention instances which came under my own observation where it would have been just as impossible for a teacher to make good children of certain individuals, as it would be to convert the Bender family to Christianity; and as sure as effect follows cause, their parents were the principal cause of this crookedness.

The mother of George Washington would have been insulted had anyone told her that the future greatness of her son rested in the hands of his teachers. She did not try to shirk her responsibility, but instead, educated him to believe that a great and good man must be a great and good boy. I have never heard any person say, that for the greatest of all our great men, we are indebted to the efforts of a common school master. But the name of Mrs. Washington with that of Washington, will long live in the hearts of the American people.

I will say by way of conclusion, that while marriage is considered nothing more than a contract, and while divorces may be had for a song, and both parties join in singing that song, so sure may we expect evil, and only evil, and that continually.

AD REFERENDUM.

Colusa county.

## Young Folks' Column.

### "Gran'ma Al's Does."

I want to mend my wagon,  
An' I has to have some nails;  
Jus' two, free will be plenty,  
We're going to haul our rails.  
The splindest cob fences  
We're makin' ever was!  
I wis' you'd help us find 'em—  
Gran'ma al's does.

My horse's name is Betsy;  
She jumped and broke her head;  
I put her in the stable  
And fed her milk and bread.  
The stable's in the parlor;  
We didn't make no muss,  
I wis' you'd let it stay there—  
Gran'ma al's does.

I's going to the cornfield  
To rise on Charlie's plow;  
I spect he'd like to have me—  
I want to go right now.  
Oh, won't I gee up awful,  
And whoa like Charlie whoas;  
I wis' you wouldn't bother—  
Gran'ma never does.

I want some bread and butter,  
I's hungry worstest kind;  
But Taddie musn't have none,  
'Cause she wouldn't mind;  
Put plenty sugar on it,  
Tell you what, I knows  
It's right to put on sugar—  
Gran'ma al's does.

—H. A. Poe.

### Daniel Webster's First Plea.

Ebenezer Webster, father of Daniel, was a farmer. The vegetables in his garden suffered considerably from the depredations of a woodchuck whose hole and habitation was near the premises. Daniel, some 10 years old, and his brother had set a trap, and at last succeeded in catching the trespasser. Ezekiel proposed to kill



### The Coming Musician.

the animal and end at once all further trouble with him; but Daniel looked with compassion upon his meek, dumb captive, and offered to let him go. The boys could not agree, and each appealed to their father to decide the case.

"Well, my boys," said the old gentleman, "I will be the judge and you shall be the counsel to plead the case for and against his life and liberty."

Ezekiel opened the case with a strong argument, urging the mischievous nature of the animal, the great harm he had already done, said that much time and labor had been spent in his capture, and now, if suffered to go at large, he would renew his depredations, and be cunning enough not to be caught again, and that he ought now to be put to death; that his skin was of some value, and that, make the most of him they could, it would not half repay the damage he had already done. His argument was ready, practical and to the point, and of much greater length than our limit will allow us to occupy in relating the story.

The father looked with pride upon his son, who became a distinguished jurist in his manhood.

"Now, Daniel, it's your turn; I'll hear what you've got to say."

It was his first case. Daniel saw that the plea of his brother had sensibly affected his father, the judge; and his large, brilliant black eyes rested upon the soft, timid expression of the animal, and he saw it trembled with fear in its narrow prison house. His heart swelled with pity, and he appealed with eloquent words that the captive might go free. God, he said, had made the woodchuck; He made him to live to enjoy the bright sunshine, the pure air, the fields and woods. God had not made him or anything in vain. The woodchuck had as much right to live as any other living thing; he was not a destructive animal like the wolf; he simply ate a few common vegetables, of which they had plenty, and could well spare a part; he destroyed nothing except the little food he ate to sustain his humble life; and that little food was as sweet to him and as necessary to his existence as was to them the food on their mother's table. God furnished their own food. He gave them all they possessed, and would they not spare a little for a dumb creature who really had as much right to his small share of God's bounty as they themselves had to their portion? Yes, more, the animal had never violated the laws of his nature, or the laws of God, as man often did, but strictly followed the simple instincts he had received from the Creator of all

things. Created by God's hands, he had a right from God to food, to liberty, and they had no right to deprive him of either. He alluded to the mute but earnest pleadings of the animal for that life as dear to him as were their own, and the just judgment they might expect if, in selfish cruelty and cold-heartedness, they took the life they could not restore again.

During the appeal the tears had started in the old man's eyes, and were fast running down his sunburnt cheeks. Every feeling of a father's heart was stirred within him, and he felt that God had blessed him beyond the lot of common men. His pity was awakened by the eloquent words of compassion and the strong appeal for mercy; and, forgetting the judge in the man and the father, he sprang from his chair (while Daniel was in the midst of his argument, without thinking he had already won his case), and turning to his eldest son, dashing the tears from his eyes, he exclaimed: "Zeke, Zeke, you let that woodchuck go!"

## GOOD HEALTH.

### Treatment of the Ear.

Delicate and highly nervous persons who are liable to suffer from shocks and are inclined to affections of the hearing, should live apart from the loud noises of railroads, factories, iron mills, etc. They should avoid with great care exposure to cold and damp, and especially should not wear thin shoes in walking on damp ground or saturated brick pavements. Children ought never to be struck on the ear with the palm of the hand, even in sport. Sudden deafness results sometimes from boxing the ears, as well as the rupture of the tympanum. Often the sudden jar or shock with the concussion of air on the ear drives in the stapes or inner bone, destroying its function and diminishing the sensibility of the nerves.

Teachers should try a child's hearing before blaming it for stupidity or inattention, as in not a few cases the fault results from imperfect hearing. Cold being one of the chief causes of deafness, care should be taken to fortify the system against it. Especially is it necessary to guard against the liability to take cold, and this is best done by being much in the open air when it is clear and dry, and by the judicious use of cold or tepid water for bathing. In case of sensitive persons, water should never enter the ears under any other condition than warm or hot, to wash out some injurious substance.

Introducing into the ear the twisted corner of a towel, as some persons do, is particularly hurtful, tending to compress the wax upon the tympanum. Delicate persons should avoid draughts on the ears, sitting in wet clothes, sudden changes from the heated atmosphere of crowded rooms to cold winds, and other similar exposures. Tobacco smoke is injurious to sensitive nerves, and sometimes produces a peculiar diseased condition of the eustachian tube. Smoking in the open air should be especially avoided by persons whose hearing is impaired, as it injures the throat, and the opening between the throat and ear. No cotton or wool should be worn in the ears unless there is a perforation of the membrane of the drum. If there is itching of the ears, a little vaseline or cosmoline may be introduced on the end of the little finger, but never poured in.

No instrument of any kind, steel pens, ear picks, pins, sharpened sticks, should be put in the ear; they irritate the delicate lining membrane, and in some instances pierce it. Sea bathing should be indulged in only with great care as to the temperature and the avoidance of water in the ears. If the person is not robust, the head should be protected in cold water bathing and diving by an oilcloth cap or other covering, or by a pledge of wool. If the ears are sensitive, they should be protected, if possible, by the natural covering of the head, the hair being allowed to grow moderately long. Frequent cutting of the hair very close is one of the causes of catarrhal inflammation of the ear. The feminine fashion of wearing the hair and hat on the back part of the head tends to neuralgia and disease of the ear, and should not be followed in cold weather.—Dr. Turbhill.

SPREADING DIPHTHERIA.—It is not alone by the breathing of infected air that diphtheria may be communicated from child to child at school. Indeed, those who deny that the air is often or ever a medium of communication of the disease, and who are at all familiar with the thoughtless ways of little children at school, must yet recognize that the possible means of communication by almost direct contact are many. Who has not seen a schoolboy with his mouth full of marbles taken from a mate? Children often borrow lead pencils, which by instinct they wet in their mouth; they borrow sponges from one another to wipe their slates, which they moisten with saliva. In so democratic a community as a primary school-room it is a very common thing for all the children of the room to drink from the same cup, their clothes commonly hang in close contact in closets and ante-rooms. They manifest their likes and dislikes by biting or refusing to bite from the same apple; and little girls often pledge eternal friendship by that classic symbol, "sharing gum." Though these things may occur outside the school, they are the more frequent the more children are brought together, as they are in schools.—The Sanitarian.

## DOMESTIC ECONOMY.

PEARS FOR DESSERT.—The following recipes are delicious: Take finest pears just ripe, just cover with water, simmer till tender, but not in the least broken; lift them out into cold water. Now measure the water you have simmered them in; to each half pint put one pound of sugar. Boil up the syrup, then simmer the pears for five minutes; repeat this for three day, but allow 10 minutes simmering the last days. Keep the pears in the syrup; the day before any are wanted remove from it and dry in a cool oven. Or you may stew pears in syrup of five ounces of sugar, six cloves, six allspice; half pint of water, and half pint of port wine. This is the proportion for eight large pears. Pure claret may be used instead of wine and water. Simmer slowly till tender, probably three hours. A few drops of cochineal improves the color if water has been used. Pears and plums in equal quantities, with a few of the kernels of the latter chopped, preserve beautifully in the above syrup.

RASPBERRY VINEGAR.—Take 2 qts. of berries, over which we put 1 qt. of best cider vinegar; let stand 48 hours; press out the juice, and wring out and pour over 2 qts. of fresh berries; let stand 2 days, and then press out again, and put 1 lb. of fine white sugar to every pint of the liquid, and boil as directed by your correspondent, but 4 instead of 2. This makes a more condensed article, and goes much farther. Last Saturday I put up 15 wine bottles of strawberry vinegar and on trial found it excellent. The tying over with paper we never tried, and it may answer as well as corking, which we have always done. But since the strawberries have been tried, nearly all prefer the strawberry vinegar to raspberry. It is an excellent way to use the little berries not fit for market. Make in the same way for raspberry. The pleasure of giving this to our sick neighbors at times pays for all the trouble and expense of making it.—Germantown Telegraph.

PICKLED WALNUTS.—Select full-grown green walnuts or butternuts when they are soft enough to be easily pierced through with a needle. They are usually in fit condition in July. Prick 100 nuts well through and lay them into brine made of 4 lbs. of salt to each gallon of vinegar; let them remain 9 days, and at the end of the 3d and 6th days change the brine for fresh. On the 9th day lay them in the sun. After they are well drained place them in the sun till they turn black; they will need to remain several days. Boil 1 gal. of vinegar, 2 ozs. of black pepper, 1 oz. of cloves, 1 oz. of mace, 1 oz. of allspice and 1 oz. of root ginger sliced, 10 minutes, and pour it over the walnuts, which have been packed in jars full. When the vinegar cools cover them up tight. They will be ready to use in a month, but they are better in a year, and will keep ten years. This pickle is an excellent accompaniment of fish.

BRANDIED PEACHES.—To every pound of peeled peaches add one pound of sugar and one gill of white brandy; make a syrup of fine sugar, add only enough water to dissolve it, let it come to a boil, then put the fruit in and let it boil five minutes; remove the fruit carefully, then let the syrup boil 15 or 20 minutes longer, until it thickens; add the brandy and take the kettle from the fire; pour the hot syrup over the fruit and seal at once. If, after the peaches have been removed, a reddish liquor oozes from them, drain this off before adding the clear syrup. Put up in glass jars that have been rolled in hot water. The peaches should not be over-ripe.

PEACH MARMALADE.—To make peach marmalade, pare, stone and weigh the fruit; heat slowly to draw out the juice, stirring up often with a wooden spoon. After it is hot boil quickly, still stirring, 3/4 of an hour; add then the sugar, allowing 3/4 lb. to each pound of fruit. Boil up well for five minutes, take off every particle of scum; add the juice of one lemon to every 3 lbs. of fruit, and the water in which 1/4 of the peach kernels have been boiled and steeped. Stew altogether for 10 minutes more, stirring to a smooth paste. Put it up hot in air-tight cans, or, if you prefer to put it in glass jars, put it in them nearly cold, and put white paper on the top of each jar.

LIGHTING RAILROAD CARS WITH GAS.—A system of lighting railroad cars with gas has been tried on the Baltic railway. The gas is made on the cars by the action of sulphuric acid on zinc, the resulting hydrogen being carburetted by being passed through naphtha vapor. It is said that this gas has very little odor, that its flame is white, bright and constant, and that it is cheaper and gives better results than stearine candles.

TO DISTINGUISH SPURIOUS HONEY.—A solution of 20 parts of honey in 60 parts of water mixed with alcohol, gives a heavy white precipitate of dextrine if glucose has been added, while genuine honey if treated in the same manner merely becomes milky.

A NEW MATERIAL has lately been compounded of leather-cuttings soaked in hot water to remove the oil. The cuttings are then dried, ground to powder, pressed into molds and used for buttons, boot-heels, etc.





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G. H. STONG

SAN FRANCISCO:

Saturday, September 10, 1881.

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## The Week.

The days have been filled with engrossing events. The whole coast was thrilled with the announcement of an Apache massacre in Arizona, and it was feared at first that a large detachment of troops had been cut and forts demolished by the redskins. Fortunately later news makes the trouble much less serious, and there is still a chance of an Apache disturbance in the southeast which will arrest industry and development of the country, and doubtless cost many lives. It is to be hoped that such an evil will be averted.

The prisoner at Washington, pierced with a bullet, well nigh crushed by the secondary consequences thereof, and hemmed in with heat and malaria, has at last escaped to the refreshing breezes of the seashore, and will there renew his battle with death with stronger weapons than before. The ride from Washington to Long Branch was successfully made on Tuesday, and the people carried lighter hearts when the tidings came that no ill effects from the movement were apparent. Hope for the recovery of the President is again in the ascendant.

The fairs are in progress. The Mechanics' fair, in recognition of the popular appreciation and patronage, has continued its display until the end of the present week. As we write, the Petaluma fair, the El Dorado fair and the Chico fair are in full blast, each drawing together the productions of rich agricultural regions of our State. Next week comes the fine live-stock show and speed contests of the Golden Gate Association at Oakland, and the county fairs of Lake and Mendocino. All those within reach of these exhibitions should not pass them by.

DETECTIVES advance the theory that the wrecking of the Central Pacific train at Cape Horn mills was not the result of a desire to plunder, but was done in hopes of intimidating the railroad company into putting on extra watchmen along the route.

## The Future of the Fallow.

Our wheat growers in the great valleys have for the most part decided upon the great advantage in summer-fallowing, and the practice is covering larger areas each year. How long will this method of handling wheat land yield satisfactory results is a question of no little importance. There is, of course, no series of experiments made in our conditions which is yet old enough to give data for determining this point, and it is experience under our conditions which must finally settle the question. It is well enough to bear in mind, however, that careful experiments elsewhere show that land tires of this treatment as it does of any other treatment which does not return to it some equivalent of value received.

The experiments of Lawes and Gilbert, the well-known English experimental farmers, whose trial crops have been grown on the same land for about 30 years, seem to show that the systems of farming advocated by Jethro Tull and the Rev. Samuel Smith, were based upon erroneous principles. Soils exposed to constant stirring and aeration were said to absorb fertility from the atmosphere. That considerable amounts of nitric acid are produced where land is fallowed is tolerably certain, but it is not easy to explain the large reduction in the yield, of the plot under experiment, except upon the assumption that the nitric acid proceeds from nitrogen already stored up in the soil in an organic form, as in farmyard manure or in commercial fertilizers.

It will be of interest in this connection to review the experiments of Lawes and Gilbert, upon which the above conclusions were based: In 1851, one acre of land was fallowed in the ordinary manner, and after receiving several plowings during the summer, was sown with wheat during the autumn of the same year. In 1853, there was, of course, no crop, but the disadvantage of having a crop of wheat on alternate years alone, was so obvious, that in 1854-5 the land under experiment was divided into two half acres, and has so remained ever since. The wheat grown in 1855 was thus necessarily wheat after wheat without a fallow. The following table gives the produce of the first seven crops, and also that of the land growing continuously unmanured wheat crops:

	Wheat after fallow.	Wheat every year.
1852.....	37	14
1853.....	42	21
1854.....	17	17
1855.....	21	14
1856.....	35	20
1857.....	25	18
1858.....	34	18

In 1855, when the experimental plot under fallow was divided into two equal portions, and the wheat followed the wheat of the previous year, it will be seen that the two crops were alike.

The first crop of wheat after fallow is considerably more than twice as much as the wheat following wheat without a fallow; the second crop is exactly twice as much, but, after that, the difference is less than twice as much, and from 1859 to the present time the fallow and the permanently unmanured crop have approximated nearer and nearer to each other, until it has become a somewhat difficult question to decide which of the two crops now growing will yield the larger produce.

This would indicate that there will come a time when the "bare fallow" (such as it is practiced in this State) will not be able to lift the yield above that of land on which wheat is grown year after year and this of course would be equivalent to the loss of every other year to the grower, without counting the cost of the work on the fallow. Will California experience lead to a similar conclusion under our conditions? This is the question which should be borne in mind and the yield of fallow and wheat every year land should be constantly compared and the result recorded so that there may be data for some future conclusions. Of course the conservation of moisture in a fallow for a subsequent crop (a consideration of great weight in California) does not hold in the English experience we have described. The matter must be studied under local conditions and we merely mention it as worthy of such study.

THE PIONEER FROG FARMER.—We had recently a paragraph on the intention of a Sonoma fish hatching company to go into frog culture, and we remarked that it was probably the first venture of the kind in the State. This, it seems by a letter in the Yolo Democrat, is not so, but that the experiment has been tried in different parts of the State, and that frog culture, like most other producing ventures, is attended by difficulties. The writer in the Democrat says that frog farming was first introduced in Woodland by Jim Gover eight years ago, in the old Dick Beamer slough, near town, and after that by him in Salinas City, Monterey county. During the flood of 1876 the frogs became scattered, and some found their way up the river as far as Colusa. The ducks destroyed the frogs on the Salinas City farm, so Jim's new enterprise was for a time abandoned. Now, however, he is trying to reinstate himself in the business, and to that end has secured some of the finest croakers from France, and the largest breed of Green Backs from some of the Eastern States, which will be planted near Woodland.

## Slaughter of the Salmon.

The "closed season" for salmon terminated on Wednesday and Thursday's dawn brought to this city a deluge of magnificent fish. There was far more than the market required. We do not know what the excess was, but from what we saw at some of the receivers' establishments we should hardly think one fish in a hundred was called for by consumers. The result was that the stalls were turned into abattoirs, all hands were set to preparing the fish for smoking and canning, and the floors almost ran with blood, while the men were forced to pause now and then to rest their aching wrists. As we watched the quick handling of the fish our first thought was of the commercial and industrial aspects of the scene—the turning of so much perishable material into an article of merchandise and durable food. But as we watched the numbers of the fish which were ripe for reproduction and saw the millions of eggs thrown in the refuse which were intended by nature to be deposited for the growth of lory fish for the future, the impression was one of reckless waste. The "closed season" was materially shortened by the legislature last winter, and it seemed to us clear enough that the step was one which will result disastrously to the future stocking of the waters. This view of the case will doubtless be set forth ere long in exact form by the public spirited gentlemen of the Fish Commission, and if the results are not startling we are greatly deceived by what we saw in the markets.

Since the above was written we have found a paragraph in the *Evening Bulletin* of Monday which presents the matter of which we write in most forcible form:

Jacob Wray, Market Inspector, reports that he condemned this morning on the Washington and Jackson streets wharves, 18,000 lbs. of salmon as unfit for food. The Inspector states that never since San Francisco has been settled by white people have such immense quantities of salmon been for sale on the wharves. This is due to the shortening of the close season. The greater portion of the fish are thrown away as being full of spawn, and they will not keep any length of time. On Friday last, 23,000 salmon were received on the city wharves and on the following day, Saturday, 23,000, a total for the two days of 51,000 fish. The average weight of each was about 19 lbs., making 969,000 lbs of salmon sent here for sale on the two days mentioned, not one-half of which was disposed of.

## The English Wheat Crop.

The condition and amount of the home wheat crop in England are of course important factors in determining the market value of imported wheat. This year's crop passed through many vicissitudes, and according to the cable dispatches this week, has met final disaster just as its gathering was in progress. This being the case, a few notes from a review in one of our London exchanges may be of interest. The seed was as a rule put in late. An early and uncommonly severe winter kept the crop in very backward condition, although a fair plant was general, and a cold spring still further retarded its growth. At the beginning of May it was in appearance a month later than usual. Lying close to the ground, but unfortunately not tillering well because of the coldness of the land, the crop was healthy and fairly vigorous, but far from bulky. If the proverbial May wheat ear was to be found anywhere it was a great curiosity. At the end of the month there were comparatively few fields in which a hare could not have been seen a quarter of a mile off if it had been moving about. A dripping June caused the crop to shoot up rapidly, and it was then seen that, owing to the lack of tillering, the "ends" were scarcer than was desirable. Coming into ear with quick uniformity, the crop had a splendid blooming time, the weather being generally still and bright, with just enough rain to do good, with no frosts sharp enough to injure cereals. Then came the scorching weather, and a short crop of straw was felt to be inevitable. Still, the wheat was healthy, and as there were few decidedly gappy plantings, a fair yield was expected. Harvest began two weeks ago with fair anticipations, but on Tuesday, Aug. 29th, came the following by cable: "The past week has brought general disaster and ruin to the harvest." The farther details of the storm injuries may be found in our market review in another column. The result will be sad, for it was trusted to a good crop this year to lift English farmers out of the depression which they have suffered during the last three years.

WEIGHT OF RAIN.—The weight of rain is seldom thought of by those who put all their rain thoughts into inches, but the avoirdupois measurement is of interest. In England, the first seven months of 1881 were unusually dry, and an English exchange makes the comparison with other years as follows: The total amount of rain which has fallen during the seven months (January to July) of the current year, is equal to 583 tons weight of water per acre, only, whereas the average quantity for these seven months collectively is about 960 tons per acre; the seven months just passed being therefore deficient in their rainfall by about 377 tons per acre, when compared with the average; whilst for further comparison we may state that the fall for the corresponding seven months of the wet year, 1879, reached the enormous quantity of 1,623 tons per acre, or nearly three times that of the seven months of the current year.

## QUERIES AND REPLIES.

## Threshing Boiler Explosions.

EDITORS PRESS:—In your last issue you gave an account of a threshing boiler explosion in San Mateo county, but you do not mention the name of the maker of the boiler. I have noticed in every account of an explosion this season the name of the boiler maker has been withheld. We, who own boilers, would like to know by whom these are made that explode. It would interest many farmers if you would ascertain and publish the names of the makers of all the boilers attached to threshing rigs that have exploded during the present and past seasons.—RURAL, Los Angeles, Cal.

We do not know whose make the boiler was; the local paper from which we took the account did not give the information. We had not noticed that the maker's name in all the explosions mentioned this year had been omitted. Certainly so far as we are concerned there has been no intentional omission of this fact, nor have we ever been requested by boiler-makers to omit names. It would have been proper enough to give the names, and we should not hesitate to do so if we had trustworthy authority. It must be remembered, however, that the make of the boiler becomes of reduced importance when the testimony before the coroners' juries establishes the fact that the motors were being handled by men not properly qualified, or the boilers were permitted to get out of repair. A verdict of this kind has been rendered several times this year. A careless or ignorant engineer could blow up the best boiler that was ever riveted.

## The Crazy Grape.

EDITORS PRESS:—In answer to your article—"The Crazy Grape"—inquiring about La Folle, I can say that I have cultivated that vine many years with most satisfactory success in gravelly and adobe soils, and not enough praise can be given of it. It is healthy, first-class bearer, easy to cultivate, and is a No. 1 grape brandy vine, now in the cognac district of France, and it is at home in the Santa Clara valley, where, when appreciated to its full merits, it will be of great value to wine makers and distillers.—Y. B. Y. PORTAL, Burgundy Vineyard, San Jose, Cal.

## Camphor and Bamboos.

EDITORS PRESS:—Could you tell me where I would be likely to get some young camphor trees and some bamboo seed, and how much the trees and seed cost. Second, please tell me which is the best time of the year to trim the weeping willow.—M. R., Napa Co.

We believe there are importers of Japan plants who have camphor trees and bamboo plants for sale. They should be advertised. We should not hesitate to trim a willow any time when our saw was sharp.

## Brook and Wheelbarrow Reclamations.

While our minds are filled with the immensity of the great enterprises in reclamation which are making our engineers and mechanics known all over the world, and to which reference is made elsewhere in this issue of the PRESS, it is pleasant to turn for a moment to the contemplation of smaller things which men have done and can do in turning wastes into fertile fields. A writer for the *Stockton Independent* who is making the operations on Roberts island quite a study, fell in with G. W. Hurey who settled on the island in 1851 and has resided there ever since. Mr. Hurey condensed his philosophy of wheelbarrow reclamation into a nutshell when he said:

I have been here through all the floods, and seen the water pouring like a mill tail over the place we are sitting of before it filled it up to its present level. I had 14 acres filled from one to four ft. before the levee was erected; filled it all in with wheelbarrows. I used to cut big trenches from the river inward, put the excavated dirt on the banks, and that trench would fill with sediment in one or two floods, and be ready for emptying again. That is the proper way to reclaim this island. The leveeing has been commenced 100 years too soon, as the settlers will learn if they live long enough. I would have had the whole island reclaimed if the levee had not spoilt my occupation.

And there is another style of reclamation applicable on other situations, which does not involve the heavy work with the shovel and the barrow. It is that which has enabled George Campbell and his neighbor Chapman, of Vallejo township, to turn salt marsh into potato patches, as told by the *Petaluma Courier*:

George Campbell, who owns a large farm on the flat in Vallejo township, has been for several years reclaiming his salt marsh land by properly directing a small fresh water stream that runs through his place in seasons of high water. He has in this way made some of the best land on his farm, and on land that eight years ago was a common salt marsh, overflowed by salt water at high tide. He now raises fine peonies, potatoes, Mr. Chapman, a neighbor, has also, by a proper direction of the sediment during overflows, reclaimed land that produces fine potatoes and other crops.

Here are precedents for those who wish to make land on a small scale, and have not the capital for magnificent dredges. There are hundreds of situations where productive areas can be secured in this way, and when you have it, it is the richest land on your farm, and if it does nothing else it will make the vegetable peddler your debtor, not your creditor. And that is a good thing in California.

ABOUT 2,000 wild goats have been killed on Santa Catalina island, off the coast of Santa Barbara, this season. They are hunted for their pelts, which sell for 27 cts. a pound. It is estimated that there are still about 4,000 on the island.



## Steam in Land Reclamation.

It was only last July that Mr. Gladstone, in the House of Commons, in course of the discussion upon an amendment to empower the Land Commission to purchase waste lands in Ireland, said that of all enterprises connected with agricultural improvements, "there was none so difficult, slippery and hazardous as the reclamation of land." No doubt he had in his mind the reclamation of the Duke of Sutherland, who reclaimed 2,000 acres at a cost of about \$500,000, or \$250 per acre. But then the Duke of Sutherland was new in the business, and in his later creations has used steam cultivators, of which it is written:

We believe no intelligent person could witness the striking sight of Messrs. Fowlers' powerful steam plow holding its way steadily along the roughest surfaces it has to encounter, cutting a duplicate furrow (surface and subsoil) of the depth of two and half ft. at same operation, without fear of either breaking or sticking fast on the most stubborn rock-head; or the patent "discer" following and tearing the toughest "divot" into a fine mold, without admitting that the Sutherlandshire experience has accomplished a marvelous success in the adaptation of steam power to the reclamation of waste land.

How much this later land will cost the Duke, we do not know, but local authorities believe it will be profitably secured, and that there will be an exception to Mr. Gladstone's dictum on his own soil.

There are many who will grant the truth of Mr. Gladstone's remark as applied to California reclamations, when they remember the money they have lost in insufficient leveeing on the tule lands. There are others who are still at work in the full belief that a good levee will settle the problem, who will admit that Mr. Gladstone's adjective "slippery" taken in its literal sense is true of the work they have in hand. For in the Duke of Sutherland's venture he had to deal with "heath-land moor and hillside," while our reclaimers work in the mud which they have to take up in giant spoonfuls from the river bottom and deposit on their levees.

This leads us to remark the interesting and effective machinery which has been devised to meet the needs of California capitalists and resident representatives of foreign capital and which are just now a prominent feature of our mechanical engineering. There is the immense dredger built by General Williams and now at work on his tule estates. So far has its fame gone abroad that De Lesseps has sent for photographs of it to aid in the construction of his Panama canal machinery. There is another dredger which was built in Stockton and planned by John W. Ferris, superintendent of the Glasgow company's enterprise on Roberts island. The Stockton Independent gives an interesting description of this machine and its work.

Briefly, the machine is, first, a boat or scow, on which the machinery is mounted. Through the center of the scow is a well, in which works a "spud" or pile, which sinks in the mud and holds the boat in place while the dirt is being excavated. The boat can swing around on this pivot, if need be, cutting a swath all around it, and it must cut a width of 42 ft. to clear a road way for the boat. It can cut 12 ft. from water line down; but, where at work, it is unnecessary. It is now working in an old canal between the levee and the river, made by former land excavations in building the levee. This canal, when filled at high tide, was locked at each end, thus holding the boat at one tide level while the work is being performed. It could start from the river inwards, cutting its own road across the island to the opposite shore. In fair work, with four men, one on the bank or levee to prepare it for the harrows, this engine can excavate and place in position 500 cubic yards of earth in one day of 10 working hours. The buckets, which run on an endless chain, hold three cubic ft. each, not counting the overflow, or lip room of the buckets, which go far to make up any deficiency in partially filling those which happen to take a light cut. The engine, 10x20 cylinder, works easily on 700 pounds of Wellington coal per day, raising this material 20 ft. above the deck, where it is discharged into a hopper, thence to the conveyor which deposits it on the levee. The bottom of the buckets are open to permit the escape of the water, for the dryer the earth can be placed on the levee, the better the work is when finished. The buckets are four ft. from center to center and speeded at an advance of 75 ft. per minute. The conveyor is on the elevator principle. It has an extension of 75 ft. It is composed of an endless chain on each side—canvas lining—traversed with hard wood slats, two ft. apart, to which are attached iron rollers which run on railroad tracks above and below. From the hopper to the levee, the slope of the conveyor is enough that the weight of the material carried materially assists the force necessary to move it to shore. The capacity of this machine for mud dredging, if careless where and how it was deposited after lifting, would be 1,000 to 1,200 cubic yards per day.

We find in the Independent's account of the work of the Glasgow company, a record of some tests with different kinds of scrapers which will be of value to levee builders and ditch makers everywhere, hence we quote as follows:

Three kinds have been tried, and submitted to actual working tests, the results of their work being carefully measured. They were the four-horse scraper, made in Stockton by Lisenden, commonly called the Southern Pacific scraper; McGuire's old-fashioned scoop-shaped, and the Chicago scraper, each two horses. At this test, the basis of measurement of the holding or carrying capacities of the scrapers was arrived at by taking a given number of loads hauled in, indiscriminately, and measured. It was found that the McGuire scraper had a capacity of 4½ ft. the Chicago a scraper 8, and the Southern Pacific four-horse scraper 13½ cubic ft. Mr. Ferris kindly furnishes the following figures and estimates of scraper work, as tested by him on these works. The time occupied by a scraper making an average round, hauling dirt, say 65 ft., equals 1½ minutes.

The cost of a scraper team is as follows:

Wages of driver.....	\$1.00
Board of driver.....	50
Two horses' hire.....	75
Two horses' feed.....	50
Superintendence.....	25
Cost of two-horse team.....	\$3.00
Extra for additional pair of horses.....	1.25
Total cost of four-horse team.....	\$4.25

Taking, therefore, the capacities of the several scrapers as above, the McGuire scraper should take in 584 cubic yards per day, of 10 hours; the Chicago scraper, 1009; the Southern Pacific four-horse scraper, 170. Allow a dis-

count of 50% for delays of different kinds and capacities of the various scrapers, and the cost of work done by them may safely be taken as follows: McGuire scraper, 28 cubic yards per day, at cost of \$3.00, equals 103 cents per yard; the Chicago scraper, 50 cubic yards per day, at a cost of \$3.00, equals 6 cents per yard; the Southern Pacific four-horse scraper, 85 cubic yards per day, at a cost of \$4.25 per day, equals 5 cents per yard.

A test of 551 ft. of levee was devoted to a trial of the Southern Pacific four-horse scrapers—the conditions were favorable, that is to say, the material was free from weeds and lumps and the height of fill was not over about 4½ ft. They completed 5,037 yards in 62½ days' work, or 95 cubic yards of earth moved per scraper per day, at a cost of \$4.25, or 4½ cents per cubic yard.

Land reclamation is one of the most interesting of our agricultural operations, and we shall always be glad to hear from our readers the methods and results of any operations they may have carried out.

## The Arid Lands Commission.

Hon. T. C. Jones and Hon. R. W. Furnas, of Nebraska, who, with Prof. Hilgard, of the State University, constitute the commission appointed to report on the condition and prospect for agricultural progress on what are known as the arid lands of the United States, arrived in San Francisco, Sept. 4th. A meeting of the commission for consultation was held on Monday, and a plan of operations was partly determined upon. The commission finds itself embarrassed somewhat by the prospect of an Indian war in Arizona, and until the southeastern horizon assumes a more peaceful aspect they will not venture in that direction. We understand that the commission was advised by telegraph from Washington on Monday, that they had better devote the immediate future to a study of California, and if there should be a war below, it is possible that Nevada and eastern Oregon, and Washington Territory will be investigated before any movement is made in the direction of Arizona and New Mexico.

It has transpired that the first schedule of instructions to the commission considered chiefly the study of the southeast country with a view of determining its adaptability to the growth of the vine as already existing in California, and a consideration of its live stock interest and the chance for its improvement and extension. It is now probable that the commission will take a wider view of the field. It is quite certain that such was intended by those who secured the passage of the arid lands act in Congress. The chief idea in the proposed investigation was to secure a report upon the condition and prospects of agriculture throughout the whole Pacific coast country, and as the report is to be the work of recognized Eastern experts, guided and aided by a well-known local authority, their conclusions would have more weight in the great Eastern country than any report which emanated wholly from those whose interests are identified with the region under consideration. It is altogether likely that the broad inquiry contemplated by the promoters of the act will be sanctioned by the Commissioner of Agriculture, in whose charge the investigation was placed.

The Commission propose first to consider the agriculture of California, and they come at an opportune time to view the results of some of our producing specialties, as the agricultural fairs are now beginning. We understand that Judge Jones and ex-Gov. Furnas will start at once for Los Angeles to attend the Horticultural fair, in progress at that place this week. They may then examine counties adjacent to Los Angeles as time permits them, until the opening of the State fair at Sacramento, Sept. 19th. After that other directions of observation and investigation will be taken up as seems best at the time. As Prof. Hilgard is occupied with his University duties, and is already well acquainted with agricultural affairs in this State he will not accompany his associates, but will intrust them to public spirited citizens of the State whom we doubt not will secure them every opportunity for seeing. Messrs. Jones and Furnas are well-trained observers and they have come here not for a jaunt, but for a close study of conditions, achievements and opportunities for progress. Their work will no doubt redound to the benefit of our western land in many ways.

By the way of introducing the members of the Commission to our readers whom they may meet in the different regions of the coast, we may remark that we have long known Hon. R. W. Furnas as prominent in the progressive movements looking to agricultural advancement, not only in his own State, but beyond. He has a wide acquaintance with practical cultures of various kinds, and will be well able to appreciate the achievements which he may find here, and the peculiar conditions under which they have been secured. He will also bring a trained observation to the detection of the adaptabilities of our country, and to form a trustworthy and business-like judgment concerning them, and this is just the kind of judgment which will benefit us most.

Judge Jones, of Ohio, is recognized as a leading authority on the live stock interest of the country. He has done most excellent service as a contributor to the *National Live Stock Journal*, and as a high officer in the American Short Horn Breeders association. He has lately returned from a prolonged examination of cattle and cattle breeding of Great Britain, undertaken in the interest of American progress in this great industry. Judge Jones is also prominent in other public endeavors and enterprises, and is at present one of the Board of Trustees of the Ohio Agricultural college, founded under the Morrill act.

## The Debris Meeting in San Francisco.

In accordance with the instructions of the Sacramento Valley Anti-Debris Association, a committee consisting of Dr. Rodgers, of Marysville, and George Ohlyer, of Yuba City, came to this city on Thursday of last week and presented the facts about debris destruction before a meeting of the citizens of San Francisco at the meeting held at the Chamber of Commerce. The meeting was well attended, and the result of this movement on the part of the suffering dwellers in the debris region will be ultimately for the better information of the people generally upon the losses they have met and the ruin which impends unless the slickens are kept out of the rivers. Dr. Rodgers and Mr. Ohlyer presented the situation in a calm and dignified way, and they produced a good effect upon all who heard them.

J. C. Patrick, President of the Chamber of Commerce, called the meeting to order. Mr. Duffy moved that J. C. Patrick be elected Chairman. J. E. Gorden was chosen Secretary, and Mr. Taber elected Vice-President. The Chairman stated the object of the meeting briefly, and announced that Dr. Rodgers, of Marysville, would explain at greater length. In substance Dr. Rodgers said:

You are well aware that the Yuba river has been gradually filling up by debris from hydraulic mines for 20 years or more. As early as 1861 the mining debris first manifested itself at Marysville. Our system of leveeing was begun in 1862, subsequently we had no high water until 1865-66. That year a large portion of the town was flooded. From that circumstance arose an agitation regarding public levees. Action of the Legislature was obtained and in 1868 Marysville commenced her present system of leveeing. Mr. Rodgers then presented a statement of levee expenditure, as follows: In 1863 the Common Council expended the sum of \$17,200; in 1869, \$6,097; in 1870, \$6,817.75; in 1870, \$1,000; in 1871, \$1,000; in 1873, \$1,908.64; in 1874-75, \$300,000; in 1875 we had the devastating flood; in 1877, \$7,350; in 1878, \$3,638; in 1879, \$3,890; in 1880, \$49,618; in 1881, \$38,300. The total is \$237,917.99. When this thing will stop we are unable to say. The levee has been built as high as safety will allow, and ruin seems to stare us in the face. In addition to this the county has expended on the north side of the river for roads \$100,000, and \$75,000 on the south side. In regard to the destruction of property, damages, etc., along the Yuba river, Mr. Rodgers read from the report of the State Engineer, Mr. Hall, in show that the area damaged was 15,000 acres, and the depreciation \$1,754,000.

What we ask is that you consider in all its bearings the importance of this matter. Consider it as far as men, and then take such action as you deem best. Let every man be self convinced. We would ask that this Chamber of Commerce and Board of Trade appoint a committee to visit our locality. We would bear their expenses, and show what hydraulic mining has done. Come and see it and we will show it to you, and then let San Francisco do as it seems best.

On Wednesday of this week, the Grass brothers, who were owners of one of the most valuable ranches in the valley, brought in specimens of the original soil of 1863, and also specimens of the debris soil seven ft. deep. I leave these specimens here for your inspection.

The samples were in bottles, the original soil being a rich black loam; the debris was a coarse clean gravel, the stones rattling ominously on the sides of the jars as it was turned over and over.

The following speaker was George Ohlyer, of Yuba City, a prominent farmer who has worked wisely and vigorously against this debris destruction from the beginning. Mr. Ohlyer made a long and very interesting address, of which the following is only a skeleton:

He said that he was a good deal disappointed that Mayor Stone, of Marysville, was not present. That gentleman had been living in sight of the Yuba since 1849. As for himself, Mr. Ohlyer said he was nothing but a plain farmer, and could not speak well. He knew that the question was all absorbing. The whole Sacramento valley was interested. If hydraulic mining is prosecuted in the future as in the past, the valley will be blotted out as a habitable part of California. The Yuba and Bear rivers have no channels. Low water in the Yuba at present is three ft. higher than high water of 1872. If it were not for the levees the rivers would at low water run over the plains. Within the last few months there has been some mining at Oroville, and for a half mile below the bed of the river has been filled to the depth of 18 ft. The consequences of that fill will destroy the agricultural lands below.

Mr. Ohlyer presented a statement made by the Board of Levee Directors in Sutter county, showing the cost to levee district No. 1 for Feather river protection to have been \$431,000. The cost to the county was \$1,500,000. The depreciation of property for the last year is \$600,000, or 33%. The loss of wheat this year is 5,000 tons.

Mr. Ohlyer also said: "The channel has filled above the level of the surrounding country, and people continue to raise the banks. It is simply impossible for us to exist if the streams continue to be used as the dumps of the mountains. We ask that the debris be kept out of the streams. The Anti-Debris association of the Sacramento valley last Saturday passed some resolutions which guide my remarks. Having failed to get protection from the Legislature, we now shall appeal to the courts."

The speaker described the fertility and value of the vast limits of land which had been destroyed, and remarked in conclusion: "We had nothing but what is right. We hold that the streams belong to the State. Suppose that on top of the millions of cubic yards of debris brought down upon us the untold millions yet remaining shall come, what then will become of the valleys? Gentlemen, do you intend to see this property destroyed, your harbor filled up and your commerce taken away?"

Congressman Berry, of Sutter county, was called upon and he gave the following important statement of the standing of the question before the Representatives at Washington:

I was not sent down here by the Sacramento Valley Anti-Debris Association yet I am a resident of that portion of the State, and have absolutely been turned out of home by the debris from the mines. However, I am a Representative of the Third Congressional District. My constituents reside in the valleys and mountains. The property of the farmer is being destroyed, and the property of the miner is tied up in litigation. In Congress I have tried to bring about relief measures. Congress hesitates to offer relief because our people are divided. We are also not by conflicting theories of eminent engineers. Some contend that the only relief is the entire stoppage of hydraulic mining, while others say debris can be taken care of before it reaches the valleys.

I believe that you cannot accomplish anything by State or National aid until the pending questions in court are determined. Let us put the case this way. It is believed by the residents of this valley that no relief can be obtained

until hydraulic mining ceases. It is believed by the miners that their right to mine on the hydraulic system is guaranteed. Now the courts must lay down a rule before any harmony of action can be secured. In my judgment, either the farmer or miner will have to be sacrificed, but don't misunderstand that. There is a pall hanging over the valleys. Property has been destroyed and lands in the line of the flow not yet touched have greatly depreciated. Business has stagnated. We are not improving our homes, because we know not what day they will be swept away. Again, in the mountains, mines are not for sale. The miner is uncertain. He does not know what day an injunction may issue to prevent mining operations, and hence business in the mountains as in the valleys is paralyzed. Production is lessened, and this reacts on the entire community. I do not propose to discuss remedies. The only thing to be done is for farmers to join hands and ask the courts to decide the pending question. That would be the best thing for the miners. My opinion is that one man has not the right to destroy the property of another. It is also my opinion that the only remedy is the complete cessation of hydraulic mining, but that is not the question to be considered here.

It is proper for me to say that I am laboring in Congress, and so is your entire delegation, to protect and preserve the navigable channels of the State. It is my judgment that Congress will make liberal appropriations to preserve the navigable streams unless you transfer to Congress conflicting opinions. My opinion is that the farmer and miner should unite and ask the courts to define the status of the two interests.

A. L. Robinson, Vice-President of the Miners' Union, said the miners were not opposed to an immediate decision.

Mr. Hawley moved the appointment of a committee of five to visit the valleys and mountains and report on the question to a general meeting of citizens. The Chairman, Mr. Patrick, appointed Messrs. Hawley, Duffy, Heller, Stetson and Taber as the committee.

It was decided, at the suggestion of Mr. Robinson, that the miners should be heard at the general meeting, when the report of the Committee would be presented.

## The Early Fruit Region.

There are many features of especial interest in connection with the invigoration in the fruit trade this year. One is the improvement in the outlook for extra early fruit. The increase in the production in the very early regions of Solano county had reached such a point that there was being less and less advantage gained by the growers because the amount was becoming large for local needs. Thus the famous prices which the owners of the exceptionally early orchards once obtained were becoming obsolete, just at this moment the overland shipment of early fruit comes in, and brightens the outlook in the early districts, and seems to give warrant for almost any amount of tree planting which dwellers in the favored regions can undertake. This subject is forcibly presented by the *Dixon Tribune*, as follows:

Now that Eastern shipments are being made successful, the market has indefinitely enlarged, and henceforth the earliness of the Vacaville fruit promises to become or constantly increasing importance, while at the same time the enormous consumption of the canneries insures what before was lacking, a remunerative market for the later fruit. To show how early the Vacaville fruit comes in, we give the following dates for this year, as stated by Mr. Dietz: Tartarian cherries received April 25th; Pringle apricots, May 10th; Royal apricots, May 18th; cherry plums, May 20th; peaches, May 20th; plums, June 1st; pears, June 10th; grapes, June 18th. The advantage which the early fruit has was illustrated this year, when for several weeks the Vacaville grapes were selling by the carload at \$100 a ton, from which the price dropped to \$40, when the Sacramento valley grapes came in, ultimately going down to \$20 for the less valuable varieties. Eastern grapes do not become plentiful in the Colcago market till the middle of September, giving the California grapes complete control for at least two months, and the earliest section will take the cream of the business. The Marysville flats are the only section that approaches the Vacaville belt on early fruit, and there the best orchards have been destroyed by alkalis, and others are in imminent danger.

We understand that there will be much orchard planting this fall in the western part of Solano county, and the full capabilities of the region will ere long be utilized, although there is still much room for orchards.

PROF. HUMANN COMING.—A dispatch from St. Louis to the daily papers, announces that what we have alluded to as possible, that is the coming of Prof. Humann, as a resident of California is assured. The dispatch says: "Prof. George Humann of the Missouri State University, who recently visited the Pacific Coast, starts within a day or two for California to make his home on the Napa county vineyards of J. W. Simonton, and devote himself to the pursuit of viticulture, in which his reputation here is of the highest. His scientific tastes and practical experience cannot fail to contribute materially to the vine growing interests of the Pacific Coast." Prof. Humann is already known to our grape growing and wine making people, as the most prominent Eastern writer on the grape and the handling of its juice. He comes to our land of different grapes, different methods of growing them and different conditions affecting the vine, with much to learn, as he himself assured us during his last visit, but the new facts he will soon master, and his life of observation and experience hitherto will be of great value in the problems which are still in progress of solution here. We trust his California life will realize all his anticipations, and we know they are high.

THE Glasgow California Land Reclamation Company, on Roberts island, have one dredger, 200 men and 100 horses, with scrapers, engaged in rebuilding the levee on Roberts island. They will have 16,000 acres under a levee with a 60-ft. base, and 3 ft. above the floods of last winter. There will be a road 10 ft. wide on top of the levee.



## Golden Gate Fair Entries.

FIRST DAY—Oakland, Monday, Sept. 12th, 1881.

NO. 1.—RUNNING—Golden Gate stake, for all two-year-olds; 1 mile dash, \$50 entrance, \$15 forfeit, \$50 added. Second colt to save stake. Winners 5 lbs. extra.

C. Van Buren, Mayfield, names Peter Coutts' h c Forest King by Monday, dam Abbie W. by Don Victor.—Leland Stanford, Palo Alto, names b f Precious by Lever, dam Frolic by Thunder; also, c o Fostress by Foster, dam Flanilla by Planet; also, c o Conquest by Lever, dam Cuba by Imp. Australian.—W. A. J. Gift, Martinez, names b c Idler by Wildie, dam Kate Gift by Lodi.—Col. Caleb Dorsey, Modesto, names b c Daredevil by Spectre, dam unknown; also, b c Birdcatcher by Spectre, dam unknown.

NO. 2.—NOVELTY RACE—RUNNING—Purse \$200, for all horses owned on the Pacific Coast, 1-mile heat. First horse to first quarter, \$50; first horse to second quarter, \$50; first horse to third quarter, \$50; first horse to fourth quarter, \$50.—f c, the horse that first reaches a quarter pole, wins \$50. If a horse reaches all the quarter poles and home first, that horse wins the whole purse. Entries to close September 1, 1881.

NO. 3.—SAME DAY—RUNNING—Parade stake, free for all; one mile and repeat; \$75 entrance, \$25 forfeit, \$200 added. Second horse to save stake.

Wm. Boots, San Jose, names b b Nathan Coombs by Lodi, dam Miami by Belmont; also, b m Mollie H. by Wildie, dam Marie Hall by Norfolk.—Charles Thomas, San Jacinto, San Diego Co., names b m Arinda Howard by Crichton, dam Camillo Urso by Lodi.—Wm. Ash, Modesto, names — Miss Camilla by Monday, dam unknown.—Col. Caleb Dorsey, Modesto, names ch s Modoc Chief by Spectre, dam unknown.—J. A. Cardinel, San Francisco, names ch c Jack Douglass by Wildie, dam Lady Clare by Norfolk.

SECOND DAY—Tuesday, Sept. 13, 1881.

NO. 4.—TROTTING—240 class. Purse, \$600. First horse, \$350; second, \$150; third, \$50.

Frank Kelly, Santa Rosa, names b m Kitty Thorne by Hambletonian, Jr., dam a Patchen mare.—Robert Beck, San Francisco, names ch m Susie by George M. Patchen, dam Santa Clara.—A. Gonzales, San Francisco, names br g Del Monte, by Whipple's Hambletonian, dam Lady Livingston.—Charles W. Welby, San Francisco, names d h Star King by George M. Patchen, dam unknown.—Louis Duncan, Santa Clara, names b g Louis D. by King William, son of Whipple's Hambletonian, dam unknown.—Jos. Cairn Simpson, Oakland, names ch m Emress by Whipple's Hambletonian, dam Katy Tricks.—Wm. Smith, Sausalito, names blk m M'iles, by Young Rattler, dam half sister to Nell Crockett.

NO. 5.—SAME DAY—TROTTING—224 class. Purse, \$750. First horse, \$400; second, \$225; third, \$75.

B. B. Milroy, San Francisco, names r g Tommy Dodd by Alexander, dam Columbia Maid by Mystery.—Jackson Cochran, Sacramento, names ch g Asbley by Plumas, son of Werner's Rattler, dam by George.—James M. Learned, Stockton, names h s Reliance by Alexander, dam Maud by Mambrino Rattler.—J. N. Killip, San Francisco, names ch s Crown Point, John H. Goldsmith, Oakland, names b s Gibraltar by Echo, dam by Belmont.—L. H. Titus, San Gabriel, names br m Echora by Echo, dam The Young Mare.—Wm. Corbitt, San Francisco, names ch m Mollie Drew by Winthrop.—L. J. Rose, San Gabriel, names blk s Dei Sur by The Moor, dam Gretchen by Mambrino Pilot.

THIRD DAY—Wednesday, Sept. 14, 1881.

NO. 6.—TROTTING AGAINST TIME—Special purse of \$250 to any three-year-old on the Pacific coast beating 2:34, a full mile.

L. J. Rose, San Gabriel, names Sweetheart, by Sultan, dam Minchaba, by Bald Chief.

NO. 7.—SAME DAY—RUNNING—Free for all; 2-mile dash; \$100 entrance, \$25 forfeit, \$250 added. Second horse to save stake.

Charles Thomas, San Jacinto, San Diego county, names b s Wildie 4 years, by Wildie, dam Eva Coombs.—Col. Caleb Dorsey, Modesto, names ch s Modoc Chief, by Spectre.—J. A. Cardinel, San Francisco, names ch c Jack Douglass, 4 years, by Wildie; dam Lady Clare by Norfolk.—E. J. Baldwin, San Francisco, names b n Clara D., 6 years, by Imp Glenside, dam The Nun.—Wm. Boots, Milpitas, names br h Nathan Coombs by Lodi, dam Miami by Belmont.

NO. 8.—SAME DAY—TROTTING—Special Purse of \$400. Free for all 3-year-olds, except Sweetheart and Fred Crocker. First horse \$240; second \$96; third \$54.

D. Gannon, Oakland, b f Flight by Buccancer, dam Prairie Bird.—A. Waldstein, San Francisco, b s Albert W. by Electouer, dam by John Nelson.—Wm. Corbitt, San Francisco, h g Joe Atherton, dam Flora.

FOURTH DAY—Thursday, Sept. 15, 1881.

NO. 9.—PACING—Free for all. Purse \$100. First horse \$40, second \$20, third \$10. Nimrod to wagon.

S. W. Robinson, Hill's Ferry, names b g Brewery Boy, pedigree unknown.—Wm. Boardman, Oakland, names ch s Terry by Capt. Webster, dam unknown.—Wm. H. Cade, Oakland, names ch g Nimrod by Missouri Chief.—Geo. A. Vignolo, Los Angeles, names d g Johnny Wiggle, pedigree unknown.—P. Farrell, San Francisco, names b m Maud Bowley by Major Rathbone's Blackhawk, dam by Hamilton Chief.—T. J. J. King, names ch g Col. Dickey by Kentucky Hunter, dam unknown.—D. Gannon, Oakland, names br m Ouida by Blackhawk, dam Fanny King.—S. Sperry, Petaluma, names blk s Washington.

NO. 10.—SAME DAY—TROTTING—Free for all 4-year-olds. Purse \$750. First horse \$455, second \$255, third \$75.

Frank J. Button, Santa Rosa, names b s Alex. Button by Alexander, dam Lady Button by Napa Rattler.—Wm. H. Cade, Oakland, names b m Annie Laurie.—J. H. Dodge, Stockton, names ch s House-ty by Priam, dam by Chieftain.—John H. Goldsmith, Oakland, names gr s Romero by A. W. Richmond, dam by Mambrino Pilot.—L. H. Titus, San Gabriel, names b m Belle Echo by Echo, dam by old Belmont.

FIFTH DAY—Friday, Sept. 16, 1881.

NO. 11.—TROTTING—2:30 class. Purse \$750. First horse \$450, second \$225, third \$75.

S. Solomon, San Francisco, names b g Dave by Niagara.—Robert Beck, San Francisco, names ch m Susie by Geo. M. Patchen, dam Santa Clara.—Newland & Hammond, Oakland, names gr s Poscora Hayward, by Billy Hayward, dam Lady Poscora by Poscora.—J. H. Tennant, Pinola, names blk s Pinola Patchen by Liberty Patchen, dam Morgan and Timoleon.—C. H. Lawrence, Plumas county, names gr Wil. Tell by Werner's Rattler, dam by Protestant.—M. W. Hicks, Oakland, names hr m Fawc by Marion, dam by Mahaska Belle.—Doriel McCarty, San Francisco, names b g Hancock by Hambletonian, dam of Crown Point. H. McConn, San Francisco, names Jas. McCord's r g Blackmore by George M. Patchen.—Jos. Cairn Simpson, Oakland, names ch m Emress by Whipple's Hambletonian, dam Katy Tricks.—James Misner, Portland, Oregon, names b s Dexter by Bellfounder, dam a Messenger mare.

NO. 12.—SAME DAY—Ladies' Riding Tournament, for several very elegant premiums; besides many rich and choice special prizes offered by the merchants and citizens of Oakland and San Francisco. None but ladies of the highest respectability allowed to compete. Ladies wishing to compete for premiums in this Tournament, will send their names to the President or Secretary, on or before Thursday, September 15, 1881, endorsed by two gentlemen of the society. Conditions will be published in the daily papers.

NO. 13.—SAME DAY—RUNNING—Free for all mules of any age. Catchweights; two-mile dash. Purse \$150. First mule \$30, second \$45, third \$15.

McGill, of Peralta, names Quen Sabe.—G. W. Turrell names Last Chance. H. H. Rockefeller names You Bet. Entries to close September 1, 1881.

SIXTH DAY—Saturday, Sept. 17, 1881.

NO. 14.—TROTTING—Free for all. Purse \$800. First horse \$480, second \$240, third \$80.

J. B. McDonald, Marysville, b s Brigadier by Happy Medium, dam Lady Turner by Frank Pierce.—John H. Goldsmith, Oakland, b g Bateman by Black Harry Clay, dam by Rysdick's Hambletonian.—J. A. Killip, San Francisco, b s Abbotford.—J. M. Learned, Stockton, b b Reliance by Alexander, dam Maud by Mambrino Rattler.—E. J. Baldwin, San Francisco, h g Volney by Volunteer, dam Defiance.

NO. 15.—SAME DAY—TROTTING AGAINST TIME—Special Purse of \$100, to any 2-year-old on the Pacific coast beating 2:30, a full mile.

L. J. Rose, San Gabriel, names Eva by Sultan; full sister to Sweetheart.

NO. 16.—SAME DAY—A special Bicycle Tournament for the Association of Gold Medal and Silver Medalists of the Silver Medal to second, and Bronze Medal to third.

This is to be a five-mile dash, and some of the most accomplished bicyclists on the Pacific coast will compete. The Managers intend making this Tournament of bicyclists an interesting feature of the fair. Conditions will be duly published.

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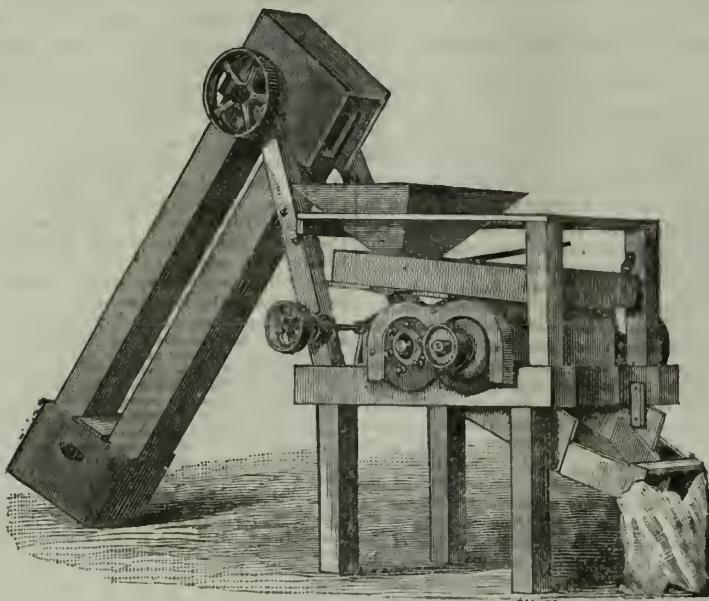
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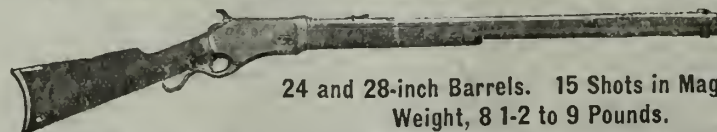
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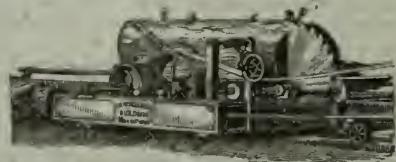
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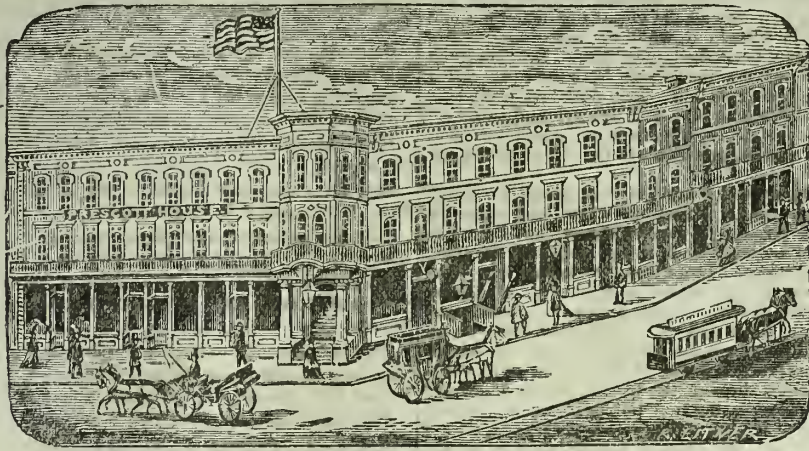
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One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

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Sold by all Wool Commission Merchants in San Francisco.

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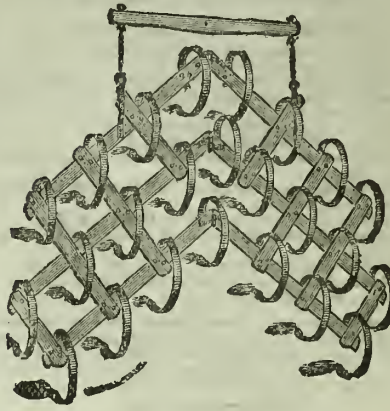
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And make money by saving time and working your fallows before harvest. Our new size six-foot ORCHARD or VINEYARD HARROWS are provided with bandles, rendering them as easily controlled as the Cultivators. These implements are acknowledged by all who are familiar with their work, to be the most practical for general use in the orchard or vineyard of any yet offered to the public. Manufactured only by

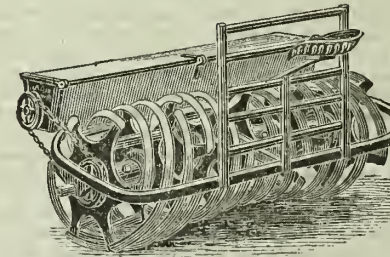
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Putting in summer fallow and volunteering can be done with six animals, at the rate of 15 acres per day, in the most thorough manner.

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No Agricultural Machine put on the market in the past 25 years has received a more hearty endorsement by practical farmers than the Screw Pulverizer.

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This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over grade knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to

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Improved Stockton Gangs and Reversible Molds, wholesale and retail, at reduced prices. Every one warranted. Shipments made to all ports with promptness. Iron and Brass Castings. Agent Holt & Young's Combined Header and Thresher. Address,

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## PATENTS AND INVENTIONS.

### List of U. S. Patents for Pacific Coast Inventors.

From Official Reports for the "Mining and Scientific Press," U. S. and Foreign Patent Agents.

FOR THE WEEK ENDING AUGUST 23, 1881.

- 245,991.—FURNACE—Bell & Griffith, Grautville, Nev.  
 245,994.—PROJECTILE—H. Carr, S. F.  
 245,943.—DAMPER PLATE AND REFLECTOR—A. Good, S. F.  
 246,125.—MECHANISM FOR CONVERTING MOTION—Wm. Hanna, Gilroy, Cal.  
 246,157.—HEADER—M. N. Laufenburg, S. F.  
 246,003.—FILTER—Benno Goldman, S. F.  
 245,992.—FIRE BASKET FOR STOVES—W. H. Loomis, Alameda, Cal.  
 246,030.—SPRING ATTACHMENT FOR SAWS—E. Moberg, Callahan's Ranch, Cal.  
 246,032.—MUD CONVEYER—W. A. Phillips, S. F.  
 246,210.—DEPRESSION PULLEY IN CABLE RAILROAD—H. Root, S. F.  
 246,051.—GALVANIC BELT—H. C. Warner, Gilroy, Cal.  
 2,672.—STOVE MAT FOR COFFEE POT, ETC.—Elizabeth C. Zuawalt, Port Orford, Or.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific Coast Inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**FEED WATER HEATER AND CONDENSER FOR STEAM BOILER.**—Reese Lewellyn, S. F., assignor to Lewellyn Steam Condenser Manufacturing Co. Dated, Aug. 16, 1881. No. (re-issue) 9,840. The invention relates to an apparatus for freeing water fed to steam boilers from earthy matters held in solution therein—such as carbonate and sulphate of lime, magnesia, and the like—and for utilizing at the same time the otherwise waste-heat of the exhaust steam. It consists first and essentially of a chamber provided with a mass of loose stones, probably cobble-stones, supported in said chamber in such a manner as to prevent the free passage of water and steam through and among all the stones, with a pipe in the upper part of said chamber, adapted to supply the water in a uniformly diffused state over the entire mass of stones, adapted to diffuse in like manner the steam upon the lower surface and cause it to pass up through the mass, whereby the salts and other matters—such as carbonate and sulphate of lime and magnesia and silica held in solution and producing scale in the boiler—are precipitated upon the stones and the heat of the steam utilized. It consists in the second place, in injecting the steam horizontally into the lower part of the chamber underneath the stone, whereby it is more uniformly diffused, brought into immediate contact with and caused to penetrate every part of the mass of stones and approximately to heat all parts alike. It consists thirdly, in placing among the stones a layer of filtering material, thereby combining a precipitating and filtering apparatus in one chamber.

**PROJECTILE.**—Howard Carr, S. F. Dated Aug. 23, 1881. No. 245,994. This invention relates to certain improvements in projectiles for guns, and it consists in a novel formation of a projectile having the cannelures or grooves formed around its base in spiral lines, which extend to a point near the center of the bullet, where they disappear in a rib on the rear part of the smooth portion of the bullet, which smooth portion continues from that point to the apex. The object of this invention is to provide an opening or openings around the base of the bullet, by which the pressure of the gas will be exerted toward the axis around the rear portion of the bullet, where the explosion of the powder takes place, and thus prevent such an upsetting of the bullet as to cause too great friction within the barrel of the gun. It also serves to distribute the lubricant thoroughly over the space occupied by the cannelures or grooves upon the bullet and within the barrel.

**HEADER.**—M. N. Laufenburg, assignor to Baker & Hamilton, S. F. Dated Aug. 23, 1881. No. 246,157. This invention relates to certain improvements in that class of apparatus employed for harvesting grain, known as "headers." A difficulty arises when the driving gear is rigidly secured to the axle, on account of the end play of the parts, which often breaks the gear by the forcible contact with the pinion. The inventor overcomes this by a peculiar method of securing the gear to the hub, so that while forced to revolve with the wheel, it will be allowed side play sufficient to relieve it of all this strain.

**THOSE HOT SPRING CHICKENS.**—The Calistoga correspondent of a Napa paper is authority for the statement that Mr. Ormsby's experiment with artificially hatching chickens by employing the heat from the hot springs, to which we lately alluded in the PRESS, was a success, and he was anxious to engage in the work, but privileges necessary for conducting the business on a large scale could not be obtained on the spring's property, and he was therefore obliged to abandon the enterprise.

### The New Process Flour.

The millstone is a thing of the past in flour manufacture, and its place is being rapidly taken by Hungarian steel rollers. By the new process the wheat is not ground, but cracked. The rollers are of steel, about thirty inches long and eight inches in diameter, and it takes five sets of them to complete the process of flour-making. Each set of rollers runs closer than the preceding, the last having little else but wheat hulls and the waxy germs of the wheat which do not crack up. Under the old method this waxy germ was ground with the starchy portion and bolted through with the flour, but by the new process the germ is flattened out and sifted or bolted out, while the nutritious part of the wheat is crushed into flour. Between each set of rollers the wheat is bolted or sifted through coarse cloth. This cloth lets the disintegrated particles of wheat through and passes off the larger pieces, which are put through a closer set of rollers, and so on to the end of the operation.

To describe the process more minutely, we will take a single kernel of wheat and trace its course through its various stages: The kernel is passed between steel rollers on which are lined corrugations. This breaks the kernel into from six to eight pieces, and a great deal of starchy matter falls out. These pieces are passed over a cloth sieve and the starchy particles which pass through are the best portion of the wheat. The six cracked pieces of wheat after being sifted are passed through the second rollers, which are quite smooth, but not polished, and the kernel is by this time cracked into perhaps thirty-six pieces, and the crushed matter is bolted again. The thirty-six pieces are then run through a third set of rollers and cracked into about 216 pieces, and bolting again takes place. By this time all the best part of the wheat is bolted out, and finally nothing but the hulls, a few particles and the waxy germs remain. What is left is rolled through another set of rollers and again bolted, and the hulls and grains are ground upon an ordinary millstone. The process may be not inaptly described as "cracking and mashing," and with each successive step a lower-grade flour is produced.

### THE SPEED OF THOUGHT AND THE SENSES.

Some interesting experiments have recently been undertaken by European scientists, to demonstrate the speed of thought along the various nerves of the human body, and also the speed of the several senses. Helmholtz has shown that a wave of thought would require about a minute to traverse a mile of nerve, and Hirsch found that a touch on the face was recognized by the brain, and responded to by a manual signal in the seventh of a second. He also found that the speed of sense differed for different organs, the sense of hearing being responded to in a sixth of a second, while that of sight only required one-fifth of a second to be felt and signalled. In all these cases the distance traversed was about the same, so the inference is, that images travel more slowly than sounds or touch. It still remained, however, to show the portion of this interval taken up by the action of the brain. Prof. Donders, by very delicate apparatus, has demonstrated this to be about .7500 of a second. Of the whole interval, .4000 are occupied in the simple act of recognition, and .3500 for the act of willing a response. When two irritants were caused to operate on the same sense, 1-25 of a second was required for the person to recognize which was the first, but a slightly longer interval was required to determine the priority in the case of the other senses. These results were obtained from a middle-aged man; but in youths the mental operations are somewhat quicker than in the adult. The average of many experiments proved that a simple thought occupies 1-40 of a second.

**TWINKLING OF THE STARS.**—Recently M. Montigny has written again on the increase of the twinkling of stars when there is a display of the aurora borealis. The increased scintillation is seen all the more clearly on winter than on summer nights, and the phenomenon is more apparent when stars in the northern region are observed. The author thinks the effect is not due to the direct influence of the electro-magnetic light of the aurora on the scintillation itself, but to disturbances (probably a cooling) which coincide in time with the appearance of the aurora in the upper regions of the air traversed by the star rays.

**EFFECTS OF INTELLECTUAL WORK ON THE BRAIN.**—What are the effects of different kinds of intellectual work on the cerebral circulation? This question M. Gley, a French physiologist, has attempted to answer by experiments made upon himself. When he applied himself to a subject which he had a difficulty in understanding thoroughly, and had, therefore, to concentrate all his energies upon it, the rhythm of the heart was far more accelerated than when he took up some matter with which he was well acquainted.

**SCIENCE IN FLOWER CULTURE.**—A gardener at Naples holds out the hope that in the near future the camellia will rival the rose in fragrance as well as in beauty. After years of experience he has succeeded in producing a camellia with a delicate perfume. It is of a pale rose color, and the gardener hopes to obtain before long fragrant white blossoms.

### The Coming Fairs.

We give below a corrected list of the coming fairs in this State, several changes and additions having been made since we printed the list before:

- Southern California Horticultural fair at Los Angeles, September 5th to September 10th. Secretary, Geo. Rice.  
 Sonoma and Marin District fair at Petaluma, September 5th to September 10th. Secretary, W. E. Cox, Petaluma.  
 Third District Agricultural fair at Chico, September 6th to September 10th. Secretary, W. J. Blackwell, Chico.  
 El Dorado District fair at Placerville, September 7th to September 10th. Secretary, C. H. Wetherwax, Placerville.  
 Golden Gate District fair at Oakland, September 12th to September 17th. Secretary, L. Walker, Oakland.  
 Mendocino County fair at Willits, September 12th to September 17th. Secretary, B. F. Coates, Willits.  
 Lake County fair at Lower Lake, September 14th to September 16th.  
 State fair at Sacramento, September 19th to September 24th. Secretary, E. F. Smith, Sacramento.  
 San Joaquin Valley fair at Stockton, September 27th to October 1st. Secretary, J. M. Larue, Stockton, Cal.  
 San Mateo and Santa Clara District fair at San Jose October 3d to October 8th. Secretary, T. S. Montgomery, San Jose.  
 Contra Costa County fair at ———, October 10th.  
 Monterey District fair at Salinas city, October 11th to October 15th. Secretary, S. J. Westlake, Salinas city.  
 Nevada State fair at Reno, October 10th to October 15.  
 Sixth District fair at Los Angeles, October 31st to November 5th. W. J. Neely, Secretary.  
 Plumas County fair at Greenville, October 24th to October 29th. W. D. Fleteber, Secretary.  
 Bay District races in San Francisco, October 12th to October 15th. Secretary, T. W. Hinchman, San Francisco.  
 Sonoma Agricultural Park Association races at Santa Rosa, August 30th to September 3d. Secretary, Chas. Hofer, Santa Rosa.

Our list is not complete. We shall be pleased to hear from all these societies.

### SAN MATEO COUNTY HORTICULTURAL SHOW.

It will be seen by a paragraph under San Mateo county in our "Agricultural Notes," that there is to be a show of plants, flowers, fruits and vegetables in the city of San Mateo, on Sept. 29th, under the auspices of the local Horticultural society. We trust this announcement will lead those who have well grown plants and creditable orchard and garden products, to prepare for exhibiting them. If there can be a good horticultural exhibition held this year the result will be the promotion of the interest in all its departments. San Mateo county has some of the best gardeners and greenhouse men in the State. It has also many citizens of wealth who have a taste for fine growths, and spend much money to secure them. We trust both the patrons and the practical workers will take an interest in the coming exhibition, and co-operate heartily.

G. M. PURSELL has on exhibition at the Mechanics' fair an improved washing machine, known as the "Californian," simple in construction, with a false bottom, iron box springs to hold the rubber down, and a device by which the rubber can be held up, leaving the tub open and free. This machine is an improvement on the well-known "Humboldt." An experimental test made on shirts, lace curtains and delicate fabrics proved that it would wash four shirts to one by hand, and delicate buttons sewed on the fabric in this public test, remained unbroken. It has worked 100 shirts in 80 minutes, and is the perfection of washing machines.

**A FERTILE VALLEY.**—The Ventura Free Press states that Mr. J. Hobart has finished threshing his wheat crop of 35 acres in the Upper Ojai valley, and realized 1,060 cents—equal to 50 bushels per acre. The Free Press says it mentions this gentleman's farm because the figures were obtained directly from himself; but the threshers assert that every farm in the fine valley yielded at the same rate. What section of country in America or the world can equal this? There is no land for sale in the beautiful upper Ojai valley.

### The Value of the Rural.

EDITORS PRESS:—I wish to say a word in commendation of your paper, which I have taken since 1st of January last, by simply remarking that I consider any one of three articles in August 13th issue, viz., "Evaporation from Stirred Soil," "The Linnet Nuisance," and "Scale Insects at San Jose," to be worth to me fully the price of a year's subscription. Information on those subjects. I shall save a good many "three dollars" next year by putting in practice the suggestions there made.—SUBSCRIBER, Anaheim, Cal.

**THE RURAL PRESS IN MISSOURI.**—A reader of the RURAL in St. Joseph, Mo., in a letter renewing his subscription says: "Of all the agricultural publications for which I subscribe, none is looked for and perused with such interest as the RURAL PRESS."

**ALWAYS ALIVE.**—The PACIFIC RURAL PRESS, a paper that is always alive to anything that affects the interests of the farmer or dairyman.—Petaluma Argus.

[Communicated.]

### Fruit Drying Experience.

SAN FRANCISCO, Sept. 5, 1881.

EDITORS PRESS:—I bought, a few weeks since, of Messrs Linforth, Rice & Co., of San Francisco, a Zimmerman Fruit and Vegetable Drier, No. 3. I tested its merits immediately at my French Prune Orchard, near St. Helena, Napa Co. Its work was completely satisfactory in every respect. I am acquainted with some dozen fruit driers in the State and I have not seen one whose merits equal the Zimmerman. Many of the fruit driers require, from 40 to 48 hours for drying Prunes. At a temperature of 150°, I dried the French prunes in 12 hours. A sample of these prunes may be seen on exhibition at the Mechanics' Fair.

The success was equally satisfactory with apples, pears and smaller fruits. The construction of the Drier is such that I found an unexpected economy in the use of fuel.

Its operation is so simple that in a single day I taught a man who had had no experience in fruit drying to use it with entire success.

I tested the Drier as a bleacher also, and merebaunts unite in saying that they had never seen such improvement in color on almonds, apples and other fruits.

933 Valencia St. C. W. HAWES.

### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGRAW—Santa Clara county.  
 M. P. OWEN—Santa Cruz county.  
 J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
 JARED C. HOAG—California.  
 B. W. CROWELL—Yuba and Sutter counties.  
 D. W. KELLEHER—San Mateo and Santa Clara counties.  
 C. E. WITMORE—Alameda county.

### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sealions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

ANDERSON SPRINGS, in Lake county, 19 miles from Calli-toga (over a grand, picturesque route, via Mt. St. Helena) are among the best in this State. They are situated in the midst of a natural park, full of beauty and interest to the naturalist. Good home-like accommodations at reasonable rates are invariably furnished by the Anderson family.

**HOW TO STOP THIS PAPER.**—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**BY TELEPHONE.**—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

**MANSION HOUSE.**—First-class in every respect.—When you visit Stockton stop at the Mansion House. Free Coach to the house. J. H. CROSS, Proprietor.

**ANNUAL STATISTICIAN OF 1881.**—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 816 California st. Price, \$4.

## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 7, 1881.

The markets have been quiet this week and a decline is noted in Wheat, owing to the trouble with charters. Rates have been run up even to \$4 10s for Cork or continent—a rate which is out of all reason or decency. While this matter is pending, Wheat-holders propose to wait. There is not nearly as much Wheat to be drawn from this year's crop as some estimates have claimed and this will soon be found out, and ship-owners will no doubt modify their views. The meeting of Wheat-growers last Monday showed a disposition to hold Wheat as shown by the report elsewhere.

The latest from abroad is as follows:

LIVERPOOL, Sept. 6.—Good to choice California Wheat, weak, at 10s 11d@11s 2d. Cargoes are inactive and lower, at 82@82 1/2d. Receipts for the past three days, 71,000 cts, including 33,000 American.

#### Freights and Charters.

German bark *Werra*, 939 tons, Wheat to Cork, U. K.; £3 8s 9d—prior to arrival. German ship *Adelaide*, 1,300 tons, Wheat to Cork, U. K.; £3 8s 9d—rechartered prior to arrival. French bark *Montmorency*, 612 tons, Wheat to a continental port between Bordeaux and Antwerp; £4 5s—prior to arrival. British bark *The Frederick*, 812 tons, Wheat to Cork, U. K.; £4—prior to arrival. Ship *Corsica*, 1,337 tons, Wheat to Cork, U. K.; £3 2s 6d—prior to arrival. Ship *Levi C. Wade*, 1,525 tons, Wheat from Wilmington to Liverpool or Havre; £3 10s. If ordered to San Francisco, £3 15s for the above ports—chartered prior to arrival. British bark *Grasmere*, 1,304 tons, Wheat to Cork, U. K.; £3 12s 6d—prior to arrival. The rate of the British bark *Maud* is £4 4s, Liverpool direct.

#### The Foreign Review.

LONDON, Sept. 6.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: During the week some progress has been made with the



harvesting, but the best condition has been middling, while the bulk has been thoroughly bad. Since Tuesday the weather has been cloudy, cold and rainy, with intermittent sunshine. The cold has checked the sprouting of Grain, but has also retarded its ripening in the late districts, especially in Scotland, where there has been frosts. Reports from Ireland are decidedly unfavorable. The results of the British harvest exercise but a small influence on the trade, owing to the available foreign supply, and the short time required to procure it. The native crops are actually further from markets than the American and Russian new crops. Millers have ceased to operate beyond their necessities, because they think they can hold out until the increased Atlantic shipments have arrived. The weather has doubtless checked the upward tendency. But a few samples of Grain harvested before the rain have come in. Rates in the Provinces continue higher than in London and other port markets where foreign arrivals rule the trade. Flour from old wheat is scarce and dear. In foreign trade it has been slow throughout the week. Millers bailing laid in a working supply, await developments of trade indifferently, and the present rate of shipments is decidedly in their favor. Friday's business was small, at a stilling decline. The off-coast market has been inactive. Of 16 cargoes which arrived, 5 were sold. No Barley or Oats are off the coast. The bulk of the British Barley crop is available for grinding only, and prices are ruled by Malze. Foreign Maize was stagnant. Malzes were slightly in favor of the buyers. Sales of English Wheat were 21,320 quarters, at 55s 2d per quarter, as against 16,636 quarters for the corresponding week of last year.

#### Eastern Grain and Provision Markets.

Chicago, Sept. 3d.—The financial events of the week have been closely allied to the Board of Trade flurry. The activity in grain has kept the available funds of the banks in good demand. General trade is good, far better than in preceding years, and really is beginning to bring returns to patient soldiers, and schemes of improvement, and some of enormous proportions, are springing up on all sides. The receipts of live stock have been: Cattle, 154,000; Hogs, 455,000; Sheep, 30,000, during August. This is 41,000 more Cattle than during the same month last year, while prices are 50c to \$1 per hundred higher than then. Hogs are now \$1.50 to \$1.60 per hundred higher than a year ago. On 'Change the markets were of unprecedented activity. The sales were greater than ever before. The Syndicate put the price of Wheat at \$1.38, and kept it there to the end of the month. Several million bushels of short Wheat were settled on that basis, and to-day very little is unsettled for. As a rule, operators took their own medicine philosophically, but they have pleaded the baby act and brought suits to enjoin payment of absorbed margins. Options were very irregular. September, which had been at a strong premium, became heavily discounted. The month of October was exactly the reverse in its movement. Corn was very active and firm. Oats were comparatively weak, but the fluctuations were in narrow limit and prices held up well. At the close provisions fluctuated smartly, but without any particular excitement, and prices had a strong upward tendency, more marked toward the close. Sales of the week were for October as follows: Wheat, \$1.22½ @ \$1.23; Corn, 61½ @ 65½; Oats, 37½ @ 38½; Pork, 17½ @ 18; Lard, 11 3/4 @ 11 7/8.

New York, Sept. 3.—The trade in all the leading departments is making good progress, and the outlook points to an active Fall business. Wheat is unsettled by reason of varying reports of the condition of the weather in the West. The port demand does not come up to the hull's expectations. Provisions are quiet and firm.

St. Louis, Sept. 6.—Wheat is so high it is being shipped back from Toledo.

#### Eastern Wool Markets.

Boston, Sept. 3.—The demand for Wool has been more active and quiet. A large business has been transacted, and prices of washed fleeces have advanced 1½c to 2c to the lowest point. The transactions for the week have been 275,000 lbs of all kinds used in Wisconsin, Ohio and Pennsylvania. Some 2,000,000 lbs of fleeces have been bought up at prices rather above the current rates here. Ohio and Pennsylvania fleeces have sold at 40c to 41c for X, 41c to 42c for XX, 42c to 43c for XX and above. 40c to 41c is now freely offered for large lines of X and XX, but new a firm at 41c to 42c; XX and above a firm at 42c to 43c. Michigan and Wisconsin X has been sold to some extent at 38½c to 40c, and are now generally sold at 40c, with 30c freely offered for large lots. Combing and delaine fleeces are in demand for present and future delivery, and stocks sold up close. Fine Michigan and Ohio delaines have been sold at 44c to 47c; medium and No. 1 combing, 46c to 48c. In unwashed combing there have been sales of 60,000 lbs at 80c, but the most desirable lots are not offering under 32c to 33c. Unwashed fleeces are in demand and firm. Territory Wools have been selling from 17c for carpet up to 30c for medium. Other unwashed fleeces are principally in a range of 25c to 30c for fine, and 27c to 34c for medium. Considerable West Virginia and Georgia medium is selling at 34c. California Wool is quiet. In pulled Wools sales have been moderate. In Canada combing there have been sales of 350,000 lbs at 39c to 40c for lb, and 41c. Other foreign Wool is quiet.

London, Sept. 3.—At the Wool sales to-day 8,400 bales were disposed of, comprising Port Phillips and Sidney. There was a fair spirit, and prices are firm.

New York, Sept. 3.—Wool is in better demand, and prices are firmer. Sales: 65,000 lbs Spring California, at 26c to 30c; 8,000 lbs Fall do, private.

BAGS—Bags are still low. There has been an auction sale of 10,000 return at \$6.10. Jute, 5c; Calcutta, 5c. Wool Bags are held at 44c to 50c.

BARLEY—A late sale reported was 2,000 sks choice feed, \$1.12½. General quotations are as follows: Brewing, \$1.25 to \$1.30 for light, and \$1.35 to \$1.42 for bright heavy; Standard Chevalier, \$1.30 to \$1.35; Coast do, \$1.17½ to \$1.20 ctt.

BEANS—The market for Beans continues pretty firm with sales as quoted in "Domestic Produce" table.

CORN—There is quite a demand for Corn owing to its scarcity. Although no sales are reported, large Yellow may be quoted at \$1.25; small round Yellow at \$1.30 ctt. White is nominal.

DAIRY PRODUCE—The market for Butter is somewhat firmer.

EGGS—Fine lots are scarce, and choice Eggs are higher. FEED—There are no special changes in price to note, the next column giving quotable rates.

FRESH MEAT—Beef remains unchanged from last week's quotations. Mutton is a little better. Pork is the same.

FRUIT—Grapes are not so much in demand, owing to canners being busy on salmon. Prices for all varieties are given in next column.

HOPS—Some 600 or 800 bales recently brought 16c to 18c. Of this lot about 400 bales went East.

ONIONS—Are somewhat stronger than last week's quotations.

POTATOES—The market is pretty steady but receipts are plentiful.

PROVISIONS—There are no special changes to note. POULTRY—Young Roosters and Hens are lower; otherwise prices remain unchanged.

VEGETABLES—The quotations in this column show what slight changes have occurred.

WHEAT—Ships for Cork have been taken at £4 10s. We quote sales: 100 tons No. 1, \$1.60; 400 sks No. 2, \$1.57½; 435 sks do, \$1.55, and 400 sks off grade, \$1.37½.

No. 1 is quotable at \$1.60 to \$1.62½, and No. 2 at \$1.55 to \$1.57½ ctt.

WOOL—The market is dependent on the local mills, there being no demand from the East. The Wool generally is better than last year.

#### Domestic Produce.

WHOLESALE.

WEDNESDAY M., September 7, 1881.

BEANS & PEAS.		SILVER SKIN.	
Bayo, ctt.	1 00 @ 25	Oregon.	@ —
Butter.	2 00 @ 25	New	1 00 @ 12½
Castor.	3 50 @ 40	do, br.	1 00 @ 25
Pea.	20 @ 25	do, Buckwheat, ctt.	@ —
Red.	@ 21	do, Tomatoes.	@ —
Pink.	@ 21	do, Humboldt.	@ —
Small White.	3 20 @ 25	do, "Kidney."	@ 1 00
Lima.	3 75 @ 40	do, Peachblow.	@ —
Field Peas, h'k eye.	40 @ 50	do, Jersey Blue.	@ —
do, green.	1 35 @ 40	do, Cuffey Cove.	@ 1 10

FRUIT MARKET. (WHOLESALE.) WEDNESDAY M., September 7, 1881.

CHICORY.		POULTRY & GAME.	
California.	4 @ 4½	Hens, doz.	4 50 @ 5 50
German.	6½ @ 7	Roosters.	4 00 @ 5 00
DAIRY PRODUCE, ETC.		Broilers.	2 50 @ 3 50
Cal. Fresh Roll, lb.	32½ @ 35	do, Fat, doz.	4 00 @ 5 00
do, Fancy Brands.	36 @ 37½	Mallard.	@ —
Pickle Roll.	@ 32½	Sprig.	@ —
Firkin, new.	27½ @ 30	Teal.	@ —
Old.	20 @ 25	Widgeon.	@ —
New York.	@ —	Geese, pair.	1 25 @ 2 00
EGGS.		Wild Gray, doz.	@ —
Cheese, Cal.	13 @ 14	White, doz.	@ —
Cal. Fresh, doz.	36 @ 40	Turkey.	15 @ 18
Ducks.	@ 25	do, Dressed.	@ —
Oregon.	@ —	Snipe, Eng.	2 50 @ 3 00
Eastern, by exprs.	20 @ 25	do, Common.	1 00 @ 25
Pickled here.	@ —	Quail, doz.	@ —
Utah.	22 @ 25	Rabbits.	1 00 @ 1 25

FEED. Bran, ton. @ 21½. Corn Meal. @ 27. Hay. 7 00 @ 12. Middlings. @ 24. Oil Cake Meal. @ 20. Straw, half. 42½ @ 45.

FLOUR. Extra, City Mills. 5 25 @ 55. do, Co'ntry Mills. 4 75 @ 55. do, Oregon. 4 50 @ 55. do, Walla Walla. 4 50 @ 55. Superfine. 2 75 @ 50.

FRESH MEAT. Beef, 1st quality, lb. 5½ @ 6. Second. 4 @ 5. Third. 3 @ 4. Mutton. 3 @ 3½. Spring Lamb. 4 @ 5. Pork, unadressed. 5½ @ 6. Dressed. 6 @ 7. Veal. 6½ @ 7. Milk Calves. 7½ @ 8. do, choice. @ 8½.

GRAIN, ETC. Barley, feed, ctt. 1 15 @ 20. do, Brewing. 1 25 @ 35. Chevalier. 1 17½ @ 20. do, Coast. 1 17½ @ 20. Buckwheat. 1 62½ @ 62½. Corn, White. @ 1 17½. Yellow. 1 10 @ 25. Small Round. 1 15 @ 30. Oats. 1 30 @ 55. Milling. 1 50 @ 65. Eye. 1 67½ @ 70. Wheat, No. 1. 62½ @ 65. do, No. 2. 40 @ 50. do, No. 3. 14 @ 50. Choice Milling. @ 70.

HIDES. Hides, dry. 19 @ 19½. Wet. 10 @ 11.

HONEY, ETC. Beeswax, lb. 23 @ 25. Honey in comb. 13 @ 16. Extracted, light. 10 @ 11. do, dark. 8 @ 8½.

HOPS. Oregon. @ 16. California, new. @ 18. Wash. Ter. @ —. Old Hops. @ —.

NUTS—Jobbing. Walnuts, Cal. 8 @ 9. do, Chile. 7½ @ 8. Almonds, half sh lb. 8 @ 9. Soft shell. 8 @ 9. Brazil. 10 @ 12. Pecans. 16 @ 17. Peanuts. 4 @ 5. Filberts. 14 @ 15.

ONIONS. Red. @ 75. Hides, dry. 19 @ 19½. Wet. 10 @ 11.

Wool. No. 1 is quotable at \$1.60 to \$1.62½, and No. 2 at \$1.55 to \$1.57½ ctt.

WOOL—The market is dependent on the local mills, there being no demand from the East. The Wool generally is better than last year.

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#### Fruits and Vegetables.

(WHOLESALE.)

WEDNESDAY M., September 7, 1881.

FRUIT MARKET.		PEACHES.	
Apples, h'k.	50 @ 1 25	do, pared.	12 @ 14
Bananas, h'k.	2 50 @ 5 00	Pears, sliced.	8 @ 9
Cantaloupes, crt.	50 @ 90	do, whole.	7 @ 8
Cocoanuts, 100.	6 00 @ 7 00	Plums.	4 @ 5
Cash Apples.	50 @ 75	do, fitted.	12 @ 12½
Crab Apples.	50 @ 75	do, Prunes.	3 @ 4
Granberries, lb.	40 @ 75	Raisins, Cal, bx.	1 25 @ 1 50
Figs, h'k.	40 @ 75	do, Halves.	1 50 @ 2 00
Grapes.	65 @ 1 00	do, Quarters.	2 00 @ 2 25
do, Malvoise.	@ 75	do, Eighths.	2 25 @ 2 50
do, Rose Peru.	@ 75	Zante Currants.	8 @ 10
do, Hamburg.	@ 75	VEGETABLES.	
do, Muscat.	70 @ 1 00	Asparagus, h'k.	@ —
Limes, Mex.	12 00 @ 13 50	Artichokes, doz.	10 @ 12½
do, Cal, h'k.	@ —	Beets, ctt.	@ 65
Lemons, Cal, bx.	6 00 @ 7 00	Beans, Lima, lb.	@ 5
Sicily, h'k.	12 00 @ 14 00	do, String.	1 @ 1½
Australian.	@ —	do, Wax.	@ —
Nectarines.	2 00 @ 3 00	do, Fountain.	1 @ 2
do, Tahiti M 20.	00 @ 25 00	Carrots, sk.	40 @ 50
do, Mexican.	@ —	Cauliflower, doz.	60 @ 65
do, Loreto.	@ —	Cucumbers, bx.	25 @ 30
Peaches, h'k.	50 @ 1 10	Egg Plant, h'k.	50 @ 1 00
do, Mount'n, bx.	1 00 @ 1 50	Garlic, lb.	1½ @ 2
Pears, h'k.	50 @ 75	Green Corn, doz.	10 @ 15
do, Bartlett, bx.	2 00 @ 3 00	do, Sweet.	1½ @ 2
Pineapples, doz.	7 00 @ 8 00	Gr'n Pepp'rs, h'k.	50 @ 60
Plums, h'k.	40 @ 75	do, Chile, bx.	50 @ 75
Prunes, German.	50 @ 75	Lettuce, doz.	10 @ —
Quinces, h'k.	@ —	Mushrooms, lb.	@ —
Blackber's, ch't.	5 00 @ 6 00	do, Parsn.	2 @ 3
Raspberries, ch't.	4 00 @ 8 00	do, Horseradish.	@ —
Strawber's, ch't.	4 00 @ 8 00	Rhubarb, h'k.	50 @ 75
Sugar Cane, h'k.	@ —	do, chest.	@ —
Watermel's, 100.	5 00 @ 10 00	Squash, Marrow.	8 00 @ 10 00

DRIED FRUIT. Apples, sliced, lb. 5 @ 5½. do, quartered. 4 @ 5. Apricots. 14 @ 16. Blackberries. 10 @ 11. Citrons. 28 @ 30. Dates. 9 @ 10. Figs, pressed. 5 @ 7. do, loose. 4 @ 5. Nectarines. 14 @ 15.

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending September 6, 1881.

HIGHEST AND LOWEST BAROMETER.						
Aug. 31.	Sept. 1.	Sept. 2.	Sept. 3.	Sept. 4.	Sept. 5.	Sept. 6.
30.063	29.998	29.956	29.975	29.883	29.761	29.900
29.981	29.931	29.919	29.883	29.667	29.667	29.761

MAXIMUM AND MINIMUM THERMOMETER.

Aug. 31.	Sept. 1.	Sept. 2.	Sept. 3.	Sept. 4.	Sept. 5.	Sept. 6.
52	51	52	52	52	53	53
63	64	64	64	64	64	64

MEAN DAILY HUMIDITY.

Aug. 31.	Sept. 1.	Sept. 2.	Sept. 3.	Sept. 4.	Sept. 5.	Sept. 6.
80	82.3	84	81.7	70.7	84	84

PREVAILING WIND.

W	W	W	W	W	W	SW
312	354	438	318	179	259	301

WIND—MILES TRAVELED.

Clear.	Fair.	Clear.	Clear.	Fair.	Foggy.
1	1	1	1	1	1

STATE OF WEATHER.

Clear. Fair. Clear. Clear. Fair. Foggy.

RAINFALL IN TWENTY-FOUR HOURS.

Total rain during the season, from July 1, 1881. — inches.

#### Commission Merchants.

WEDNESDAY M., September 7, 1881.

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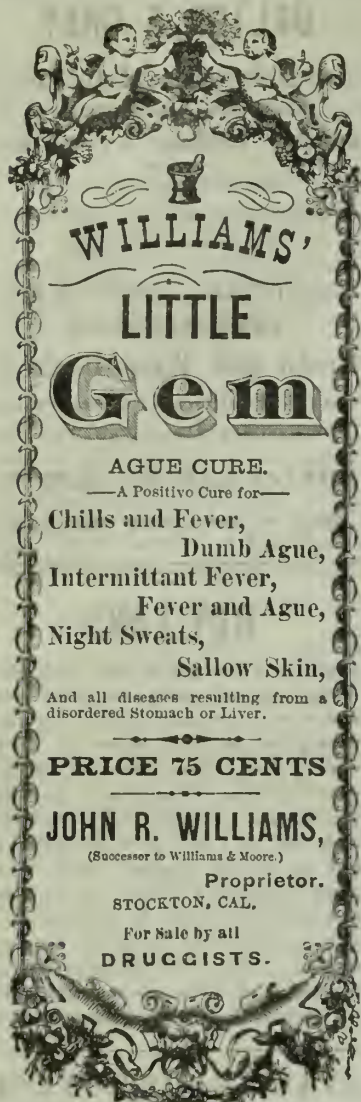
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Chills and Fever,  
Dumb Ague,  
Intermittant Fever,  
Fever and Ague,  
Night Sweats,  
Sallow Skin,  
And all diseases resulting from a  
disordered Stomach or Liver.

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(Successor to Williams & Moore.)  
Proprietor.  
STOCKTON, CAL.  
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DRUGGISTS.

**ZIMMERMAN**  
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PORTABLE, FIRE-PROOF,  
Fruit and Vegetable Drier.

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IN FUEL. CURES THE FRUIT IN  
FROM 2 TO 8 HOURS.

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country.

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Got —, by Grand Commander.....12085  
1st dam, Duchess 9th, by Baron Airdrie..... 9476  
2d dam, Duchess 7th, by Duke of Airdrie..... 2743  
3d dam, Duchess, by D'Arcy..... 432  
4th dam, Henrietta, by Sir Alfred..... 969  
5th dam, Lucilla, by imported Romulus..... (12013)  
6th dam, Helen, by Bertram 2d..... (3144)  
7th dam, Ruby 2d, by Bertram..... (1716)  
8th dam, Ruby, by Young Sir Dimple..... (971)  
9th dam, Daisy, by Wellington..... (678)  
10th dam, Beauty, by Duke..... (224)  
11th dam, Lucy, by Young Cornet..... (305)  
12th dam, —, by J. Brown's Red Bull..... (97)  
Grand Commander 12085, by imported Royal Commander  
10914, out of imp. Goody Two Shoes, by Lord Lyons (26677)  
Baron Airdrie 9476, by 12th Duke of Airdrie 5534, out of  
Baroness 6th, by Royal Oxford (16774).  
This splendid Bull is in fine condition and warranted kind  
and gentle. A child can handle him. Address  
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OATMEAL!  
ABSOLUTELY PURE!!

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such sweet, wholesome porridge. Greatly superior to  
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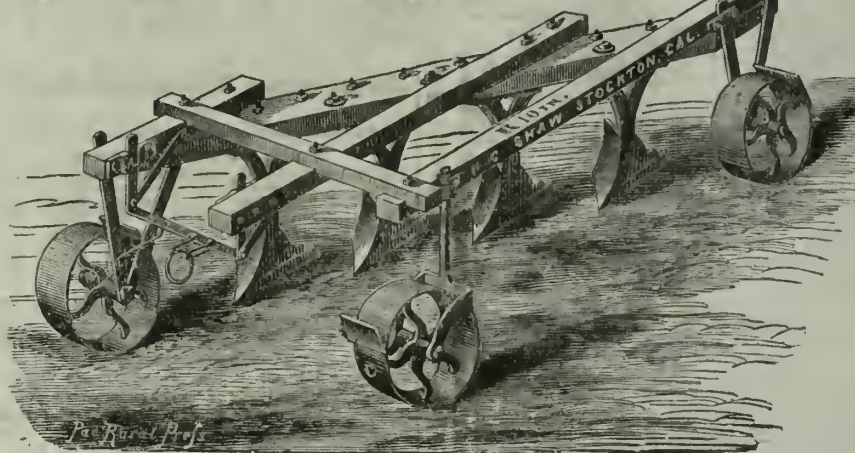
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**Plow Works.**



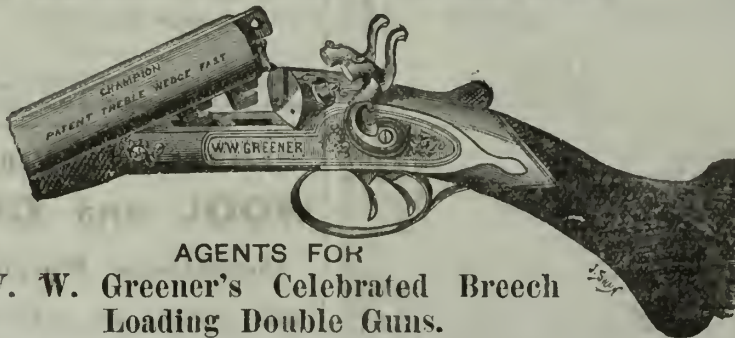
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Over 2,000 of H. C. Shaw's Improved Patent Stockton Gang Plows Sold in Five Years  
Cahoon and Gem Seed Sowers, Harrows, Etc. Extras for all Plows and Machines I have sold for the past  
TWENTY YEARS in this valley. Send for Circular and price list. Always on hand a full stock of Single Plows.  
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KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.

Ammunition in quantities to suit

A liberal discount to the trade.

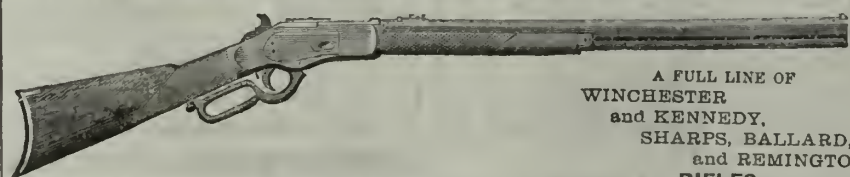
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WINCHESTER  
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RIFLES.

Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to  
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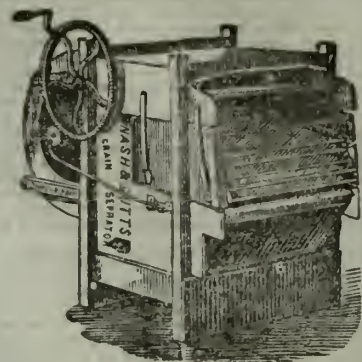
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**Nash & Cutts' Grain Cleaner**

Improved Again for 1881.

Five sizes, warranted to clean from 50 to 200 bushels per  
hour, perfectly. The fact that we have taken EVERY  
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THE IMPROVED  
NASH & CUTTS' GRAIN CLEANER.  
(TRADE-MARK.)

OUR NEW WHEAT GANG,

Composed of perforated zinc and patent rolled wire. The zinc  
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grow gradually larger as they reach the lower or out end of  
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while the Wheat being smooth will pass through readily,  
thus increasing the capacity both in speed and quality.

Notwithstanding the extra expense incurred by the pur-  
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this season, thus giving the farmers the benefit of this new  
combination.

Farmers and Dealers are particularly cautioned against  
spurious imitations. Be sure that the one you buy bears  
this Trade-Mark: "THE IMPROVED NASH & CUTTS'  
GRAIN CLEANER." All others are frauds. See that it  
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We mention the above for the protection of our customers  
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Prices at Factory.—No. 1, \$30; No. 2, \$40; No. 3, \$50. For  
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Sole manufacturers of "The Improved Nash & Cutts'  
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22' We also make a Cleaner to attach to Threshing Ma-  
chines that will clean ALL any machine can thresh.

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FOR 1881.

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\$2 per Gallon.

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purposes, etc. T. W. JACKSON,  
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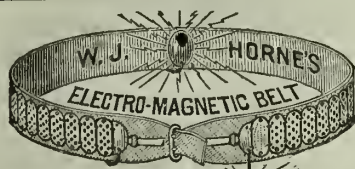


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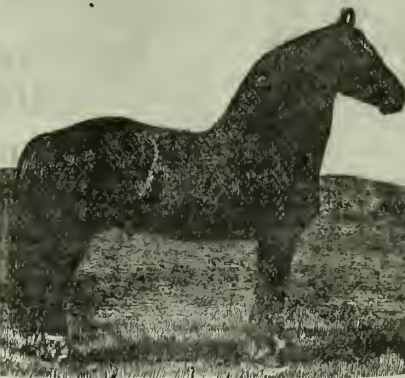
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As a Horse Medicine

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freely so as to blister, from  
three to five days in succe-  
sion, and in four or five days  
if not cured repeat as at first.

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We are safe in making the  
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Apply freely to the parts af-  
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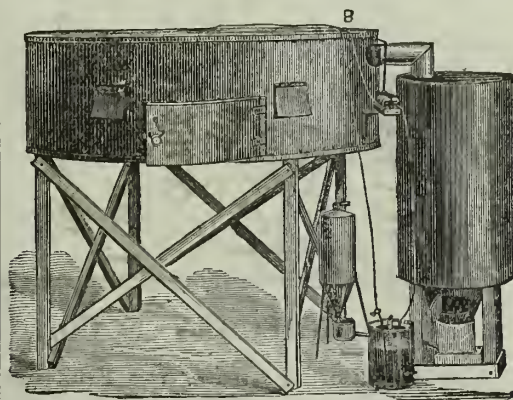
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is warranted to saw a 2-foot log in three min-  
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Every Farmer and Lumberman needs one.  
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FOR FALL SOWING, AND

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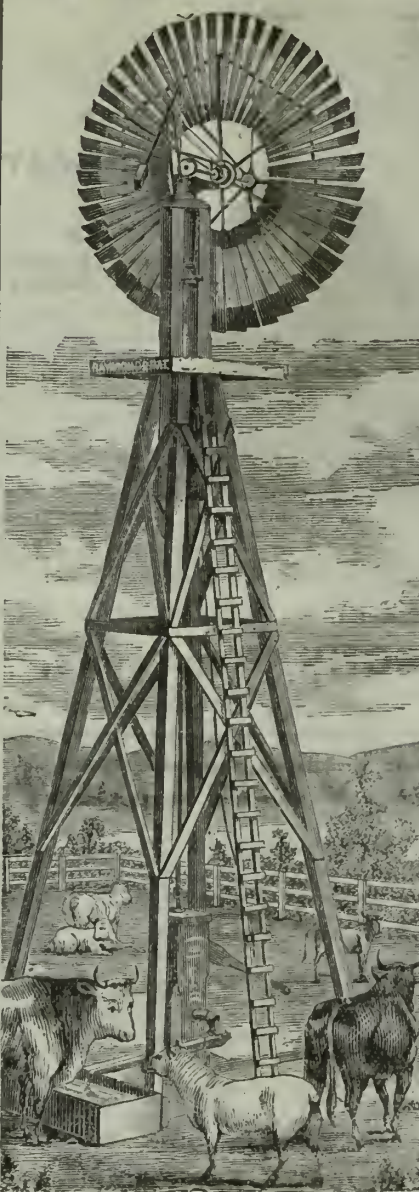
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**VANELESS WIND MILLS**

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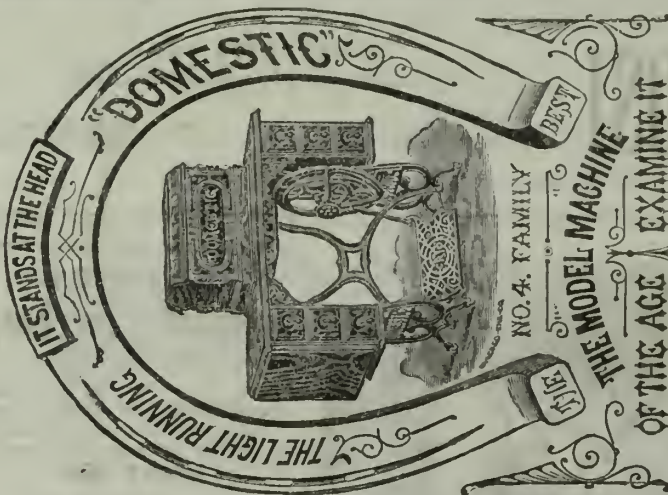
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London Purple, Paris Green and Blue Stone are the safe, sure and leading remedies for the eradication of Insects and Fungus.

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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 17, 1881.

Number 12

## The Wool Markets.

The Eastern authorities are now nearly in accord in reporting a good demand for wool and a prospect of a good and continued trade in wools, which will be the surety of future wool values. On this point, Walter Brown's circular says: "The woolen goods trade for the past month has shown several favorable features. Most manufacturers have had orders ahead for their product, which, although the margin of profit may have been small, have enabled them

manufacturers, as a class, have on hand only moderate supplies of wool, we are led to anticipate a strong, healthy condition of the market for the staple, during the next few weeks, with possibly some hardening in values."

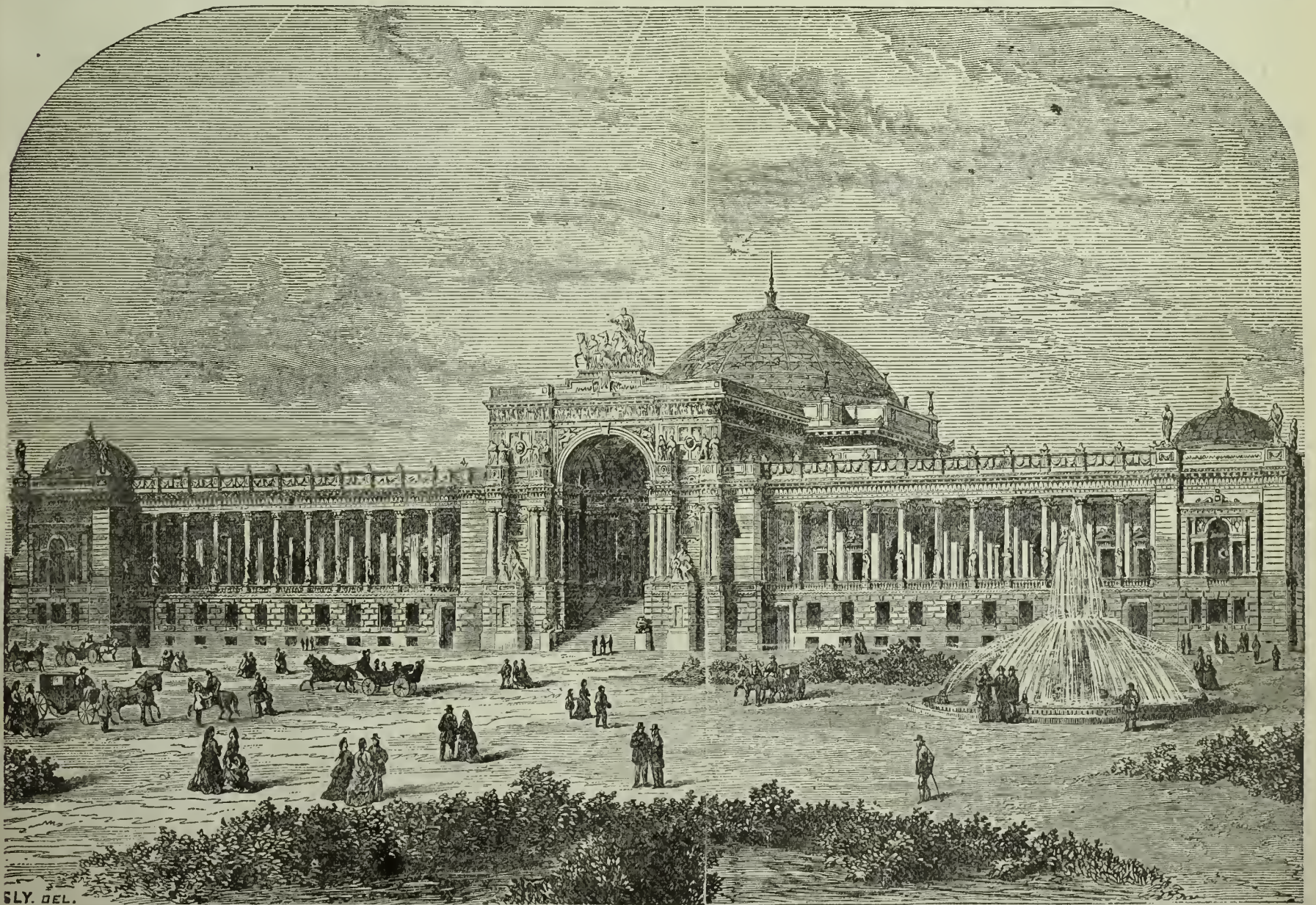
This promises well. As we have said before, the sheep are increasing and the wool interest of California promises again to return to old figures. It behooves the coming Congress to refrain from tariff tinkering, and the future will be satisfactory to the flockmen.

To EXTRACT OIL FROM HERBS.—The volatile oils are generally obtained by distilling in a

FRAUDULENT "AMERICAN" COTTONS.—During a recent tour through Lower Egypt an American correspondent was astonished to find at Rosetta, Damanhour, Zagazig, and especially at the great fair at Tantah, a great quantity of cotton goods for sale purporting to be of American manufacture. These goods consisted of a wretched, flimsy fabric, filled up with "sizing." A large portion of them bore the word "Mexican" in large, English letters and underneath the word "American" in large Arabic letters. The traveler found, on consulting the official report of the Director of the Egyptian Statistical Bureau,

## Parliament House, Berlin.

The engraving on this page shows the Parliament House, at Berlin, capital of the German Empire. It is a large and striking structure, well calculated to stand as an exponent of the greatness of the nation, whose law makers and counselors assemble in its halls. The German Empire does not figure in the daily transcripts of European news nearly so largely as its importance would warrant, and yet the general reader knows that some of the most engrossing



SLY. DEL.

THE PARLIAMENT HOUSE, AT BERLIN, CAPITAL OF THE GERMAN EMPIRE.

to keep well sold up, and they generally have very little stock which will have to be closed out at a sacrifice and reduce the profits on their earlier sales. The reports indicate that with the opening of the season for light weight goods, there is a comparatively smaller stock of old fabrics on the market than has been known for some years. The prospects of the fall trade in this branch of industry, look encouraging and should have the influence to induce manufacturers to depart from the conservative policy they have pursued so long, of buying only from hand to month. In summing up the prospects of wool, the course of the market during the past month, with the general firmness evinced by holders, in connection with the belief, that

deep narrow retort the articles along with an equal weight of water; but some substances that give out their oil with difficulty are first soaked for twenty-four hours in twice their weight of water, to each gallon of which one pound of common salt has been added, by which its boiling point is raised, and consequently the oil comes over more readily. The distillate separates into two layers, the water being drawn off and returned to the retort, and this is repeated until distilled water ceases to come over mixed with oil. The rectification of the oil is performed without water, by the careful application of heat, just sufficient to cause them to flow over pretty rapidly, so that they may be kept heated for as short a time as possible.—Scientific American.

M. Amici Bey, that no American cotton goods have been entered at the regular Egyptian custom house during the past five years. A small quantity of American cotton goods have entered Egypt by way of Smyrna, where the greater part of the duty was paid; but all such goods were found upon inquiry to have been of uniform, excellent quality. The presence of the fraudulent "American" goods is explainable only on the theory that the English manufacturers, who now monopolize the Egyptian market, have found a new way of "spoiling the Egyptian," by palming off upon him their "cheapened" goods as American, and thus momentarily avoiding the consequences of their cheating in the fabric, and at the same time doing untold harm to American manufacturers.

subjects of modern legislation have arisen lately in Germany, and are being discussed and investigated so thoroughly that the new truths will be generally accepted and benefit the world at large. In the promotion of agriculture by the systematic investigation of agricultural problems, and by a most careful plan of agricultural education, Germany outthinks (to us a good example. Even in a country where agriculture has been practised for more than 1,000 years, they find there is still much to learn by thorough scientific inquiry, and how much more need have we where hardly a single generation has yet passed away. The Fatherland is accomplishing a high mission in the world's progress. Long may it live.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eos

### Alameda County Notes.

EDITORS PRESS:—About three miles to the southeast of Haywards lies the little village of Mount Eden. From its name one might suppose that it stood upon some lofty eminence overlooking the surrounding country; but this romantic idea is at once dissipated on arrival. The town sits is probably about 10 or 12 ft. above the adjacent country, but the rise is so gradual as to be imperceptible except to a close observer. The village has abundant room for expansion, but at present consists principally of two stores, one hotel, one schoolhouse, one blacksmith shop and some half a dozen or more residences. The soil in this section is good and well adapted to fruit culture, to which but little attention is given. Grain and hay are at present the chief products. To the west of Mount Eden, as you approach the bay, the soil becomes more or less impregnated with alkali.

Newark lies about three miles west of Mount Eden, and is situated on a low alkali flat near the bay, used chiefly for grain and pasture. The people around there are mostly poor, according to their own confession, and many of them would be glad to get away if they could. This town is favored with some railroad repair shops (Narrow Gauge), that give employment to several mechanics. This is about all that keeps this place alive. There is a good hotel, a schoolhouse and a Catholic church. There are several fine artesian wells in this neighborhood, so that the inhabitants are favored with good water. I was informed that the Narrow Gauge Railroad Co. owns about 5,000 acres of land around there which they rent out to farmers on shares, but I did not hear of any of their tenants getting rich. On the contrary, there was a general complaint of poor crops and hard times. So far as I could learn not a copy of the RURAL PRESS was taken in the whole neighborhood, and chiefly for the reason that they could not afford it, according to their own statement. This fact is, of itself, a pretty good indication of the character of the country.

Beyond Mount Eden, southward some four miles, and you come to the town of Alvarado.

There is a slight gradual descent for a mile or more to the level of the salt marsh, which is crossed in part over a causeway thrown up about six ft. above the surface, until you reach some trestle work, constituting a bridge over which the road passes at about the same elevation above the salt marsh and about a mile long. At or near the end of this bridge the Narrow Gauge railroad crosses the highway, and runs a little back of the town and near the beet sugar factory, with a station close by the fine new hotel of Meers, Granger & Son, which is one of the best appointed and well-kept hotels in the county. They have a fine artesian well, and have constructed a fish pond with a view to introducing carp. The Standard sugar manufactory also have a fine artesian well, which supplies all the water they need, and there are several others in the place, by which the village is chiefly supplied. Artesian water is also used for irrigation. Alvarado is rather a pleasant little village, with several stores, hotels, blacksmith and wagon shops, schoolhouse, etc. The soil is a rich, sandy loam, and devoted largely to raising sugar beets, which are sold at the rate of \$4 per ton to the sugar factory. The average product is about 15 tons per acre.

#### Other Towns.

Decoto is a mere railroad station of the W. P. R. R. Co., a little east of Alvarado, and can hardly be considered a village. The same may be said of Niles, some two miles southerly from Decoto. A store or two and a few scattering houses, a postoffice, schoolhouse, railroad station, etc., constitute their claim to be called villages. Centerville and Washington Corners are but a short distance apart, to the southward of Alvarado, situated in the midst of a level and fertile country, and inhabited by an intelligent and enterprising people. The soil in this region is well adapted to fruit culture, to which considerable attention is paid, with successful results.

Mission San Jose is about three miles east from Washington Corners, and about 24 miles from Oakland. It lies snugly nestled at the foot of the hill range which skirts the entire valley on the east, on somewhat elevated ground, commanding a fine view westward across the valley to the bay. By its elevation it is almost exempt from frosts. The vine and the olive, the almond and the apricot, as well as most all other kinds of fruit flourish here. The climate is warm and healthy, and excellent for invalids. It is a small village, and has not grown materially for years past.

A few miles below the Mission, and toward the lower end of the county is a postoffice, hotel and store, which goes by the name of Harrisburg, although the railroad station is called Warm Springs. The springs, however, are some three miles away to the east, in the edge of the foothills.

The country along in this region is chiefly devoted to grain and hay, although much of it is well adapted to fruit, especially along the edge of the hills on the east, toward which

there is a gradual rise giving good drainage, and sufficient elevation above the main valley to be exempt from frosts. The climate is warm and pleasant, and very desirable for invalids. Here Mr. H. Curtner has an almond orchard of 40 acres kept in fine order and so well cultivated that there is not a weed to be seen. This produces about 11 to 12 tons annually, or about 600 lbs. per acre, selling at from \$270 to \$280 per ton. He has found by experience that almonds do better if budded into peach stocks. The trees grow larger and yield better. He also is engaged largely in cultivating early vegetables, which he finds profitable. Being exempt from frosts, he gets his green peas into the market before they can mature in other localities, and thus gets the highest price. Mr. Millard has quite a large vineyard near here, a part of which is of the Zinfandel wine grape. There was a great demand for his cuttings last spring, which he sold at remunerative rates.

There is quite an extent of country through here well adapted to the vine, and it is a wonder that so little of it is used for this purpose. Several vineyards, however, have been recently planted, and the people seem to be waking up to the advantages which their soil and climate affords for the successful culture of the grape and other fruits.

The Warm Springs (Aqua Calientia) are situated in the foothills to the eastward of Harrisburg, and about three or four miles below the Mission of San Jose. These waters have proved very beneficial to invalids, especially in rheumatic affections, but the place is now occupied by Mr. J. Stanford, a brother of Gov. Stanford, as a private residence, and is no longer used as a sanitarium. The situation is elevated, commanding a fine view of the valley in front, and of the bay in the distance. The grounds are handsomely laid out and adorned with shrubbery, choice plants and flowers. Some choice fruits are also raised here, but a subsoil of cement comes too near the surface for trees to flourish without irrigation. The vine, however, does well, and some attention is given to wine making. C. E. W.

Oakland, Cal.

### The Salmon Industry of the Columbia.

EDITORS PRESS:—The Columbia river forms the boundary line between the State of Oregon and Washington Territory for a distance of over 250 miles, receiving from the country numerous tributaries of more or less importance, and affording a convenient water way for the products of the immense country beyond the Cascade range as well the beautiful Willamette valley. Of Oregon this paper has teemed with full and accurate reports of its great resources and inducements both to the stock raiser and agriculturist. Its vast and magnificent forests and wealth of its waters. The Columbia is indeed a noble river, broad, beautiful and of sufficient depth to float deep water vessels that now seek the port of Astoria and City of Portland for cargoes of wool, wheat and salmon. The regular reader of this journal has seen detailed accounts of the first two products and should be familiar with their importance. Of the latter,

#### The Great Salmon Industry.

We hope to add something in the way of information. It has been stated that salmon were first packed about 20 years since. Perhaps this is true as an article of sale, but the writer of this caught and packed salmon 30 years ago, and has heard mountaineers tell of spearing them and packing them in snow in the fall, to be used during the approaching winter, over 50 years ago. However, the packing of salmon in tin is of more recent practice, and within a few years has outstripped every other industry of western Oregon. It is profitable to give a moment's consideration of the subject. There are over 30 establishments along the Columbia below the Cascades, that have packed from 5,000 to 30,000 cases of 4 dozen each of 1 lb. cans, aggregating over 500,000 cases, at \$5 per case along the river, giving a gross income of \$2,500,000, and this from an annual income of less than \$20,000 15 years ago.

The salmon caught in the Columbia averages 20 lbs., from which the packer realizes about 75%, much of the balance being reduced to oil that now finds ready sale. We understand that salmon caught in the Sacramento river only average 16 lbs., while those taken north of the Columbia up to the Fraser are of greater weight.

Salmon are caught in weirs and nets—the majority in nets. The law regulating the size of mesh is generally observed, although some persons take the small fish, pack them in kegs and barrels to be consumed by hotels after the close of this catching season. The weir or trap does not bruise the fish, and therefore furnishes full better material for packing. Those taken from nets are sometimes discolored, and in the rush of work much inferior fish is packed.

In the early years of canning salmon, kettles heated by fire were exclusively used to cook the fish in. Great difficulty was experienced in getting sufficient heat to cook the fish uniformly; now steam has taken the place of fire and facilitates labor. The kettles hold about 500 lbs. at once. It requires about two hours and a half to can, cook and prepare the stock,

which is then taken out to cool, and, in due time, tested and packed in cases.

The capital employed varies from \$20,000 to \$75,000. The profits have been uniformly good, and much is expected from the industry in the future.

It is interesting to watch the Indian at the cascades perched on his frail platform when he snatches from the swift-flowing river one by one these shining beauties; equally interesting to see the fragment of a school confined in the weir in their vain efforts to escape from their prison, but it is more than interesting to see the new-fangled wheel up the river that takes up in its canvas buckets scores of fish and quietly delivers them out of one side to be packed in barrels and sent down stream to be gathered up by boats and transported to market or cannery. The labor is severe, and the fishermen are hardy. They seem to have no ability to leave their earnings, and the gambling room, saloon or worse place, gathers a rich harvest during the season. Astoria is headquarters for the trade, and its streets are thronged evenings with Scandinavians, Italians, Chinese, with not a few Creoleans.

At present a flourishing trade is carried on with Europe, Australia and the Eastern States. When the railroad via Portland, Baker City and Granger, Wyoming Territory, is finished, no doubt much of what now reaches New York via San Francisco will go by the new route—as must the wool and other products of Eastern Oregon. W. R. B.

Astoria, Oregon, Sept. 10th.

## HORTICULTURE.

### To Propagate the English Gooseberry from Cuttings.

EDITORS PRESS:—Some time ago, "The Gooseberry and its Culture," was before the State Horticultural Society for discussion, and the subject was most ably handled by some of the best informed members of the society. One thing, however, struck me; it was the unsatisfactory reasons given for failure in growing cuttings from English varieties. Being very busy at that time, I could not reply, through the PRESS, to that part of the society's proceedings; but to-day, that I have more leisure, I will give your readers at home and abroad a never-failing way of growing cuttings from English gooseberry varieties.

Mr. West, in his interesting and instructive paper on "Gooseberry Growing," says about its propagation:

The English varieties do not propagate as easily as the American. Cuttings of the former should be taken from near the ground, and if they can be found growing from under it, all the better. They should be taken from the old plant very early in the winter. American kinds propagate easily from cuttings.

I will say that English varieties can be as easily propagated from cuttings as American kinds, if we employ here the same process as they do in England and Scotland, and of which I will give you a full description, as practiced on my place by myself.

#### English Process of Growing Gooseberry Cuttings.

Cuttings must be taken from the old bushes not early in the winter nor through the winter, but right in the spring, and when the bushes are fully out and all green with new leaves. Make only one cutting out of a vine and keep only that part of it next to the main stalks, from 12 to 16 inches in length altogether. Always disbud the cutting below the ground, and split the butt end from half an inch to one inch. Set the cuttings out immediately, and as fast as they are disbudded and ready to plant, and water well. Better do such planting by cloudy weather. Keep the ground well moist through the summer. The cuttings will be fully two months before showing any growth, though keeping green all the while; and finally they will make a growth from 6 to 20 inches, mostly through the latter part of summer. Should the bushes have their blossoms all out and even the fruit already formed, it would still be possible to grow cuttings from them, only they would have to be shaded for a few days, if too warm after being set out. In this case, however, not more than 50% may be expected to grow; while if the cuttings are taken in time, that is, when the bushes are getting all green with leaves and before the blossoms are out, 90% may be easily grown.

I have myself succeeded well in propagating English gooseberries from cuttings at the above rates, though I grow the most of my plants by "layering," which is the French way of propagating the gooseberry. As to the English gooseberry not showing their peculiar characteristics in this country as they do in England, it is not so in my experience; and I could name you over 20 English varieties that have fruited on my place, which not only showed their characteristics to the letter, but which were so distinct from each other, that one variety could be plainly told from another.

The culture of the gooseberry may be summed up in three words, viz.: humus, water and sun; that is, rich and deep ground, plenty of water and no shady place in the garden but the open ground, and as much sun as water, and as much water as humus. FELIX GILLET.

Nevada City, Sept. 6, 1881.

## THE VINEYARD.

### Present State of the Phylloxera Problem.

Leonard Coates, Secretary of the Napa Grapes Growers' Association, recently addressed a series of questions to Prof. Hildard, with a view of drawing out his understanding of the present condition of this phylloxera problem, as follows:

1. Is the bi-sulphide of carbon as used for the extermination of the phylloxera practically a success?
2. What treatment would you recommend when a vineyard is infested to a small extent, when not more than 100 or so vines are, apparently, diseased?
3. To what depth can it be applied successfully?
4. Which of the claimed "resistant" stocks do you consider best?
5. What method of grafting is most practicable?
6. Is it yet safe to use seedlings or cuttings of the *Vitis Californica* as a stock capable of resisting the attacks of the phylloxera?
7. Will the more rapid growth of "Clinton" and "Taylor" in our State detract from their resisting qualities?

In answer to the above, Prof. Hildard made the following reply: It is not easy to answer all of them categorically, and a book might be written in reply. However, I will do the best I can.

1. I think there can be no reasonable doubt of the efficacy of the carbon bi-sulphide, for even this complete extermination of the phylloxera in your valley, or anywhere, unless this soil be heavy, ill-drained adobe, not fit for vineyards at best. It is simply a question of expense. From the latter standpoint, it has been found in Europe that a widespread invasion can practically be controlled so as to restore profitable productivity, in cases of valuable vineyards, especially. But complete extermination in such cases has been found to be very expensive, and "culture treatment" seems to have gained the preference.

2. When a vineyard is infested only to the extent referred to, the "death treatment," with repeated and heavy doses of bi-sulphide, and regardless of the life or death of the infested vines, would be my choice. More so in this country than in France, because there can be no doubt that the insect labors here under especial disabilities as compared with other countries, and that the danger of reinfection through the agency of the "winged form" is vastly less.

3. The depth to which the bi-sulphide may be made to act varies greatly with different soils. It can be made effective in any soil fit for grape culture, to the depth of three ft.; in soils like those around St. Helena, to five or six ft., with adequate doses, and proper care in injection. But roots penetrating rock crevices, or lying under local sheets of hardpan, may remain untouched by the antidote; and this, doubtless, is the cause of the failure to effect complete extermination on a large scale, that have been recorded.

4. As to resistant stocks, the latest experience, and common sense as well, point to the wild stock of the native American grapes as the most certain to resist; for otherwise they would not be where they are. The "Riparia," or wild stock of the Taylor seems to offer the most certain exemption, and is most easily propagated by cuttings, if that method be chosen. Seedlings are getting to be considered as barded; but this is a question not yet fully settled for practical purposes.

There seems to be good reason to expect that in the case of grape varieties whose habit of growth would be better suited to the "Estivalis" (Norton's Seedling). Stock, the wild summer grapes of the East would be preferable, and likewise hardy.

5. The method of grafting must always in a measure be adapted to the peculiarities of the woods to be united. Cleft-grafting seems on the whole to be the least desirable for any case; heel and wedge grafts are as adapted to most. But in any case, the graft must ultimately be at least two inches above ground, to prevent casting roots. Root-grafting is useless as a protection against the insect.

6. Personally, I would take a considerable risk in using seedlings of *Vitis Californica*, without fear of loss. I would advise any one to do the same to an indefinite extent, rather than plant unprotected vines in infected neighborhoods. But the experience had thus far does not justify me in making, as yet, an unqualified recommendation in favor of the *Californica*. However,

7. I expect the current year's experience to settle all except the question of longevity of such grafts. We shall see how the woods join, and agree as regards their growth. And we shall doubtless find some that do not agree, and will need Taylor, Riparia, or Estivalis stocks. The question of resistance will be tested in several localities.

8. Are you sure that the Taylor and Clinton stocks do grow "more rapidly" in California? They grow for a greater length of time each year. But I am not aware that this is done in such a way as to render it probable that their wood is softer. I should hardly think it a priori probable, the more so our "fast-growing" *Californica* is at least sensibly resistant. Moreover, this resinous substance that seems to spoil the "Riparia" juice for the tastes of the phylloxera, is likely to be increased rather than diminished in our climate.

I cannot but think that we have yet before us a very important line of experiment in growing some of the American grape varieties for their own sakes, for their own wine as well as for "cutting" or blending with "Vinifera" wines, as can be done nowhere else to such advantage. Who will take the lead in trying this?



## THE SPORTSMAN.

## Game Laws of the State of California.

We give herewith the complete game laws of the State of California, with all the amendments to 1881 inclusive:

These laws form part of the Penal Code of California, and come under Title XV "Miscellaneous Crimes." Chapter 1 of this title relates to violation of the laws for the preservation of game and fish. We give the law by sections and number as printed in the statute books, and "sub-head" the paragraphs, so that the subject matter is easily found. As these laws ought to be where they may be constantly referred to, by residents of the country where fish and game abound, we suggest that they be cut out of the RURAL PRESS and preserved.

## Killing Quail, Duck, Etc.

Section 626. Every person who in any of the counties of this State, between the 15th day of March and the 15th day of September in each year, hunts, pursues, takes, kills or destroys quail, partridges or grouse, or any kind of duck, or rail, or marsh hens, is guilty of a misdemeanor.

## Doves.

Every person who in the State of California, between the 1st day of January and the 1st day of July in each year, hunts, pursues, takes, kills, or destroys doves is guilty of a misdemeanor.

## Eggs of Wild Duck.

Every person who at any time takes, gathers, or destroys the eggs of any mallard, wood, or summer duck, red-head, teal, gadwell, or gray duck, or any other species of wild duck is guilty of a misdemeanor.

## Having Game in Possession.

Every person who shall have any of the aforesaid game, or any male deer or buck, or any female deer or doe, or any antelope, elk or mountain sheep in his possession at a time when it is unlawful to kill the same, as provided by this section or by section 628 of this Code, is guilty of a misdemeanor, and proof of the possession of any of the aforesaid game at a time when it is unlawful to kill the same within the county wherein the same is found shall be prima facie evidence, in any prosecution for a violation of any of the provisions of this section that the person or persons in whose possession the same is found, took, killed or destroyed the same in the county wherein the same is found, during the period when it was unlawful to take, kill, or destroy the same.

627. Repealed by section 626.

## Bucks.

628. Every person who between the 1st day of November in each year and the 1st day of July of the following year, hunts, pursues, takes, kills or destroys any male deer or buck is guilty of a misdemeanor.

## Doe, Antelope, Elk and Mountain Sheep.

Every person who shall for the period of four years from and after the passage of this act, pursue, hunt, take, kill or destroy any antelope, elk, or mountain sheep, or female deer or doe, shall be guilty of a misdemeanor.

## Spotted Fawn.

Every person who, after the passage of this act, shall kill any spotted fawn, shall be guilty of a misdemeanor.

## Killing for Skins Alone.

Every person who, after the passage of this act, shall take, kill or destroy any of the animals mentioned in this section, at any time, unless the carcass of such animal is used or preserved by the person slaying it, or is sold for food, is guilty of a misdemeanor.

## Buying, Selling or Having in Possession.

629. Every person who buys, sells, or has in his possession any of the game enumerated in the two preceding sections, within the time the taking or killing thereof is prohibited, except such as are tamed or kept for show or curiosity, is guilty of a misdemeanor.

## Use of Phosphorous.

630. Every person who, in the counties of Santa Clara, Contra Costa, San Joaquin, Santa Cruz, or San Mateo, uses or distributes phosphorous upon any land or ground, between the first day of March and the first day of November, in any year, is guilty of a misdemeanor.

## Trapping Quail, etc.

631. Any person or persons who shall at any time net, pound, weir, cage, or trap any quail, partridge, or grouse, and any person or persons who shall sell or give away, or have in his or their possession any quail, partridge, or grouse, that have been snared, captured, or taken, in or by means of any net, pound, weir, cage, or trap, is guilty of a misdemeanor.

## Catching Trout.

632. Every person who, in the counties of Santa Clara, Alpine, Santa Cruz, Lake, San Marin, Placer, Nevada, Plumas, Sierra, San Mateo, Monterey, Sonoma, Tuolumne, Alameda, Luis Obispo, Solano, Mariposa, Mendocino, or Napa, at any time, takes or catches any trout, except with hook and line, is guilty of a misdemeanor.

## Close Season for Trout.

633. Every person who takes, catches or kills any speckled trout, brook or salmon trout, or any variety of trout, between the 1st day of November and the 1st day of April in the following year, is guilty of a misdemeanor.

## Close Season for Salmon.

634. Every person who, between the 31st day of July and the 1st day of September of each year, takes or catches, buys, sells, or has in his possession, any fresh salmon, is guilty of a misdemeanor.

## Netting Salmon Saturdays and Sundays.

Every person who shall set or draw, or assist in setting or drawing any net or seine, for the purpose of taking or catching salmon in any of the waters of this State at any time, between sunrise of each Saturday and 12 o'clock noon of the following Sunday, is guilty of a misdemeanor.

## Close Season for Shad.

Every person who, between the 1st day of April and the 31st day of December in each year, takes or catches, buys or sells, or has in his possession, any fresh shad, is guilty of a misdemeanor.

## Tide-Water Fishing.

Nothing in this section shall be so construed as to prohibit any person from catching fish, with hook and line, at any time in the tide waters of this State.

## Deleterious Substances in Water.

635. Every person who places, or allows to pass into any of the waters of this State, any lime, gas tar, coccolus indicus, or any other substance deleterious to fish, is guilty of a misdemeanor; provided that sawdust shall not be deemed a deleterious substance.

## Private Fish Preserves.

Any person who shall catch, take, or carry away any trout or other fish from any stream, pond or reservoir belonging to any person or corporation without the consent of the owner thereof, which stream, pond or reservoir has been stocked with fish by hatching therein eggs or spawn, or by placing the same therein, is guilty of a misdemeanor.

## Standing Nets and Traps for Fish.

636. Every person who shall set, use or continue, or who shall assist in setting, using or continuing any pound, weir, set net, trap, or other fixed or permanent contrivance for catching fish in the waters of this State, is guilty of a misdemeanor.

## Seines and Nets.

Every person who shall cast, extend or set any seine or net of any kind for the catching of fish in any river, stream or slough of this State which shall extend more than one-third across the width of said river, stream or slough at the time and place of such fishing, is guilty of a misdemeanor.

## Fish too Small for Market.

Every person who, by seine or any other means, shall catch the young fish of any species, which at the time of capture are too small to be marketed, and who shall not return the same to the water immediately and alive, or who shall sell or offer for sale any such fish, fresh or dried, is guilty of a misdemeanor.

## Penalties.

Every person convicted of a violation of any of the provisions of this chapter shall be punished by fine of not less than \$50 and not more than \$300, or imprisonment in the county jail of the county where the offense was committed for not less than 30 days nor more than six months, or by both such fine and imprisonment.

## Who Receive the Fines.

One-half of all moneys collected for fines for violations of the provisions of this chapter shall be paid to informers, and one-half thereof to the District Attorney of the county in which the action is prosecuted; all other costs shall be charged against the county in which the action is prosecuted.

## Fish Commissioners.

Nothing in this chapter shall be construed to prohibit the United States Fish Commissioners, or the Fish Commissioners of the State of California, from taking such fish as they shall deem necessary for the purpose of artificial hatching, nor at any time.

## Forfeiture of Boats, Nets, etc.

All nets, seines, fishing tackle, boats, or other implements used in catching or taking fish in violation of the provisions of this chapter shall be forfeited, and may be seized by the peace officer of the county, or assistant, or person acting under the Fish Commissioners, and may be by them destroyed, or may be sold at public auction by the party making such seizure, upon notice posted in such county for five days.

## Proceeds of Forfeitures.

The person making such seizure and sale shall be entitled to retain one-half of the proceeds of such sale, and the balance shall be paid into the school fund of the county, in case the seizure and sale is made by a peace officer thereof, or to the Fish Commissioners, if made by a person appointed by them; provided, that all nets having meshes of less than one and half inches in size, when seized under the provisions of this section, must be destroyed.

## California State Sportsman's Association.

EDITORS PRESS:—Your letter of inquiry as to the aims and the necessity of organization, we would briefly answer thusly: Throughout our Golden State dwell many true sportsmen who take a run with rod and gun for the enjoyment of the sport as sport and recreation; and with alarm at the rapid decrease of sundry kinds of game in regions where it should naturally increase, and

with disgust at the selfishness of those who will not give any kind of game a chance for its life, have these same sportsmen returned home time after time. Giant powder, nets of wse, small-sized meshes, snares and spring nets, traps, and such like paraphernalia have, in some localities, well nigh made a clean sweep of fish and game, add to which a total disregard for the existence of open or close season. And what chance have we of finding in a very short time, a fish or a bird, or game of any kind in California? And, too, in a State long and justly termed the "Sportsman's Paradise." By only a limited observance of the game and fish laws as now in force, there will be enough and abundances to spare for all time. This and a natural feeling of goodfellowship, such as always exists among those of similar tastes, drew together at Stockton, as a central point, on Monday, June 27th, in Eureka Engine Co.'s hall, delegates representing ten clubs—Pajaro Valley Club, Watsonville; Folsom Club, of Folsom; Butte County Club, of Chico; Ukiah Club, of Mendocino; California Wing Shooting Club, and the Cosmopolitan Club, of San Francisco; Yolo Club, of Woodland; Stockton Gun Club; O'Neil Club, of San Joaquin, and Woodbridge Club; and a more harmonious meeting throughout cannot be imagined. A full and complete canvass of the situation was had; Constitution, By-laws and two sets of shooting rules adopted, and the intention was to have every portion of the ground so fully covered there should no question arise, but our by-laws and rules would cover it (we will forward you copy soon as printed). After electing as officers for the year, Park Henshaw, Butte County Sportsman's Club, Chico, President; Dr. F. C. Durant, of Folsom Sportsman's Club, Folsom, Vice President; Sidney Newell, Esq., Stockton Gun Club, Treasurer; J. Pitcher Spooner, O'Neil Gun Club, of San Joaquin, Stockton, as Secretary. Directors, Crittenden Robinson, of California Wing Shooting Club, San Francisco; J. H. Burnett, of Ukiah Sportsman's Club, Ukiah; C. H. Wyckoff, of Yolo County Sportsman's Club, Woodland; C. B. Smith, of Stockton Gun Club, Stockton; J. N. Besse, of Pajaro Valley Sportsman's Club, Watsonville, adjourned to meet second Monday in May, 1882, at parlors of Palace hotel, San Francisco. We have already heard from several noted clubs, among them Grass Valley Club, signifying their intention to join the association. Under our rules, none but members of the association will be allowed to participate with us in association tournaments. Our strength at starting was most gratifying to all, and there seems no reason why the California State Sportsman's Association should not be one of mutual benefit to its members, as well as all sportsmen in our State.—J. P. SPOONER, Secretary California State Sportsman's Association.

## Hunting Upon Enclosed Lands.

On the 3rd of March, 1876, the Legislature of California passed an act to prevent persons passing through enclosures and leaving them open, by tearing down fences or otherwise, and to prevent hunting upon enclosed lands in the State of California. We append the sections of this law, and as it is an important one to farmers they may as well cut it out of the columns of the RURAL PRESS and paste it up where it can be readily found for reference:

## Gate, Bars and Fences.

Section 1. Every person who shall open any gate, bars, or fence of another, for the purpose of passing through, and shall wilfully leave the same open, without the permission of the owner, is guilty of a misdemeanor.

## Fences on Inclosed Lands.

Sec. 2. Every person who wilfully opens, tears down or destroys any fence on the inclosed land of another, is guilty of a misdemeanor.

## Giving Permission to Hunt.

Sec. 3. Every person who wilfully enters upon the inclosed land of another for the purpose of hunting, or who discharges fire-arms, or lights camp fires thereon, without first having obtained permission of the owner or occupant of said land, is guilty of a misdemeanor.

## Killing or Wounding Horses, Cows, Etc.

Sec. 4. Every person who wilfully, carelessly or negligently, while hunting or camping upon the inclosed lands of another, kills, maims, or wounds an animal, the property of another, is guilty of a misdemeanor.

## Camp Fires.

Sec. 5. Every person who, upon departing from camp, wilfully leaves the fire or fires burning or unextinguished, is guilty of a misdemeanor.

## Penalties.

Sec. 6. Every person found guilty of any of the misdemeanors herein mentioned, shall be fined not less than \$20 nor more than \$50, and shall be imprisoned in the county jail until such fine be satisfied, not exceeding one day for every \$2 thereof.

Sec. 7. All acts and parts of acts in conflict herewith are repealed; provided, however, nothing herein contained shall be construed as repealing section 594 of the Penal Code.

## POULTRY YARD.

## California and Eastern Eggs.

Large quantities of eggs come into this market from far distant Iowa and Nebraska, and nearer Utah. There is no question that they are imported for the purpose of supplying the bakers, who use immense quantities, and who put them away in lime water until the furs for fresh eggs reach too high an altitude; but it is also true that the public eat large quantities of them under the mistaken impression that they were laid at no great distance from home, instead of 2,000 miles or so away. There is this peculiarity about Eastern eggs: Owing to some difference in the chemical elements of the soil there from those which obtain here, a very considerable proportion of them are of a rich deep brown, while in a case of California eggs the brown ones are few and far between, nearly all the home product being whites. These eggs arrive here by the car-load—12,000 dozen—and those that are not taken by the bakers, who have generally bought before arrival, are distributed among the commission merchants. By many of these a cunning description is practiced in selling as "fresh California," eggs which were laid in Iowa two or three weeks previously. If the commission houses sold these eggs to the retailers in the boxes in which they came into the city, the trick would at once be detected, and the same result would follow the discovery of the presence of so many brown eggs. So the eggs are quietly changed into old boxes, bearing the stencil marks of local firms, nearly all the "red" eggs, as they are called, are removed, and the sharpest examiner cannot tell the remainder from the California product, save by their size, for the fact is well known that the majority of Eastern eggs are larger than the ordinary run of California. The principal reason for practicing this deception is to be found in the fact that the home article, from its supposed superior freshness, always brings from two to five cents per dozen more than the imported egg, which means a very fine profit for the man who manipulates the latter in the manner described. The remaining "red" eggs are mixed in the proportion of from one to two to the dozen with California eggs, and pass muster undetected. A great many Eastern eggs come into this market during the fall, and from then on through the winter, though during cold weather in the East they frequently reach us more or less bitten with frost, and then they have to be consumed without delay, as they spoil very quickly upon thawing. In the spring the receipts are very large, until the heat of the summer upon the plains and the home abundance prevent further shipments.

## Cracked Eggs.

The majority of the boxes of eggs which arrive here are found to contain from one to a dozen, and sometimes more, which are cracked. It would be supposed that these were no longer of any value, and would be thrown away. Not so. As long as the shells are not so completely destroyed that the contents have escaped entirely, they represent just one-half the whole-sale price per dozen of those which still preserve the integrity of their envelope. Hardly an hour in the day passes but what some woman, with head either bare or covered with a shawl, and with a basket or tin pail upon her arm, advances almost with the confidence of proprietorship into those commission houses which deal largely in eggs, and propounds the question, "Got any k-raked eggs?" and, if she is answered in the affirmative, she will coolly help herself, and, if eggs are selling at 20 cents per dozen wholesale, will pay 10 cents per dozen for them. The same women call every day, month in and month out, with unfailing regularity, and always ask simply for "k-raked eggs," and nothing more. Some of them have been on the street for years, and they are as well known to the merchants as the latter are to each other. Many of them sell these eggs to boarding-houses or bakers at an advance of four or five cents per dozen, and do a thriving business, while a few seek them for home consumption. When eggs are high, there is a considerable demand among the poorer classes for duck eggs, which contain about twice as much "meat" as the average hen's egg, and are thus more economical, though selling at nearly the same figure. They are not as well liked, however, as they are prone to taste somewhat rank. Lastly come

## The Rotten Eggs.

Do not suppose, as you naturally will, that these are thrown away, for such is not the case. They represent a value of from two and one-half to five cents per dozen, according as the market is down or up. The principal buyer of them is a foreign woman who can speak but a word or two of English, and whose yellow shawl thrown over her head is a well-known sight on the street. What she does with them is a mystery. Some say they are used in cleaning kid gloves; others declare they are sold to tanners; but the fact is, so far as can be ascertained, no one really knows what she does with them. She buys nothing but spoiled eggs, and is familiarly known as "the rotten egg woman." There are other outlets for rotten eggs. Occasionally a predatory peddler, who has no regular route or line of customers, goes about buying rotten eggs. These he mixes with good ones in the proportion of about half-and-half, and sells to consumers and retailers. His profit is immense, but he does not dare to pass over the same route twice.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Wheat Growers' Association.

The adjourned meeting of the wheat growers of California convened at Grangers' Hall at 2 p. m. on the 14th. At 2 o'clock the meeting was called to order by H. M. Larue, of Sacramento.

H. M. Larue was elected Chairman, and Mr. McCarty Secretary.

The following letter and resolutions, by H. J. Ostrander, were then submitted to the meeting by the Chairman:

"I would beg leave to suggest that the meetings of the Association be as often as once a quarter; that the officers should consist of a President, Vice-President, Secretary and Treasurer; that the Secretary receive a salary; that it be his duty among others to ascertain and report on each meeting of the Association the condition of crops in the leading wheat-producing countries; the condition of the wheat markets of the world, etc., together with such other information as may be of material interest to the member of this Association. That the fees and quarterly dues be sufficient to remunerate the Secretary for his labor and expense in collecting and disseminating such knowledge. Respectfully,

"H. J. OSTRANDER."

### Resolutions leading to the Wheat Growers' Association in the State of California:

WHEREAS, It is the sense of this meeting that the wheat growers of this State labor under certain disadvantages, and whereas it is believed that these together with other disadvantages and evils arising from the present unorganized condition of the wheat growers of this State can be greatly mitigated, if not entirely prevented by united efforts upon their part; and whereas, such united efforts can only be attained by a definite organization of said wheat growers; therefore be it

Resolved, That we as wheat growers proceed at once to form ourselves into an organization to be known as The Wheat Growers' Association of California, the purposes and objects of which shall be as follows, to-wit:

First. To insure the more frequent intercourse of the wheat growers residing in different parts of the State.

Second. To enable wheat growers to keep thoroughly and reliably informed at all times respecting, 1st, crop prospects in this and foreign countries, 2d, local and foreign markets, 3d, shipping facilities, and 4th, any other information that may inure to their benefit.

3d. To enable farmers to reap the benefit of high foreign markets by chartering vessels and shipping their own wheat.

4th. To secure unity of action influencing legislation in favor of the great interests of the State.

5th. To discourage all practices that may tend to lower the standard of California wheat in the markets of the world.

Sixth. To enhance the value of our wheat, and to increase the production of our land.

Seventh. To enable the wheat growers of this State to act with promptitude and efficiency in any emergency in which their interests are threatened.

Resolved, That the members of this Association fully recognize and appreciate the great benefits arising to the wheat growers of this state growing out of the efforts of the Grangers' Bank and the Grangers' Business Association, and that this Association shall act in concert with said Grangers' Bank and Business Association, so far as practicable.

Mr. Campbell of Colusa moved that these resolutions be referred to a committee. The motion was adopted. On motion it was ordered that the Chair appoint the committee.

The committee appointed on the resolutions of Mr. Ostrander, were as follows: J. C. Campbell, Colusa; E. Jacob, Tulare; A. D. Logan, Colusa; Daniel Inman, Alameda. The Chair appointed on Statistics: A. C. Paulsell, Stockton; J. McPike, Stanislaus; Gardner, Solano, and English, of Contra Costa. Report of the Committee on Resolutions was adopted.

A collection of \$67 was made to pay expenses incurred.

The Committee on Statistics reported as follows: "There are nothing like full reports from the different parts of the State; but we found 647,000 tons of wheat reported. From the facts before the committee, we estimate there is not 950,000 tons of wheat in the State for exportation." The report was approved. W. B. English submitted a statement of the engaged and disengaged wheat tonnage in port and to arrive, viz:

Engaged, 65,694 tons; disengaged, 4,687 tons; to arrive, 406,508 tons. Add to this 50%, the carrying capacity of ships more than registered, 238,444 tons, makes a total of 715,333.

#### To Hold the Wheat.

Caleb Dorsey's resolution was adopted, viz: Resolved, That we, the wheat growers of the Pacific coast, realizing the ruinous policy of our shippers in paying exorbitant freights to foreign shippers and, therefore, be it

Resolved, That we, the grain growers, hold our grain till such time as vessels will carry the same at a reasonable rate.

The meeting was then addressed by Mr. Inman of Alameda, by the chairman of the meeting, Mr. English of Contra Costa, Dr. Grattan of San Joaquin, C. J. Cressey, and by Mr. Applegarth. Mr. English submitted the following resolution, which was adopted: "Resolved, That a committee of seven be appointed on permanent organization. That said committee submit a constitution and by-laws for the government of this association." The following were appointed:

Committee on Permanent Organization. W. B. English, E. Jacobs, A. D. Logan, A. C. Paulsell, L. M. Hickman, H. G. Ostrander and Dr. T. E. Tyman.

Forty registered their names as solid for the organization. Papers will be circulated for further signatures. Chairman was added to Committee on Organization. Committee to report Thursday at 10 A. M. Adjourned.

## The Grangers' Enterprise at Port Costa.

We deeply regretted our inability to visit Port Costa on Friday of last week, at the time the Directors of the Business Association decided to examine the progress of their enterprise at Port Costa. We have secured, however, the following interesting statement from a brother who was present, and to whom our thanks are extended:

The Board of Directors of the Grangers' Business Association was called to meet Sept. 9th, and examine their new wharf and warehouses in course of construction on the straits of Carquinez, below Port Costa. All were present except two, the lamented G. W. Colby being one of the absent. On arrival, many laborers were found at their various duties, much resembling ants in numbers and in industry.

The main wharf is 650 ft. in length by 150 ft. in width, to which will be added a dolphin of about 100 ft. in length, making room sufficient for three large vessels to load, and for barges and small craft to unload at same time. Three-piled approaches connect it with the main land; a side track from the railroad runs along the land side, while another goes on the wharf from the lower end, dividing into three tracks, which run the length of the wharf.

The wharf and building are well protected from the jar of vessels when coming alongside by a row of brace piles the full length of the wharf, which are strongly bolted to heavy timbers under the floor. The floor is of two-inch plank, well spiked, covered with one-inch pine lumber put on diagonally, so as to prevent waste of grain by leakage. The frame is being strongly made, braced and tied with iron bolts and rods. The roof will be a double gable extending lengthwise the wharf, and will be covered with shingles by the 10th of October next, half of it in less than one-half that time.

The length of warehouses will be 620 ft. by 100 ft. in width, with 14-foot posts, having capacity for 30,000 tons of grain, of which about 8,000 tons are already on the wharf.

Everything presented a business-like appearance and convinced the Board that they had made at last a step in the right direction. Worthy Master Spilman, of the State Grange, was, during the inspection, landed at the wharf by J. F. Deming, of Glen Cove. After looking around him and examining and considering things in his cool and deliberate manner, Bro. Spilman expressed himself as satisfied that this move was the best one made by the Order, and without doubt would be of great benefit to the farmers of the State.

The work is an example of what can be accomplished in a short time when conducted with energy and promptness. Mr. Amos Adams, Manager of the Grangers' Business Association, who has had the whole superintendence on himself, is worthy of great credit for the successful issue of this advance in the interests of the farmers of the State, and they will undoubtedly soon appreciate the benefits they will derive from this move of the G. B. A., both directly and indirectly.

Mr. Ira Bishop, the foreman and supervisor of the mechanical work, also comes in for much credit for the thorough, efficient and energetic manner in which he has and is conducting the work. He has in this, well sustained his former reputation as a first-class mechanic and builder. The board returned to San Francisco in excellent spirits, satisfied that a good work was being well done.

### Resolutions of Respect.

WHEREAS, The great Ruler of the universe has in his infinite wisdom removed from our midst our worthy and esteemed President and fellow member, G. W. Colby, and

WHEREAS, The intimate relation held during a long business life by him with the members of this Board makes it fitting that we record our appreciation of him; therefore,

Resolved, That his sudden removal from our Board, and as President of this corporation, leaves a vacancy and shadow that will be deeply realized by all members of the Board and its friends, and will prove a grievous loss to this State and the public.

Resolved, That with deep sympathy with the afflicted children and friends of the deceased, we express an earnest hope that even so great a bereavement may be overruled for their highest good.

I. C. STEWART, }  
A. D. LOGAN, } Com.  
C. J. CRESSEY. }

STOCKTON GRANGE.—Saturday, Sept. 10, the Stockton Grange held a regular meeting. The principal matter of business transacted in which the public take an interest was the passage of the following:

Resolved, That it is for the best interest of the farmers having wheat to withhold the same from market until such times as freights shall decline to a reasonable price.

It was also the sense of the meeting: From the present outlook, the partial failure of the crop in France, floods in England, drought in the northwest, and with not more than one-third of last year's crop in our own State, coupled with the unprecedented amount of tonnage in port and to arrive, we have no hesitation in saying we have nothing to lose and all to gain by holding our wheat as recommended.

GRANGERS' BANK OF CALIFORNIA.—J. H. Gardiner, Esq., of Rio Vista, Solano county, has been chosen to fill the vacancy caused by the death of Hon. G. W. Colby, Director. John Lewelling, Esq., former Vice-President, is now acting President for the unexpired term.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

COTTON GROWING.—Oroville Register: F. A. Shaffer, owning land in connection with the Park brothers, of Marysville, planted on his land just below Oroville, as an experiment, on the 10th of May, a quarter acre each of Georgia and Sea Island cotton seed. Mr. Shaffer brought into our office on Tuesday a plant which he pulled up on his way to town. The plant was about four ft. in height of thrifty growth and containing 40 bolls, a number of them being fully opened out. On one plant in the patch he counted 64 bolls, 27 of them in bloom. An old cotton planter from Georgia, living on the ranch, pronounces the patch in growth and quality equal to the best productions of Georgia. The Sea Island variety does not seem to be as early a growth as the Georgia, nor does it seem to be as well adapted to our soil and climate. No rain has fallen that could be called even a shower since the seed was planted. The seed was imported by Col. Abby, formerly President of the Spring Valley mining company, and distributed in various parts of the county in order to test the adaptability of our soil to cotton raising. This experiment is the only one we have heard from. Had the season been one with the usual amount of May rains it is but fair to suppose that the crop would have been far ahead of what it is. We have been informed that a farmer in Colusa county is so well satisfied with his experiment in cotton raising in that county that he this year planted 100 acres. What the result of his present year's operations is likely to be we have yet been unable to learn. While we know nothing about the profits of cotton raising, the fact of its growing successfully on the river bottoms insures our farmers a spring crop for those lands subject to April overflows. Mr. Shaffer informed us that he intends to try his experiment on a much larger scale next year.

#### CONTRA COSTA.

SQUIRREL RUINS.—Gazette: Mr. Milford, a farmer in the hills south of the New York grant, who has lost nearly his entire crop this season from the depredations of the squirrels, sends us a statement showing the extent to which a single one can carry off plunder from the farmers' fields. The instance in illustration which he gives is furnished by the quantity of wheat found in the mouth pockets of a single squirrel that he killed, and which counted out 1,834 grains. We have before had verified reports of nearly as large amounts taken from the mouth pouches of single squirrels, but this particular pilferer somewhat overtops any others of which we have had reports.

#### LOS ANGELES.

BUYING MUSCAT GRAPES.—Anaheim Gazette, Sept. 10: The announcement in the Gazette last week that the winemakers were disinclined to purchase Muscat grapes, because of their unsuitability, gave rise to great anxiety among growers of that variety of grapes—an anxiety, however, which was speedily dissipated by the appearance at Orange of a gentleman representing Mr. Briggs, the famous raisin-maker of Yolo county, who commenced purchasing all the Muscat grapes which were for sale. Sixteen dollars a ton was the price paid for the grapes either on the vines, and as high as seven cents per lb. was paid for raisins as they came from the sweat boxes—the purchaser furnishing the boxes and doing the packing. From the fact that the purchaser buys the grapes on the vines, partly cured or fully cured, we infer that a scarcity of raisins is anticipated. This is the first time that a foreign purchaser has appeared in the vineyards of our neighborhood, and great is the joy thereof.

#### SANTA CLARA.

A NEW BLACKBERRY.—San Jose Mercury, Sept. 10: Wm J. Cottle, of the Twelve Mile House, brought us, Tuesday, a box of blackberries, with a sample of the bearing wood, which are entirely unlike any of the kind with which we were familiar. It is called the Alaska Evergreen. The berries are very sweet, and come along at a time when the common blackberry is not in season. Another peculiarity is the continuous character of the growth of the wood, which produces berries from the same wood from year to year. The canes grow into stocks the size of a man's arm. Mr. Cottle obtained his plants from a party who brought them from Alaska. They are entirely new to this section.

#### SANTA CRUZ.

HORTICULTURAL.—Sentinel, Sept. 10: Horticultural Commissioner Pilkington informs us that he has visited 80 or more orchards in his inspectorial district, and carefully examined, reported and registered the condition of the same. That he finds a growing and deep interest among the fruit-growers and shippers on the subject of fruit pests, and especially in Highland district, where universally the fruit-shippers have instructed their consignees to return no boxes. The boxes are freely given with the fruit. This is done to prevent any return pest to their orchards, and so particular are they that any box received by them from any fruit-infested locality, especially San Jose and San Francisco, is at once burned and destroyed to avoid infection of their own orchards. Commissioner Pilkington advises, in all cases of shipment, that the orchardist and fruit-shipper receive no return boxes as the only safe course

to be pursued to avoid the devastating influences in Santa Cruz county of fruit pests, as already in our adjoining county of Santa Clara the infested orchards and nurseries that two years ago could have sold for from \$20,000 to \$50,000, cannot be sold now for half the money, and if the instruction given every orchardist in our county by the Horticultural commission are not levied up to, Santa Cruz county, like these adjoining, will soon be in the same condition. While on the other hand if fruit-growers and shippers pay strict attention to the rules and quarantine regulations given them by the Horticultural Commission, Santa Cruz county will become one of the finest counties in the State in this new fruit-growing and shipping interest, and fruit lands increase from 100% to 300% in value.

#### SONOMA.

AN ARTIFICIAL MOTHER.—Petaluma Argus: L. C. Byce exhibits at the fair a National Incubator, with which he has unprecedented success this season; also Byce's Artificial Mother, for raising chickens. By a combination of the hot water and hot air principles, pure fresh air as well as warmth is supplied all parts of the mother, so that no matter whether there are few or many chicks in the mother, there is no fear of suffocation. The ventilation is so perfect. The heating apparatus may be described as follows: A series of what may be termed duplex cylinders, through which the super-heated water flows to and from the heater, and by which a greater radiating surface is secured. There are pipes through which pure air is conveyed, becoming heated before being discharged into the mother. The warmth is supplied by a small lamp, the whole appearing unique, convenient, simple, and so far as we can see, is just what is needed to successfully raise chickens.

LARGE YIELD OF PEARS.—Flag, Sept. 8: Mr. N. P. Olds informs us that the yield of a Bartlett pear tree at Mrs. Michaels' ranch, 2½ miles northwest of town, was this year, by actual weighing by himself and Mrs. Michaels, 500 lbs. of large and very nice pears. They were sold in Healdsburg at 2 to 2½ cents per pound. Mr. Olds says that an orchard of these trees on good soil, trees 20 ft. apart, will average 500 lbs., with reasonable care.

AN OFF TIME FOR FARMERS.—As the store-houses are full and grapes are not quite ready for picking, our farmers are having an idle time. In two or three weeks, however, when the wineries are running, and seeding summer-fallow in full blast, and perhaps the hauling of grain under headway, things will be different.

SHORT CROP OF GRAPES.—Owing to neglect in sulphuring, it is believed that the yield of many of the oldest vineyards of this section will not be more than half what it was last year.

#### SAN DIEGO.

FRUIT FIGURES.—Union, Sept. 10: We now have before us specimens of apples and pears, grown on the ranch of Mr. E. Steele, of Paradise valley. The apples, which are large and of excellent flavor, are perhaps not superior to some of the splendid varieties presented to us by others, but they are very fine. The pears, however, are ahead of any we have seen this season. First, we have the Flemish Beauty, a pear weighing 21 ounces. Then a cluster of four, of the same variety (three on one stem and the other dropping off in pulling), weighing four lbs. The next a Bartlett, weighing a fraction over a pound. Then follows three Eckles, weighing a pound, and two Russets, not so large, but very perfect in form. Mr. Steele has recently disposed of one of the finest crops of apricots ever grown in the State. It was our pleasure to see the trees before the crop was picked, and it was a sight that would have gladdened the heart of the most enthusiastic fruit raiser. There were 100 of them, and the fruit on each was estimated at from 300 to 500 lbs., valued at from 4 to 8 cents per lb. Taking the lowest estimate, the product of the 100 trees was worth \$1,200. Mr. Steele has a great variety of trees, bushes and vines, yet the ground occupied is only about seven acres.

#### TULARE.

THE FAIR SOCIETY.—Delta, Sept. 7: At the meeting of this Tulare Valley Agricultural Association held in Visalia on the 27th ult. a committee was appointed to inspect the different pieces of land available for fair purposes, and to report on prices, location, accessibility, quality of the soil, and adaptability for a race-track, and to give a comparative analysis of the various merits of the respective tracts. At the meeting held last Saturday the committee submitted a full report, with suggestions and recommendations. It had visited the different localities, and was qualified to report advisedly. After hearing the report the Directors decided on the purchase of Wiley Watson's tract, on the southwest of Visalia, and lying partially within the corporate limits. It is thus well located, and easily accessible from all directions. The tract contains about 67 acres, and the purchase price is \$2,200. The tract is 120 rods in length and 90 rods wide. In one end is a splendid oak forest, which greatly enhances the value of the tract for fair purposes. The northern end is cleared, and is under cultivation. Three shares of the Watson ditch accompany the deed, and additional water can be easily brought upon the land. The Directors arrived at an important decision, namely, to have a stock fair instead of a regular agricultural and mechanical fair. They adopted this wise course for the reason that there is insufficient time for ample preparations for a fair that would reflect



full credit on the wonderful resources of this section. They decided that a stock fair, with an excellent race programme, could be made successful, and would arouse interest in a general preparation by the people for the regular fair of 1882.

### NEVADA.

**BOUNTY FOR ARTESIAN WELLS.**—Winnemucca Silver State: Artesian wells are of the greatest benefit imaginable to the people of Nevada. Without water for irrigating, the State is practically worthless for agricultural purposes. The soil is rich, but the climate is so dry that without artificial irrigation, nothing but sagebrush and stunted shrubs of that character will grow in the rich valleys, where, with plenty of water, trees, grain and vegetables grow luxuriantly. This has been demonstrated at Battle Mountain, which was located on an arid plain which produced nothing but sagebrush, until artesian water was procured for irrigating. In a few years the place has changed as if by magic, and trees, flowers, grasses, grain and vegetables flourish where only a few years ago a jack rabbit could not live on the natural vegetation of a quarter-section of land. Besides the advantages to be derived from artesian water for agriculture, it might be used advantageously for mechanical purposes. This ought to be sufficient to induce moneyed men to try the experiment of getting flowing water from an artesian well. The cost, so we are informed, will not exceed three or four dollars per foot for a depth of 300 ft., and the State gives a bounty of two dollars per foot after a depth of 500 ft. is attained. An act passed by the Legislature, approved March 6th, 1879, provides that every person, firm, corporation or association that shall sink an artesian well within the State shall be entitled, after the first 500 ft. shall have been sunk, to the sum of two dollars per foot, to be paid out of the General Fund of the county in which the well is situated.

### The Horticultural Fair of Los Angeles.

[Written for RURAL PRESS by JEANNE C. CARR.]

The most chronic sight-seer cannot complain of a dearth this year. Two successful citrus fairs at the opening of the season, and now the Horticultural, coming in connection with the celebration of the centennial at Los Angeles, will be quickly followed by the Agricultural fair of the Southern District. While there is a very tiresome sameness in the lines of mammoth squashes, pyramids of hotbells and tin cans, there's perennial freshness in fruits, flowers and habies, and in the gaily-dressed and happy crowds.

Everybody declares this the best of fairs, and a plentiful sprinkling of blue ribbons and silver trophies, accounts for the satisfied expression I notice in the faces of exhibitors.

The *coup d'ail* of the pavilion on the opening night presented a scene of enchantment. Abundant greenery, with flags and streamers covered the nakedness of a building still unfinished and unpaid for. Mr. Stengel, our leading florist, had enclosed the fountain with a magnificent row of tree ferns and other rare exotics. Their brown columns surmounted with crowns of graceful drooping fronds, make the most simple and satisfactory decorations. Large magnolias, palms and New Zealand grasses finish this very handsome exhibit in the center of the pavilion. I have never seen as large or as brilliant a collection of greenhouse and foliage plants from a single exhibitor at any fair in the State, as Mr. Stengel makes this year, to say nothing of bouquets and cut flowers. A vine of *Aristolochia gigantea*, or Dutchman's Pipe, daily puts forth fresh flowers, and a large Warden case, full of choice foreign ferns and selagionellas, are the most admired features of his table display.

Some of the readers of the PRESS are aware of the generous rivalry between our horticultural colonies of Riverside and Pasadena. The managers gave to these contestants display tables opposite and near each other, where the odiousness of comparison might be relieved by the play of social attractions. The Riverside sent generously of their best; the Pasadena's offerings overflowed into all available adjoining space, and for the fourth time won the premium for largest and best local exhibit.

But Riverside bore off the prize for the largest display of grapes in variety, A. S. White having sent 42 varieties, among which I find a very full suite of American table grapes.

Pomona comes to the front with apples and pears, taking the premiums for the best six varieties of each. This exhibit is in charge of Rev. Mr. Loop and contains 12 varieties of pears and 18 of apples, grapes, figs, almonds, oranges, lemons, limes and a little of everything, and all good. One pear branch weighed 50 lbs. Mr. Chas. Weile shows superb specimens Souvenir de Congres, Duchess D'Angouleme and Flemish Beauty. Mr. Loop, fine Winter Nelis, "Tuni," the Polo, a Russian apple, and Duchess of Oldenberg. Mr. Rogers of Pomona shows extra fine specimens of Skinner's seedling apple and Heath cling peach.

Let me digress to speak of a remarkable exhibit by Mr. Loop, of a box of Mediterranean Sweet oranges, packed February 24th and opened September 1st. There was not a spoiled orange in the box, and although somewhat shriveled, they tasted very sweet. This shows the superior keeping qualities of our fruit.

A natural transition takes us from "Pomona"

to "Pomona's retreat," where I find your correspondent, Mr. Cadwell, with 63 varieties of seedling apples and 18 of seedling pears, grown by him without irrigation on his farm at Carpenteria. Mr. Cadwell has charge of the Santa Barbara exhibit, where Mrs. Mary Ashley's glowing jellies, the wines of J. E. Goux, Col. Hollister's almonds, oranges and persimmons, and Mr. Cooper's never over-praised olive oil, attract much attention. But, alas, as in the original Eden, the enemy of our horticultural peace is here, in the form of Dorthesia, the white Australian scale. This new foe is a beauty to look at, about the size of a small pea, with longitudinal chalk-white bands or furrows, ending near the head in a series of bright red points. No other scale leaves half so loathsome a ruin in its track.

The collection of beneficial and injurious insects presented by Mr. Alsx. Craw, is very complete and instructive.

McPherson Bros., of Orange, have taken premiums on largest and finest display of grapes, largest bunches, and best raising. Mr. M. has choice boxes of Sultana raisins also.

D. M. Harwood, of Orange, has a splendid show of grapes. I. B. Parker, D. C. Hayward, and others, grapes and deciduous fruits of high quality; W. F. Windheim, London layer raisins of 1881; Miss B. Johnson, pine-apple in pot, not yet ripe; R. B. Warren, well ripened Cavendish bananas. A. J. Sanders, also of Orange, has a very praiseworthy exhibit of native woods and articles turned from the same.

Tustin wears the blue ribbon for P. Potts' corn; for best variety of lemons grown by Snow & Adams, bananas, do; when it's remembered how close the competitions on lemons has been, Mr. Snow has reason to be congratulated. Beautiful bolls of Sea Island cotton are shown by Washington Williams of Tustin; Snow & Adams show the "Oliveoid beet," weighing 30 lbs., 34 in. in length; this beet is excellent for stock, and from its habit of growing nearly all above ground, is easily harvested. Santa Ana shows the blue ribbon upon Brownell's Beauty potatoes, grown by W. F. Halsell, of Gospel Swamp, also gains another premium for the Early Blue potato, by the same exhibitor. D. F. Wehler receives the premiums for best bushel of white, do., yellow corn.

Anaheim shows minerals from Santiago caynon and fruits in variety.

A few miles from Anaheim, Mr. George R. Hinde has a fruit and vegetable farm from which we have a great variety of exhibits. There is quite a flutter of blue ribbons here. A "scuffler hoe," the premium (White Imperial or Lodi) water-melon; early corn; 12 varieties of peaches; Mr. Hinde shows the Peruvian Papaw, Italian chestnuts and a variety of apples and pears. Much attention has been paid to Mr. Hinde's exhibit, on account of the notoriety attached to the uncooked vegetable diet adopted by this family. The starved baby which made a sensation at Anaheim last year is as ruddy and healthy a child as one could wish to see, makes comment upon this novel system of dietetics superfluous.

Mrs. Geo. W. Dye of LaDow, takes five premiums for jellies, and shows 68 varieties. The crab apple jelly of this exhibitor is good and beautiful enough for angels' food. Mrs. Rosenbaum, of Pasadena, receives a premium for guava jelly, which has been pronounced superior to the imported.

Mr. Bronks' rustic furniture was even finer than last year, and was eagerly bought up by lovers of picturesque adornments. Tables, chairs, camp stools, sofas, hanging and standing baskets were displayed in willow and manzanita. There was also a great deal of willow work of the ordinary manufacture.

The Zimmerman fruit drier received the premium for articles in that line.

This is an off year with the blessed bees, but one gallery was full of them and their products. Five improvements were shown in contrast with a "hollow gum" hive of 1781. The fruits preserved in honey by C. N. Wilson were much admired, and received an award. A machine for making comb foundation, exhibited and worked by W. W. Bliss, was accompanied by all manner of implements required in modern bee culture.

As promised by the Directors, the baby show was made a telling feature of the fair; but I never desire to attend another cherubs' mass meeting in hot weather. In vain the hand treated them to "hush," to be still and slumber, they proved the strength of lungs and legs, to the dismay of 25 suffering mothers, and a surging sea of grandmas and aunts. Above these little piping voices there rose triumphant the clarion notes of a splendid Plymouth Rock who represented the poultry interest.

As I close this letter there is a breaking up of the show, and loads of fruit are being gathered for the orphans. The harvest festival includes these, and many others who cannot command the season's wealth in its benefits. We go back to our work in orchards and vineyards better and wiser for hours spent in social intercourse and opportunities of comparing our work with others.

Pasadena, Sept. 10, 1881.

THE Dalles Mountaineer says: The stock range of one firm in the south end of Grant county is 50 miles wide and 125 miles long. This firm, by taking advantage of the nefarious swamp land laws of Oregon now hold possession of the watering places in this vast region, and as effectually keep settlers out as if they had a patent for the whole region.

### Petaluma Fair Premium List.

The following is the list of awards for agricultural exhibits at the fair held last week at Petaluma:

#### Horses.

Thoroughbred—J. G. Underhill, best stallion 4 yrs, Wheatley; J. B. Chase, best stallion 2 yrs, Duke of Maud; J. G. Underhill, best stallion 1 yr, no name; J. G. Underhill, best mare 4 yrs, Rosette; J. B. Chase, best mare 3 yrs, Winifred; J. B. Chase, best mare 2 yrs, Annie Laurie; J. G. Underhill, best mare 1 yr, no name; J. G. Underhill, best suckling horse colt; also, best suckling mare colt; J. G. Underhill, best stallion and 6 colts, Wheatley.

Graded Horses—John Pfau, best stallion 4 yrs, Eureka; Robert Crane, best stallion 2 yrs, Dicky; S. S. Drake, best stallion 1 yr, Hendricks; James Biggins, best mare 4 yrs, Kitty Watson; S. S. Drake, best mare 3 yrs, Eve; S. S. Drake, best mare 2 yrs, Alaida; James Biggins, best mare 1 yr, Fannie Parnell; P. H. Hoskinson, best horse colt, Decoration; R. Miller, best mare colt, no name; S. S. Drake, best stallion and 6 colts, Admiral.

Horses of all Work—J. P. Rodchaver, best stallion 4 yrs, Lafayette; Wm. Harbin, best stallion 3 yrs, Daniel Webster; W. H. Helman, best stallion 2 yrs, Wide Awake; Robert Crane, best stallion 1 yr, Crum Point; S. Gilmore, best mare 4 yrs, Julie; E. R. Charles, best mare 3 yrs, Fannie; H. Mechem, best mare 1 yr, Jane; T. M. Chapman, best horse colt, Bonanza; J. Loughlin, best mare colt, Nell; Petaluma Horse Breeders' Association, best stallion and 6 colts, Crown Prince.

Draft Horses—J. P. Rodchaver, best stallion 4 yrs, Time of Day; R. Crane, best stallion 3 yrs, Duke; G. D. Green, best stallion 2 yrs, no name; S. Gilmore, best stallion 1 yr, Pollock 11; Wm. Bihler, best mare 4 yrs, Doll; Page Bros., best mare 3 yrs, Blanche; H. Mechem, best mare 2 yrs, Kate; H. Mechem, best mare 1 yr, Betsy; T. Skillman, best horse colt, Model; also, best mare colt, Gertrude; Petaluma Horse Breeders' Association, best stallion and 6 colts, Duke de Chartres.

Roadsters.—P. J. Shafter, best stallion 4 yrs, Rustic; Wm. Bihler, best stallion 2 yrs, John; S. Sperry, best mare 4 yrs, Mild; Wm. Bihler, best mare 3 yrs, Mollie Scott; Wm. Bihler, best mare 2 yrs, Mary Wallis; P. J. Shafter, best colt 1 yr, Greyson; Wm. Bihler, best stallion and 6 colts, Gen Dana.

Carriage.—Saddle Horses and Jacks.—M. Fraser, best matched carriage team, Dick and Alex; P. J. Shafter, best single buggy horse, Rob Roy; R. Shafter, best saddle horse, Kate; Patrick Lawler, best jennet, no name.

#### Cattle.

Thoroughbred.—J. R. Rose took 8 premiums for Devon bulls, cows and heifers.

George Bement took 9 premiums for Ayrshire cattle.

James Biggins took one first premium for Ayrshire bull "Duke," 3 yrs old.

Jerseys.—P. J. Shafter, best bull 3 yrs, Young Surprise; J. S. Edminster, best bull 2 yrs, Blucher; D. S. Dickson, best bull 1 yr, General Grant; F. DeLong, best cow 4 yrs, Fashion; P. J. Shafter, best heifer 2 yrs, Dew Drop.

Durhams.—Page Bros., bull 4 yrs, El Medico; Page Bros., bull 2 yrs, Oxford; A. J. Pierce, bull 1 yr, Golden Wreath; Page Bros., bull calf, James Flood; Page Bros., cow 4 yrs, Belle Christmas; Page Bros., heifer 2 yrs, Rosette; Page Bros., heifer 1 yr, Lady Ashburne; Page Bros., heifer calf, Natalie.

Graded Stock.—P. Lawler, bull 4 yrs, King William; P. Echart, bull 2 yrs, Bonanza King; Page Bros., bull calf, Duke; S. Gilmore, cow 4 yrs, Beauty; Page Bros., cow 3 yrs, Maggie; Page Bros., heifer 2 yrs, Sprightly; S. Gilmore, heifer 1 yr, Lilly; Page Bros., heifer calf, Mamie.

Sweepstakes.—Page Bros., best thoroughbreds, herd of not less than 6 animals, and not more than one male, El Medico and 5 cows; Page Bros., best graded herd, of not less than 6 animals and not more than one male, Prince and 5 cows.

#### Sheep and Goats.

Thoroughbreds.—E. W. Woolsey & Son, best ram and best ewes Spanish merino. E. H. Crane, Southdown ram and ewes; T. Gilmore, Cotswold ram.

Grade Sheep.—All premiums to Page Bros.

Goats.—All premiums to T. J. Crawley.

#### Poultry.

T. D. Morris, best exhibit of not less than 10 varieties, also 19 other premiums for single pairs of fowls, geese and ducks; W. D. Froeman, 7 premiums for fowls and geese. Other awards: Mrs. W. Hill, best Buff Cochins; T. B. Cary, best Black Braided Game; do Blue Games; Mrs. Purrington, African Bantams; G. F. Ward, China geese; E. K. Evans, Pekin ducks.

#### Swine.

Geo. Campbell, Berkshire boar and sow; A. C. Shelton, Essex boar; R. H. Crane, best China Poland boar and sow; Geo. Campbell, best 5 pigs any breed; R. H. Crane, finest and fattest hog.

#### Field and Garden.

W. D. Freeman, best exhibit grain; Wm. Constock, best Australian wheat; John Kendall, best sack propo wheat; Hamilton Gaston, best chili wheat; Robert Crane, best sack Smith wheat; W. D. Freeman, best sack wheat, white Oregon; also best sack barley; Mrs. F. Purrington, best sack rye; W. D. Freeman, best sack oats; John Kendall, best sack buckwheat; Geo. Campbell, best sheaf Australian wheat; John Kendall, best sheaf propo wheat; Robert Crane, best sheaf of any other variety; C. S. Gibson, best sheaf barley; John Kendall, best sheaf oats; John Kendall, best sheaf rye; P. Mullally, best collection potatoes; G. W. Ormsby, best single variety potatoes; Carlo Pezolo & Co., best onions; John Quinn, best squashes; John Kendall, best peas; W. D. Freeman, best exhibit beans; C. S. Gibson, best exhibit sugar beets; John Kendall, best mangol wurtzels; Carlo Pezolo & Co., best blood beets; C. S. Gibson, best rutabagas; Carlo Pezolo & Co., best turnips; Hugh Stockdale, best corn; R. Looney, best broom corn; Carlo Pezolo & Co., best cabbage and cauliflower; Robert Crane, best watermelons and cantaloupes; Carlo Pezolo & Co., best carrots, parsnips, best display garden vegetables.

Fruit, Grapes, Nuts, etc.—M. Gilliam, largest and best collection fruits; Mrs. F. Purrington, largest and best collection fruits raised in one orchard; M. Gilliam, best exhibit apples; John Merritt, best single variety apples; also best 6 varieties apples; M. Gilliam, best collection pears; C. S. Gibson, best single variety pears; M. Gilliam, best 6 varieties pears; also best exhibit peaches; also plums; W. C. Andrews, best quinces; Morris Bros, best collection of oranges; Morris Bros, largest and best collection grapes; also best collection grapes raised in one vineyard; also best exhibit foreign grapes; also best exhibit California grapes; also large bunch of grapes, any variety; also best collection figs, almonds, English walnuts.

Preserved Fruits, etc.—G. N. Whitaker, best exhibit dried fruits; Geo. Parks, best dried apples; G. N. Whitaker, best dried peaches; P. F. Ennis, best dried plums; G. N. Whitaker, best dried plums, seedling; W. W. Chapman, best raisins; S. C. Pierce, best canned fruits; S. C. Pierce, best jellies; Mrs. F. Purrington, best preserves; W. D. Freeman, best honey in comb.

Butter, Cheese and Bacon.—A. J. Pierce, best box fresh butter; Geo. Ward, second best box butter; David Stewart, best packed butter packed 3 months; A. J. Pierce, second best packed butter; I. R. Jewell, best exhibit cheese; Simon Morrison, second best exhibit cheese; Robert Crane, best hams and side bacon.

Wines, Cider, Ale, etc.—Geo. F. Hooper, best exhibit wines; G. W. Edelman, best champagne and port wine; Geo. F. Hooper, best red wine; G. W. Edelman, best white wine; W. J. Hunt, best blackberry wine; G. W. Edelman, best brandy.

#### Plants and Flowers.

W. A. T. Stratton, best collection trees, shrubs and flower-plants; also 8 other premiums for special plants; Mrs. S. C. Pierce, best exhibit cut flowers; Walter Tonne, best miniature garden.

### News in Brief.

GRAPE distilling will begin October 1st in Los Angeles.

CARP ponds are being built in many portions of Placer county.

GENERAL BURNSIDE died suddenly at Providence on Tuesday.

THE stage between Bishse and Charleston, A. T., was robbed of \$2,500.

THERE is talk of founding a historical and antiquarian society in Los Angeles.

THE California pioneers in New York had a grand time at Coney Island on Admission Day.

THE White Mountain Apaches, who are on the war-path in Arizona, number 750 all told.

NEAR Corfu, N. Y., forest fires have attacked the clearings, compelling families to abandon their homes.

THE Los Angeles Commercial says that the Ord mine has been sold to parties in San Francisco for \$150,000.

THE Lieutenant-Governor of Colorado is about to found a public library at Denver, to be liberally endowed.

Two hundred people were killed and 30 houses destroyed by a landslide at Elme, Switzerland, Sunday night.

THE California Southern railroad is now regularly carrying freight by rail between National city and San Diego.

J. R. KEENE says that he did not lose \$1,500,000 in Hannibal and St. Joe Railroad stock, as was reported lately.

SEVERAL persons have been taken into custody on suspicion of being connected with the Cape Horn Mills train-wrecking.

FEARS are expressed in diplomatic circles at Constantinople, that the situation in Egypt may lead to differences between France and England.

AN improved condition in the case of the President is reported from Long Branch, and the dispatches are couched in more hopeful language.

A WELL at Benicia bored for artesian water has struck gas, and it is proposed to light the arsenal and barracks. The well cost the government \$51,000.

THE pressing need of this season in Mendocino has been more laborers in harvest and hop fields, on sheep and dairy ranches, in the coast timber belt and at the mills.

ONE of the guards at the Washington jail "took a shot" at the assassin Guiteau, and came near depriving that scoundrel of the privilege of a trial for his crime.

HANLAN offers to row Wallace Ross, or any man in the world, a three or four-mile race, for from \$2,000 to \$5,000 a side, on a course to be mutually agreed upon. This will be his last race.

THE rebellious Egyptian officers refuse to accept the conditions offered unless their previous demands are first conceded, and boast they have the support of 80,000 Bedouins.

THE conference to consider State division met Thursday in Los Angeles. Delegates were present from San Bernardino, Ventura and Santa Barbara. Little business was done. Another meeting will be held in February.

THE steamer *Proteus* has arrived at St. Johns, N. F., from Lady Franklin bay, having accomplished her work. There is much ice in Lady Franklin bay. No tidings of the missing *Jeannette*.

THE Ameer camped on the 10th instant eight miles southeast of Candahar. Firing was heard at noon on the 10th, and from morning until 4 o'clock on the afternoon of the 11th. Access to Candahar is closed.

THERE is great damage by fires in the neighborhood of Owen sound, Parry sound, Gravenhurst, Otterville, Stratford, Eden Mills, Burton and Zurich, all in Ontario, Canada West. A million dollars' worth of timber has been burned in the Parry sound district. Cattle are dying on all sides on account of the drouth.

FACTS CONVENIENT TO KNOW.—The following facts are well worth remembering, as they will save a great deal of calculation and give approximately accurate results with minimum labor:

A cord of stone, 3 bushels of lime and a cubic yard of sand will lay 100 cubic feet of wall.

Five courses of brick will lay 1 foot in height on a chimney. Nine bricks in a course will make a flue 8 inches wide and 20 inches long, and 8 bricks in a course will make a flue 8 inches wide and 16 inches long.

Eight bushels of good lime, 16 bushels of sand and 1 bushel of hair will make enough mortar to plaster 100 square yards.

One-fifth more siding and flooring is needed than the number of square feet of surface to be covered, because of the lap in the siding and matching of the floor.

One thousand laths will cover 70 yards of surface, and 11 pounds of lath nails will nail them on.

One thousand shingles laid 4 inches to the weather will cover 100 square feet of surface, and 5 pounds of shingle nails will fasten them on.

THE BEST OIL FOR RUBBER BELTS.—A correspondent of a mechanical paper says: "I have run many rubber belts, and after trying various articles had the best success with boiled linseed oil. It should be put on while the belt is running slow, say at night or stopping-time, and run slow long enough to distribute it well. All animal oils are very injurious for rubber belts, causing them to 'peel up' and leave the fabric bare."





## A Legend.

Once in an ancient city, whose name I no longer remember,  
Ruled aloft on a column, a brazen statue of Justice  
Stood in the public square, upholding the scales in its  
left hand,  
And in its right a sword, as an emblem that justice pre-  
sided  
Over the laws of the land, and the hearts and homes of  
the people.  
Even the birds had built their nest in the scales of the  
balance,  
Having no fear of the sword that flashed in the sunshine  
above them.  
But in the course of time the laws of the land were cor-  
rupted;  
Might took the place of right, and the weak were op-  
pressed, and the mighty  
Ruled with an iron rod. Then it chanced in nobleman's  
palace  
That a necklace of pearls was lost, and ere long a sus-  
picion  
Fell on an orphan girl who lived as maid in the house-  
hold.  
She, after form of trial condemned to die on the scaffold,  
Patiently met her doom at the foot of the statue of Justice.  
As to her Father in heaven her innocent spirit ascended,  
Lo! o'er the city a tempest rose; and the bolts of the  
thunder  
Smote the statue of bronze, and hurled in wrath from its  
left hand  
Down on the pavement below the clattering scales of the  
balance.  
And in the hollow thereof was found the nest of a magpie,  
Into whose clay-built walls the necklace of pearls was  
inwoven.  
—Longfellow.

## The Recompense that Returns.

"I have come to ask your advice, Annie," said Mary Carter, entering her sister's small bed-room, "but first let me warm my frozen fingers, for the afternoon is fearfully cold."

She threw her snow-dusted cloak on the only vacant chair, and tossed her black hat on the bed; she coiled up at Annie's feet in front of the meager register.

"Well, darling, what is the trouble now?" and the elder sister looked down at the fair young face and at the sweet eyes so wistful and sad.

The two girls were orphans, and were toiling in the respectable harness of—teaching. Theirs was the only, the oft-repeated story of New York life. The father had failed, and had not strength to rally again, so the frail, gentle mother soon followed her husband to the rest where the weary are sleeping. A rich relative had educated the girls that they might be independent, and, therefore, now they are battling and struggling in the great city, whose God is gold! Annie, the elder by two summers, was a gentle-eyed girl of 22 years, one of those calm, self-relying natures that rise in all the strength of the old martyrs when circumstances so require; a heroine born, that storms only strengthen, misfortunes make grand; with a pure, classic face—a face that men gaze on more in admiration and respect than passionate love; and she strove and suffered as resident English governess in one of the large fashionable schools of the city, while the younger, the impulsive, sensitive Mary, was teaching Mrs. Vale's four children in a beautiful home on the avenue.

On Thursday Mrs. Vale had issued cards for a grand ball the following week, and to Annie's advice in reference to this ball the young girl had braved the driving November storm.

"And now, Annie, help me to decide, for although Mrs. Vale is exceedingly kind to me, even urging my presence on the plea of friendship, yet all that is soundly practical in my nature counsels me to come here, stay with you till 10, at which hour your 'retreat' is sounded, and then creep quietly back into my own little room and read till sheer weariness sends me to bed."

"Would it not be better, darling, for you to please Mrs. Vale?"

"Better, Annie?" and her eyes flashed, "better to feel the pangs of a position to which I have not been born? True, Mrs. Vale is a considerate woman, and would shield me if she could; but will her guests regard this protection? I know the women better! 'Who is that?' will some jeweled shoddy exclaim, and how can the question be answered? I am neither Mrs. Vale's relative nor guest, but—the governess of Mrs. Vale's children."

Her voice trembled, and her eyes were full of tears.

"No, Annie," she continued, "I have no place in society, and it is safer not to risk attack."

Annie felt the truth of her sister's logic, yet she knew that it was wiser for Mary to accept Mrs. Vale's invitation. No kind shelter awaited the orphans, for self-reliance was a hard necessity forced upon them, and it was braver to meet life's shares than to shrink, and shrinking, lose a good home. The elder sister also felt a pardonable pride in the rare beauty before her, so she tried to soothe the sensitive spirit, and wayward, haughty nature. And in truth Mary Carter was gifted with the "fatal gift," for if the mere accident of birth leaves its impress, she as thoroughly illustrated that birth as any of the patrician beauties of the old days of Rome. Light golden waves of hair,

that the poets love, shaded her low Greek forehead, and beneath her proudly-arched brows shone dark, changeful hazel eyes—eyes that gleam with passion or glance tenderly soft, as a cooing dove; then a lithe, graceful, expressive figure, with a walk even characteristic, and you felt, when you looked upon her, that mere circumstance could not locate her, but that she belonged where she was born—among the daintiest of the land. A woman to be sheltered and cared for, not to struggle and suffer.

Annie's argument prevailed, and on the night of the hall, Mary Carter walked into the brilliant rooms with Mrs. Vale, and not even in that lovely gathering was one fairer than the young girl standing at Mrs. Vale's side.

Only a simple dress of tulle fell in a cloud mist around her, and a wreath of lilies bound her shining hair. Excitement deepened the color of her cheeks, and her eyes were luminous with the light that only such eyes ever give forth.

"My friend, Miss Carter."

How Mary's heart beat as Mrs. Vale introduced her. The inherited pride was undiminished; and although she felt that her position was honorable, yet she knew that society gave her no status.

But Helmsmuller's lovely music was sounding, and youth, with its keen relish of pleasure, cannot always feel the shackles of circumstances, so Mary forgot her nervous fears, and enjoyed every moment till—well, it was near the close of the evening. The beautiful Faust lancers was echoing, and the third figure, so trying to a woman's grace, was begun. Mary Carter's vis-a-vis was a handsome, showy woman, flashing with diamonds, and, in the intervals of the dance, conversing with a tall, distinguished gentleman, who stood carelessly leaning against a pedestal near by. With the eye of a connoisseur he swept the crowded rooms, and rested it on the slight figure opposite.

"Saving your fairest self, Mrs. Edelbert, I would determine the young lady facing us the most beautiful in the room. Watch her movements and that graceful courtesy; in that simple inclination is the test of the breeding, which the exquisite feature substantiate."

"You are for once mistaken, Mr. Hardinge, for that is only Mrs. Vale's governess."

It was the second forward, the forward when the ladies courtesy, and just when the music sways for the low inclination, and when the cold, hard words fell distinctly, "only Mrs. Vale's governess." For one single instant the young girl faltered—for one second, as she afterwards said, her eyes were blind, her brain reeled. But true to its old source, the haughty blood rose to her rescue, and with a lady's flash, a fleeting look of ineffable scorn, she met Mrs. Edelbert's gaze until the woman quailed, then, as a queen, Mary Carter rose and glided back to her partner.

And John Hardinge saw it all and felt for the young fawn, so cruelly wounded, shrinking, quivering, yet with all the spirit of the rampant lion.

The man felt his heart beat quickly, and his pulses thrilled at the insult thus ruthlessly given; so he coldly looked at Mrs. Edelbert and walked away.

It was Sunday after the party, just at the soft hour when the twilight shadows the day, and on the warm curtains the fire gleams danced in weird fitfulness; the gas was not yet lit, and through the dimness floated the wailing notes of a sweet contralto. What a world of tender pathos in the tones as they appealed:

Flee as a bird to the mountain,  
Ye who are weary of sin.

And she sang on, with a low sob in her voice, as though her heart echoed every note of the music. Her face was very pale, and her eyes rested on Raphael's Madonna. The children were very fond of Mary Carter, and they were kneeling and leaning near, perfectly calmed by the sweet, sad strain, when noiselessly the heavy curtain parted and Mrs. Vale walked in with her brother, John Hardinge.

"Mary, here is my brother, John Hardinge, of whom you have heard me speak so often; and this, John, is my friend, Miss Carter."

The poor child's thoughts were wandering to Thursday evening, when she had reared upon those very words, with such crushing results; therefore her bow was very cold, and her voice trembled as a few minutes after she arose, and, excusing herself, retired from the music-room.

The arrow was quivering still, and the poison was absorbing the heart's vitality—its trust in human nature.

A shade of disappointment clouded John Hardinge's face as the last fold of her trailing black dress disappeared from the heavy curtain, and then he told Mrs. Vale of what had happened.

She was a kind, gentle lady, and her heart sorrowed for the desolate young orphan.

Mr. Hardinge often strolled in at the "children's hour," and the little ones were really as lovely as the celebrated group known as Longfellow's children.

Always in the music-room he found Mary; for never since the night of the ball had she appeared in the parlor. Society had only stamped the impress which her own heart had warned her of, and she felt that as a governess she was unrecognized. And so the buoyant, haughty spirit forced itself into the shackles, and the young heart fed upon its life for food.

But John Hardinge was no longer a young man; therefore he was not easily daunted, nor was he a neophyte to be discouraged by a girl's

coldness. The heart that was unimpressed by the sun of forty summers at last felt the trembling of germination, and the realization came with untold strength and power; so the strong man yearned to fold within his protecting care the delicate blossom so tossed by life's storm.

Proud and shrinking, she seldom allowed herself to be talked to; but music was her greatest passion, and she quite forgot her life and position when Mr. Hardinge's pleasant visits came to brighten her winter days.

He was a cultivated, courtly gentleman, whose wealth made him sought after in the great marriage market; and mammae were especially suave and daughters very docile when Mr. Hardinge vouchsafed attention. But men in society; they weary of rote and routine, and tire of reproduction from the one unvarying and unvaried type, a pretty, expensive doll. Therefore they are more often attracted by the species *sui generis*, afforded without a grand whirl; and so the marriages of such men are disappointing and startling to the expectant hattalions.

Madge was the youngest and fairest of the Vale household; a winsome little fairy of six summers; but fever flushed her soft cheeks, and her blue eyes were bright with that dangerous light which makes the heart of her mother throb hard within her bosom, for she feels instinctively that the Reaper is near.

Eight days and nights Mary Carter attended the child, for the faint voice always sounded her name, and the little arms ever sought her breast to nestle on.

But the fiat had gone forth, and Mrs. Vale saw the little one pass from her; saw the violet eyes close on Mary's bosom; heard the baby twice plead for Mary's hymn, and while the low music sounded Mrs. Vale fainted by her dead child.

Then the beautiful strength of the young girl developed, and her tender words of comfort called back the mother's faith. A woman's religion is never more lovely than when clouds and shadows darken; then she clings closer to the cross, her "rock of ages," and her words of trust and comfort seem almost inspiration. And Mr. Hardinge watched the slight figure as it softly glided to and fro on its errands of love in the house of sorrow.

\* \* \* \* \*

The little one had been laid to rest beneath one of the willows of the Trinity Cemetery, and the household seemed under a spell—the weight of the first great grief. Mrs. Vale was in her darkened chamber, the children in the nursery, and Mary sat in the low bay window of the library. Her face was very pale, for long watching had exhausted her. Mr. Vale had told her in the morning of his intention of sailing for Europe next month, and had placed a check for a handsome amount in her hands.

This Mary at once returned. There was a flush of the old pride warming her cheek when she wrote the simple lines enclosing the check to Mr. Vale:

I should be false to my name did I receive pay for any service it has only been my pleasure to render. The salary agreed upon is only one-fourth the sum returned. This I shall be glad to receive.  
MARY CARTER.

And now she was thinking of her future, she felt that she must find another home, though no one could shrink more from intercourse with strangers. There were many Mrs. Edelberts in the great world, and a governess was only considered a person to control and instruct unmanageable children; not a woman with the heart and soul of a woman, but a piece of household furniture, to occupy its own special place, and nothing more.

And so the rough tide surged on, and two burning tears blinded her eyes as these hard realities formed the picture of her life to come.

Her intercourse with Mrs. Vale had always been pleasant, and Mr. Hardinge's visits had become more of an anticipation than she cared to acknowledge. Now fate would drift her away and her very name would be forgotten.

Why had she met these kind people? and why Mr. Hardinge—

"Mary," sounded a well-known voice, and she looked up to meet the very face she had been dreaming of. "I have come to tell you a little story. Have you time to give me a half-hour's patience?"

She could not speak then for her heart was full—full of the sorrow that knows no utterance. He drew up one of the old gothic chairs close to her low seat and commenced:

"A very long time ago, Mary, my father died and left my mother with two little children and not a dollar to support them. We were comparative strangers in New York, and I was then a boy, only fourteen, and still attending a school."

"I shall never forget the dreary November afternoon on which my father's corpse was borne from the house. My mother's grief maddened me, and on my knees beside her, I promised to take care of her."

"I wandered out the next day with a boy's determination, but with a boy's faint heart. In twenty stores I offered myself and was twenty times refused. Work was what I wanted—labor, honest labor, and money for my toil. At last, footsore and pinched with cold, I nerved myself for my last attempt, and walked into the office of one of our merchant princes."

"There was a gentleman writing at one of the desks who was pointed out to me as the only partner in. He was just finishing a letter, and looked up as I paused before him."

"My appearance seemed to please him, for I was neatly dressed, and he spoke with some surprise as he answered my request."

"You have an honest face, my lad," he said,

in conclusion, 'and I will see what can be done for you.'

"The words were few and simple; but I afterward learned that he never promised without fulfillment."

"I saw him next day, and he gave me employment—not only employment, but he saw my mother, and for years, through his kindness, we were saved from want."

"Then a great crash came. My kind friend died, and we heard that his family had left New York."

"Fortune smiled upon me and I became rich; but one sorrow weighed upon my heart, the family of my benefactor had escaped me. What if they were now suffering?"

"I came back to New York last autumn, and as soon as I saw you I felt the haunting resemblance to a face that had somewhere crossed me. Your name at once struck the old chord, and I found to my surprise that you were the daughter of Thomas Carter."

"And so, darling, I wish you to help me lighten the debt I owe your father."

"I have to-day purchased a lovely home which I wish your taste to furnish, and if you will condescend to be an old man's pet I will promise," he added, smiling, "to submit to the rule of a very wayward woman."

She could not answer him then, for her tears fell rapidly, and the first words that pride urged were, "I am too poor for a rich man's wife."

But he kissed the tears away, and told her to consult Annie about it all. And so when the calm, practical sister heard the story, she soothed the little one as on the day preceding the hall, and the quiet, blue eyes looked up in Mr. Hardinge's face as she replied:

"The bread cast upon the waters has returned in many days."

And the house in—street received its beautiful mistress, and Annie Carter loved to watch her darling dispensing the noble charities which her husband's wealth allowed.

"You are right, Mary," he would always say, for you have taught me how precious is the recompense that returns."

## My Cook.

I was in despair.

Tildy Tyson, my invaluable "help"—who never had followers (to my knowledge)—gave warning. We had just breakfasted on her incomparable waffles and clear coffee, when she came in with a:

"Mem, when me month's up I've got to leave ye. I'm to be married, mem."

"Good gracious!" was my response. "You going to be married, Tildy, you! What! have you lived forty years in ease and comfort to be trapped at last?"

"I'm pretending it, mem," responded Tildy, turning a faint copper color and casting down her eyes.

"And who is the happy man?"

"An old bean of mine, mem—as is a coachman with good wage, an' able to keep me."

"Well, Tildy, I suppose I must wish you joy," was my doleful response, "but whatever am I to do?"

"Sure, it's sorry enough I be that it's a misfortune to ye, for I've been that considerate I'd not let ye set yer fut in the kitchen—but it do seem to be the lot an' the luck of the best of us, mem."

It was very dispiriting to hunt for a girl in the heat of July, but it must be done. I spent twelve dollars in hack hire and intelligence offices, and found at last a poor lonely orphan with a red nose and skim-milk eyes, who represented herself as having "no friends in the world." She did tolerably well under my instructions till my quarter's store bill came in with thirty dollars additional footed up. Now, as all good housekeepers should, I keep my accounts with methodical care, and so I learned that my poor orphan kept a mother and three sisters. The institution was too expensive, and I exchanged her for a Mulhony, who got drunk regularly on Saturday night, and, in one of her sprees, came near burning us all up.

One day, almost frantic over my loss of time and domestic comfort, I went down town where somebody's cousin had found a splendid cook for somebody else's cousin. It was a little box of a place, and within sat a man all head and shoulders, who sent me into a yet smaller room, beyond.

"I'm afraid we haven't exactly the sort o' person you want," he said "but you can try them."

As I entered a woman in the farthest corner pulled a grey veil over her face, and, hunching her shoulders, turned her head away.

Didn't I know that queer little twist? There was something familiar in the whole personnel of the woman, but I went the rounds till I came to her.

"You wish a place," I said, with a singular trepidation. "Are you a good cook?"

"I does chamberwork, mem," was the stifled reply.

"You do!" I responded, with a quick leap of the heart. "Yes, and you make waffles and delicious clear coffee, and keep the kitchen stove shining like a mirror, and boil and roast to perfection, and get up the best kind of strawberry shortcake, and iron shirts like a queen, and make corn-starch pudding and cream tarts, and keep your mistress out of the kitchen! Now, Tildy, if I've got you again I'm just the happiest woman in New York, and I'll add whatever you say to your wages."

There was a sob, an odd little shake of the whole body. Poor Tildy had burst into tears.



## Young Folks' Column.

### Our Puzzle Box.

#### Numerical Enigma.

I am composed of 16 letters.  
My 9, 5, 10 is distant.  
My 4, 15, 6 is a nickname.  
My 1, 7, 3 is a receptacle for grain and bulky commodities.  
My 10, 5, 3, 13 is relative position.  
My 6, 11, 10 is to injure or deface.  
My 14, 7, 2 is a falsehood.  
My 1, 5, 8 is a malediction.  
My 14, 7, 16, 2 is a small eord.  
My 12 is found in all continental countries.  
My whole was an eminent philosopher and sage who existed in the 18th century.

CLAUDE REVERE.

#### Hidden Animals.

1. "I say, Rube, are you coming to see me to-night."  
2. If I were in your place I would go at once.  
3. The damage done by that cat amounted to \$5.00.  
4. While they were trying to decide with regard to the colors, pink or buff, a low cry was heard.  
5. Please show me how; let me try it once.  
6. You shirking numbskull, come here.  
6. "Sahib, excuse my rashness," pleaded the faithful fellow.

JERRY.

#### Cross-word Enigma.

My first is in strap, but not in string;  
My second is in song, but not in sing;  
My third is in skill, but not in tact;  
My fourth is in place, but not in act;  
My fifth is in fate, but not in doom;  
My sixth is in salute, but not in hail;  
My eighth is in cover, but not in veil;  
My whole is a tree resembling palms,  
Which never grows on northern farms.

A. B. C.

#### American Towns.

1. An article of food.  
2. Indispensable to sailors, a kind of meat.  
3. A wild animal, an enclosure of land.  
4. A color, ground.  
5. In the middle, a port of refuge.

JOE.

#### Curtailments.

1. Curtail upright and leave sharpens; again, and leave to sharpen; again, and leave a little; again, and leave an exclamation.  
2. Curtail a woman and leave a boy; again, and leave a musical note.  
3. Curtail desire and leave to jump; again, and leave an exclamation.  
4. Curtail part of a house and leave part of the body; again, and leave to listen.

CHARLES.

#### Answers to Last Puzzles.

NUMERICAL ENIGMA.—Paul Revere's ride.  
HIDDEN RIVERS.—1. Elbe. 2. Kama. 3. Meta. 4. Pruth.  
5. Weser. 6. Gila. 7. Duna.  
AMPUTATIONS.—1. Hate, at. 2. Hit. 3. Moneo, one  
4. Sewer, ewe. 5. Prate, rat. 6. Ghent, hen. 7. Salem, ale.  
CHARADE.—Matrimony, (mat-rye-mo-ny).  
TRANSPPOSITIONS.—1. Mad, dam. 2. Time, item. 3. And,  
Dan. 4. Late, tale. 5. Ten, net. 6. Nip, pin.

### Bruce and Old Sheepy.

Many years ago, I spent a few weeks with some friends who lived upon a large milk farm in the State of New York. They made a great many pounds of butter every day, and packed it in firkins for market. So much churning could not be done by hand, and as working by steam was not common then, they were obliged to employ dogs, and sometimes sheep.

In the basement of the farm-house was a huge churn, the handle of which was attached to a large barrel made of slats, in such a way that, when the barrel revolved, the churn was worked. When the dairy-maid was ready to churn, she would lock Bruce, their great dog, into this barrel, and say to him, "Go on, Bruce." If he went on, at every step he turned the barrel.

Bruce did not like this kind of work; and who of us would? He often tried to shirk it by running away; but when John, the farmer's son, perceived this trick he took care to secure the dog over night. In order that Bruce might rest, they selected a sheep to perform a part of the labor. This sheep though quite young was never called by any other name than "Old Sheepy."

The dog and the sheep took turns in the churning thus: Bruce worked Mondays, Wednesdays and Fridays; Old Sheepy worked the other three days of the six. On Tuesday, Thursday and Saturday morning, Old Sheepy could never be found without much hunting. The other three mornings she would wander leisurely near the house, nibbling the grass near the door step.

So John was obliged to drive her into an enclosure, and there confine her for the night, previous to her churning, as it took too much time to find her in the morning.

One Monday evening, Bruce, having done his day's work, was lying on a rug in the sitting-room, where the farmer's children and myself were having a quiet game of "Come, d'yo con-e." At 8 o'clock Priscilla and John, as if with one thought, started up from the game with the words, "Has any one shut up Old Sheepy?" No one knew. So off John ran to get the animal, but soon returned, not able to find her.

"No matter," said Priscilla, "Bruce has had an easy time to-day. We'll put him on to-morrow; for we never had more cream ready than now." Bruce pricked up his ears as if to say, "Catch me churning Old Sheepy's butter!"

When bed-time came, Priscilla said, "I will not let old Bruce out to night. I will put him in the wash-room."

Bruce had no idea of allowing old Sheepy to

get clear of her task. At midnight a terrible harking and bleating and growling and scamping was heard some little distance from the house. John went out to see what the noise was about. He found that Bruce had spied out old Sheepy in her hiding place, had roused her out, and driven her into the enclosure; but, as he could not bar the gate, he stood guard against the opening, and was barking loudly to awaken the household.

When old Sheepy was marched into the barrel the next morning, you ought to have seen Bruce strutting about the basement. If old Sheepy slackened her pace at all, Bruce would growl; if she didn't mind that, he would bark, and would not stop until he had succeeded in calling the dairy maid to threaten old Sheepy with the whip.

Priscilla and John thought these little acts of the dog very wise; but I think that a sheep that could tell the days of the week, as this one was able to do, and knew enough to run away the night before her turn came, was just as wise as the dog.

The family were loud in their praise of Bruce, however, and as a reward for his shrewdness, talked of relieving him from further work as soon as they could succeed in training another sheep.

I left the farm-house before this took place, so I cannot say how Bruce bore his laurels. But if I had my way, I would have rewarded old Sheepy too.

## GOOD HEALTH.

### Diphtheria.

EDITORS PRESS:—As the cold and stormy season of winter is now upon us, mothers commence housing the feeble, delicate little ones under their charge. But let me ask, would it not be far wiser to send them out for a while at least every day into the pure air? Investigate most thoroughly every part of your dwelling. See for yourself that the cellar is well ventilated, that there are no decaying vegetables about it, that it is perfectly dry and healthy. The walls should be whitewashed and disinfectants scattered over the floor. Chloride of lime is the cheapest and best for this purpose. If water closets are in the house they should be carefully examined by an honest and reliable plumber. Stationary wash-stands ought also to be looked to, and the traps put in perfect order. A small quantity of sulphate of iron dissolved in two gallons of boiling water should be thrown into the closets and wash basins at least twice a week. Allow no withered flowers to stand, for the water becomes dead, and the decaying stems produce a malaria in the air, which, to a delicate person, proves extremely hurtful.

With these precautions and the little ones put upon a healthful nutritious diet, many untimely deaths may be prevented. Many persons think that diphtheria is comparatively a new disease. On the contrary, it is known to have been prevalent in Egypt over 2,000 years ago. It appeared in Rome A. D. 334, was highly contagious, and was called the Egyptian ulcers, appearing in all cases in the throat.

When the first symptoms of soreness in the throat are noticed, it is well to gargle the throat with water, not too cold, and with a little salt dissolved in it, making it slightly brackish, like sea water. See that the stomach and bowels of the patient are in good order, and then send for the family physician as soon as possible. One reason why so many cases are fatal, is that there is oftentimes a delay of a few hours, and he disease obtains a powerful hold upon the patient, when a slight remedy administered in season might have arrested its progress. Here comes in full force the old adage, "An ounce of prevention is worth a pound of cure."

It is doubted by some whether diphtheria is contagious. I will cite an instance. A lady living in San Francisco lost a little girl with the disease. The year following she visited friends in Boston, and a few days after her arrival their little child died with the disease. A. C. A.

Berkeley, Cal.

### Tomatoes as Food.

Tomatoes, remarks an authority, are not without some defects as an article of food. They are not, like milk, a perfect diet of themselves, and besides, like most other articles of food, they contain some obnoxious qualities. But they need not be thrown aside on that account. Nature has provided us with such sufficient excretory organs that obnoxious matter in our food, if in moderate amount, is readily cast out, and the body is protected against any material injury. Were it not so, we should be obliged to throw out of our dietary many kinds of food now eaten, not only with impunity, but with advantage. Thus, red cabbage, cherries and peaches contain prussic acid, which is a deadly poison when taken in sufficient quantity. The very small amount of the poisoning acid these vegetables contain is cast out of the system without any material injury to the person using them. A positive good may actually be derived from the use of food containing some such foreign matter, by way of giving increased activity and strength to the excretory organs from their exercise in casting such foreign matter from our bodies, provided the quantity is not so great as to overburden them. Since we are all the time liable to take in our food substances the tendency of

which is harmful, a good development of efficiency in our excretory organs is necessary to protect us against the pernicious effects which might otherwise occur. Almost every kind of grain and fruit in use contain more or less things which in a larger amount would prove hurtful. Unless we closely study our food, we are taking them in when we little suspect it. A Frenchman, not many years ago, discovered a substance in wheat bran, under which the high heat used in baking, dissolved out and spread over the crumbs of bread, of which bran forms a part, and discolored it, and hence the brown stain peculiar to graham bread. But from this discovery such bread has not been rejected, but continues to be accounted among the most wholesome kinds of food. Rye is seldom used without containing more or less ergot, but rye bread is also reckoned among the most healthful. Tea contains tannic acid, apples contain malic acid, lemons and oranges citric acid, no one of which is used either in nutrition or respiration, but they only become objectionable when used excessively. —*Heels Mercury.*

## DOMESTIC ECONOMY.

### Woman's Noblest Mission.

Lady mine, since you are rich in  
Charming culinary lore,  
Let me enter, too, the kitchen,  
Where I never was before.  
Teach me arts of frying, boiling,  
How to make the pot-au-feu;  
I shall be contented toiling—  
There with you.

Teach me to dress dainty dishes,  
Soups, and curries with their rice,  
How you crisp those little fishes  
Known as white-bait, in a trice.  
You make omelettes that would lure a  
Hermit into wild excess;  
You're a neat hand at a puree,  
All confess.

Men may come, and also men go,  
As the laureate has told,  
But with fowl la Marengo,  
Will affection ne'er wax cold;  
Slices of a Severn salmon  
Well may serve to fan the flame;  
Sweet-breads of the tender lampon  
Sauce Supreme!

Better far than arts æsthetic,  
Crewel work and peacock fans,  
Are these studies dietetic,  
Carried on mid pots and pans,  
This is woman's true position,  
In the kitchen's inmost nook,  
And the lady's noblest mission  
Is to cook.

Punch.

KOUMISS.—Koumiss would be a popular drink in the United States now if the land of the free, etc., imitated its ruler as closely as England would, but the receipt for making it is hardly promising enough to make any Yankee desire to take very large draughts of it. This is the formula: Into one quart of new milk put one gill of fresh buttermilk and three or four lumps of white sugar. Mix well and see that the sugar dissolves. Put in a warm place to stand ten hours, when it will be thick. Pour from one vessel to another until it becomes smooth and uniform in consistency. Bottle and keep in a warm place twenty-four hours; it may take thirty-six in winter. The bottles must be tightly corked and the corks tied down. Shake well five minutes before opening.

MATRIMONY TAET.—Pare and core a dozen apples; put them into a saucepan with a little water to keep them from burning; boil them until you can pulp them, but do not forget to frequently stir them; then add quarter pound of currants, two ounces of candied lemon peel, and enough sugar to sweeten it nicely; if liked, also a little grated nutmeg. Pour this mixture into a large dish that has previously been lined with a thin paste. Then roll out another piece the same size and thickness, which place over the top; press the edges together all round, make a hole in the center the same as for mince pies, and bake.

BLACK CHOCOLATE CAKE.—One cup of butter; two cups of sugar; two and one-half cups of flour; five eggs; one cup of sour milk; one teaspoon of soda dissolved in a little boiling water; one-half a cake "Baker's" chocolate, grated and put in the cake before stirring in the flour. Bake in jelly tins in four layers. Filling.—One pound of white sugar wet with a little cold water; add the whites of three eggs, slightly beaten; one-half cake grated chocolate. Cook in boiling water until it thickens. Flavor with vanilla. Spread between the layers and outside the cake. Sprinkle grated coconut over the top.

RICE CHICKEN PIE.—Cover the bottom of a pudding dish with slices of broiled ham; cut up a broiled chicken and nearly fill the dish; pour in gravy or melted butter to fill the dish; add chopped onions if you like, or a little curry-powder, which is better; then add boiled rice to fill all interstices and to cover the top thick. Bake it for one-half or three-quarters of an hour.

POTTED FISH.—Cut a fish into four pieces, and after they are thoroughly cleaned put them into a stone pot; take a layer of fish and cover with a little salt, spices, Chili peppers and bay leaves; then another layer, and so on till the pot is full; fill the pot with vinegar and close it tightly; put it in the oven for three hours; don't let it dry, and add more vinegar if required,

"An' sure, I was 'shamed to come back to ye. An' ye'll not want me, mabby, for it's disgraced I am. His tother wife come and said 'no,' jest as the minister axed if there was any reason, and so I wasn't no wife at all, at all."

"Poor Tildy, come home with me. We will make you happier than ever you could have been with such a wretch."

"An' I wouldn't mind it a bit," sobbed Tildy, vindictively, "if I could only see him punished, for I bought his weddin' suit, an' a gould watch, and me own weddin' ring which never went on my finger."

"Never mind, Tildy, she'll punish him," I said.

"I hope she will, an' if any one axes me to marry, I'll choke him, sure as my name is Tildy"; which assurance was an immense relief.

Tildy is a fixture now. Being "up'ards o' forty," I think we shall go on enjoying light waffles and clear coffee to the end of the chapter, unless that importunate bridegroom steps in who never takes no for an answer, and weds her in a shroud.—*Food and Health.*

### "Lo, The Big Injun."

Address of a big chief when invited to take a walk: "When the white father starts the music we waltz to it. We have been asked to irrigate the country here and hoe corn like the white man. Our hearts are heavy, and we cannot promote the string bean. We will do what is right, but we cannot work. The Indian cannot hunt the potato bug when the deer and antelope are ripe. He cannot dig post-holes in the hot sun when the chase calls upon him to go forth into the forest. Here, where we have roamed through the tall grass and hunted the deer and buffalo, the paleface asks us to dig irrigation ditches and plow the green earth with a rebellious mule. Here, where our warrior has been answered back by the giant hills, we are told to whack bulls and join the church. They come to us and tell us to go to school and wear pants. They ask us to learn the language and go to Congress. They send men to us who want us to learn to spell and wear suspenders. We cannot do this. We are used to the ways of our people. Our customs are as old as the universe. We scratch our backs against the mountain pine as my people did a thousand years ago. We cannot change. We can leave our land, but we cannot change our socks every spring and do as the white man does. We can go away from our homes and live in a strange land, but we cannot wear open-back shirts and lead in prayer. Warriors, we will go to the land our white father has given us. We will take our squaws and our yellow dogs, our wigwams and our fleas. We will go to our new home beyond the river now, and when the autumn comes we will take a bridal tour back to this country. We will construct holocaust, whatever that is, and spatter the intellectual faculties of the ranches all over the country. This is all. I am done. I have made my remarks. I have twittered my twit."

### Chaff.

WHAT word is always pronounced wrong?  
*Wrong.*

WOULD it be vulgar to call soothing syrup a kid-napper.

THE reason "the boy stood on the burning deck" is because, it was too hot for him to sit down.

AN American girl in Columbus has married a Chinaman for love, and while she swings in a hammock and reads novels, he does the washing and cooking.

"My opinion is," said a philosophical old lady of much experience and observance, "that any man as dies upon washing day does it out of spite."

AN old farmer the first time he ate an oyster stew, was asked how he liked it. "Well," he answered, "I like the soup well enough, but I wish they'd left out them pollywogs."

"How is it that you have never kindled a flame in any man's heart?" asked a rich lady of her portionless niece. "I suppose, aunt, it is because I am not a good match," meekly replied the poor niece.

"I HAVEN'T work enough for another servant," said a lady to a girl that applied for a situation. "Oh, yes you have, ma'am. It'll take precious little to keep me busy," was the naive response.

A PALE faced young clerk in a Woodward avenue clothing store received a set-back from an old woman which will retard his growth for a year to come. She entered the store in company with her son, and said:

"I want to see some ulcer overcoats, for boys."

"You mean ulster—u-l-s-t-e-r," he replied.

"Did I ask for ulcer overcoats?"

"Yes, ma'am."

"Then I want to see ulcer overcoats, no matter how you spell it! I got up at five o'clock this morning, rode 14 miles facing the wind, sold two hogs and a harrel of cider; and if I don't know what I want, I'm not going to take any advice from a walking goose quill like you."

A SUBURBAN minister applied to a ticket agent, on one of the railroads for a "clergyman's ticket," and on the official expressing a doubt as to his clerical character, exclaimed: "If you don't believe I'm a clergyman, I'll read you one of my sermons!" The agent passed over the ticket, but did not insist upon the proof.





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## The Week

The fairs are still uppermost topics in rural regions. Last week's exhibitions, according to all reports which come to us of them, were well patronized and greatly enjoyed by the people—the good, old-fashioned style of camp and picnic beneath the trees and in other sheltered situations being more generally adopted than usual. Of course, there is some trouble about this way of attending fairs and some drawbacks to its adoption, but it still has its value, for it gives a few days of sight seeing and entertainment to those whose purses could not stand the storing of a family at a hotel during fair time. This week the Golden Gate fair is in progress near Oakland—the attractions being horses and cattle. Next Monday, Sept. 19th, the State fair will open at Sacramento, and there are many indications that there will be a notable display of California productions.

The week has carried the President a good journey toward convalescence, and the confidence of the people in his recovery is now strong again. The air of the seashore has apparently saved the nation a ruler whom the air of the town would have destroyed. The pure air of the country is a national boon in other ways as well, for it is from rural scenes that comes the strength to overcome the degenerating influence of towns. Let the country have due credit for her service to the nation.

A PARTY of engineers under the direction of Mr. Thomas of the Atlantic and Pacific railroad have gone to Vineta, I. T., where they will commence surveying the line for the extension of the St. Louis and San Francisco road across the Territory to Albuquerque, there to connect with the Atlantic and Pacific. The gap between Vineta and Albuquerque will be covered rapidly.

## The Wheat Situation.

Wheat is again strong, and there is confidence on the part of the holders. Purchasers are brought up to \$1.70 for No. 1 shipping. The advance of this week, or, rather, the return to the improvement recorded two weeks ago, is the direct result of improvement based upon what are now plainly seen to be the prospects of a reduced yield in most supply regions, and a lamentable destruction of the English home crop by wet weather and fungi.

It now seems to be generally understood that wheat is better property than it was last year, and there is a disposition to hold for whatever farther advantage there may be in selling later. We never advise our readers on procedure of this kind. We give them the latest and most trustworthy information we can secure, and allow them to draw their own conclusions. In keeping with this course of conduct, we propose now to collate the latest points concerning crops and probably consumptive demand abroad.

James Caird, a recognized English authority, makes the following statement on the present harvest, which has been affirmed by last and this week's telegrams:

"The agricultural returns of this year give the smallest acreage in wheat since 1867, when they were first established. The decline from 1868 (when the returns were more accurate) is 1,000,000 acres, or one-fourth of the whole extent at that time. The smaller breadth of the present year as compared with the preceding one is the result of the unusually heavy autumn rains on the east side of England, where the largest acreage of wheat is grown. But for the late wet weather and diminished temperature, the yield would have proved equal to nearly the average of the years preceding 1874. But mildew has made its appearance, and will effect the quality and yield of the latter crops. On two-thirds of the wheat an average crop will be made up by fineness of quality, on one-third, even with that aid, it will be at least 10 per cent. below the old average. We begin the harvest year very bare of an old stock of wheat in the country. Our annual requirements are from 24 to 25 million quarters. When the last harvest year is completed we shall have imported over 16 million quarters. Our own crop of this year will probably yield nine and a half million quarters. So that if we can reckon on a foreign supply equal to that of last year, and at not much over the same price, we shall be safe."

This is an admission Great Britain will need about as much wheat as she took last year and that, as all know, was an extraordinary importation. Never was so much wheat imported during a corresponding period of time. This demand is met by a general decrease of production in the supply countries. Only Russia is reported to have a large crop, and Russia has been so long declining from her old position for the English trade, that her course has no doubt been shaped by causes which will not yield to the influence of a single favorable year.

But five-sevenths of the English wheat importations came last year from the United States. This is in addition to the large amounts sent to France. France is in the market again; the wheat crop is believed to be scanty, and prices are rising steadily in that country. Millers, who were holding off, have been forced to yield to the increasing demands of the grower as the deficiency of the crop develops itself. Now, if France and England calls for as much as last year, it is plain that with a lessened production in the United States amounting fully to one-third on this coast and 1,000,000 bushels less to export from the Atlantic coast, it can hardly fail that prices will take a higher range.

## Sonoma and Marin District Fair.

The annual fair of District, No. 4, was held last week at the fair grounds at Petaluma, and in all respects seems to be considered a success. There was a uniform and continued interest for the whole week. There was not so full a display of farming machinery as would be desirable, but there was a fine display of thoroughbred horses, cattle sheep, goats, bogs and domestic fowls. Seeds, grain, vegetables, fruits, green and dried, made up some very tasty displays, all labeled "hands off." The various mechanical trades were finely represented in wagons, buggies, etc., harness and saddles, fine tailoring, millinery, embroidery, painting, sculpturing in marble, fancy needle work, musical instruments exhibiting their tones, and a thousand and one beautiful and ornamental attractions, not to mention the fair guardians of these valuables. But not to mention the great life center would be an unpardonable omission.

The new Petaluma incubator or egg hatcher was so arranged that all could see the chicks bursting the prison shell and coming into a new sphere of active life. All seemed to be also impressed that Mr. L. C. Byce has a very successful incubator, thoroughly self-regulating, and costing but small amount of personal attention. His patent mother is also a good piece of ingenuity. Each machine requires the services of a coal-oil lamp to furnish the warmth required. It would not be easy to do any justice to this grand pavilion of tastefully arranged cabinets, and all manner of handicrafts, a full share of which was of the ladies' industry and skill. All seemed to enjoy the occasion. The grand stand was daily

filled to witness speed contests; ending with Saturday's ladies' tournament, and a very exciting foot race, where the famous Plow Boy looked back on his competitor, as he leisurely won the race over a more modern champion.

It is now contemplated to make a change of the society's fair grounds, so as to make a mile track equal to any on the coast, and possibly superior. The present half mile track requires turns of too sharp an angle for the highest speed. It was a pleasing thought, that in a thronged city, for a whole week, various races and nationalities mingling in one motley throng each day, there was no quarreling or fighting, and an almost entire absence of drunkenness or improper language. Who is it that does not rejoice that such a record can be made at a California district fair? Yet there is a shady side not pleasant to state—that the town had dozens of gambling games, openly carried on, as in the days of '52, but not so recklessly patronized. Young lads, even boys, were passing in their half dollars at these various games, that are permitted to run in violation of law and good morals.

## ENTOMOLOGICAL.

## The Insect Exhibits at the Fairs.

One cannot praise too highly the displays of injurious and beneficial insects at the horticultural fairs. There are several public-spirited collectors, who are now doing much to disseminate information concerning insects, and by their specimens and explanations at the fairs many people are interested and excited, who might read about insects for a century with unruffled spirit. Object lessons are very forcible, and we would do everything we could to encourage the entomological departments of the horticultural fairs.

We were much interested in the insect exhibits at the Los Angeles fair last week. To give an idea of the variety of insects of horticultural qualities which may be gathered in a single locality, we print below an abbreviated list of the insects shown in Mr. Alexander Craw's exhibit. Mr. Craw has made a close study of the insect problem, and we shall have occasion at another time to allude to some of his discoveries. The following is an outline of the material he exhibited at the fair:

## Scale and other Injurious Insects.

Grape scale (*Pulvinaria vitis*): A large brown scale secreting cotton-like substance on the grapevine. Smooth, soft scale of citrus trees (*Lecanium hesperidum*), large, oval, light brown scale. Aleo oles scales upon fuchsias: Small, light yellow scale on under side of leaves giving the leaf a whitish appearance.

Long scale (*Diurys rosea*): A large, roundish, white scale thick covering rose bushes.

Muscle shell scale (*Mytilaspis-aspidiotus-Gloverii*): On citrus trees.

Convex scale on apple (*Aspidiotus convexus*): A new species by Comstock. Shown on apple bark, also on skin of orange.

A scale (*Aspidiotus acaciae*): Very small, white scale thickly covering bark of acacia trees.

Walnut scale (*Aspidiotus juglans regis*): Another new species by Comstock; a large, grayish scale on bark of English walnut trees.

Red scale of the citrus trees; the famous new pest named by Comstock, *Aspidiotus citri*. Shown on the skin of the fruit, also on leaves, etc.

Mealy bug (*Dactylopius adonidum*): On oranges; gathering in snow masses on stem, leaves and fruit.

Scale on *Arbutus laevis* (Norfolk Island pine), named *Uhlaria arbuti*.

Large white scale (*Aspidiotus pinus*), sometimes called *Diurys*. The pest which has destroyed acacias in the northern part of the State.

*Diurys* or *D. 12-punctata*: The 12-spotted green beetle which has done such injury to plants and fruits at the north. *Diurys trivittata*: The cucumber bug of the East; also *Diurys*, new species; larger than *trivittata*.

White ants (*Termites flavipes*).

Raydidi (*Microcentrum*) and eggs on orange twigs.

Codling moth and larva in different stages.

Orange worm (*Nothris citrifoliella*): A grub eating into the orange, a slim worm about  $\frac{1}{4}$  inch in length, with brown head.

Red spider or red mite (*Tetrinus telarius*): Shown on orange leaves.

May beetle (cock chafer) *Cotula lanigera*.

## Beneficial Insects.

Syrphus flies in different stages: *Syrphus conops quadrimaculatus*: A very good example of these destroyers of plant lice, etc.

Lace-wing flies (*Chrysopa*) also in different stages.

Dragon fly (*Agrius basalis*).

Parasites of scale insects; parasites of black scale (*Tonnoera Californica*); parasite of smooth scale (*Encyrtus flavus*); parasite of orange aphid (*Trioxys testaceipes*); also parasites of cabbage louse.

Lady-birds (*Coccinellidae*): Larvae and perfect insects. Several species.

Soldier bugs of unknown species.

Devil horse (*Pronotus cristatus*): A destroyer of aphids.

## Repudiates the Salt Treatment.

EDITORS PRESS.—I desire to correct a statement made in your paper a short time ago. It purported to be a sure remedy for scale insect. This statement was never authorized by me, nor has ever been tried in my orchard. Neither have I any faith in the remedy. There is but one practical remedy found, so far, and that is the one tested by Dr. Chapin, of San Jose: 1 lb. of concentrated lye to 1 or 1½ gallons of water. By correcting same you will confer a great favor on me.—A. CADWELL, State Horticultural Commissioner of Sonoma county, Petaluma, Cal.

The statement to which Mr. Cadwell alludes is one which we took from a Petaluma paper, which purported to be a detailed account of the application of brine for scale insects and the success thereof. This stands off the salt remedy for the present.

At Minneapolis, in the 20-mile race for the championship of the world, between Miss Cooke, of California and Mrs. Robinson of London, Mrs. Robinson fainted at the end of the fourth mile. Miss Cooke rode two miles more, and was declared the winner.

## Utility of the Beautiful in Home and Town.

[The following address was delivered at the last meeting of the Berkeley Village Improvement Society, by the editor of the PACIFIC RURAL PRESS, and is published by request.]

Beautiful is Berkeley for situation. Beautiful are the hills which look down upon us; beautiful are the waters upon which we look. Beautiful are the adjacent lands—the wide plain southward, where, within a score of years, croning oaks have grown to stately roof-trees, and miles of sandy waste have given place to smiling gardens beside royal avenues—a land of oaks become an Oakland.

Beautiful, too, are the views in distancespread, the far-off hills of San Mateo brought near by the clear winter air; the great city with its countless windows all ablaze at morn, flashing back to Berkeley the first rays of the rising sun, as the hilltop signal fires heralded to Argos the return of the victorious Agamemnon; and with its myriad lights by night brightening the darkest sky, as though Ceres was still marshalling her torch-bearers, searching for the lost Persephone in the Hades of the metropolis.

Before us is the far famed Golden Gate, the ships of all nations plowing its blue waters by day, and its headlands jeweled at night with the beneficent gems, set for the guidance of mariners. To the right is the outline of the coast mountains, clear cut against the evening sky—the reigning light of Tamalpais drawing the royal purple over his wounded side—and still farther northward is the upper bay, its shores approaching each other, from our point of view, until it seems a majestic river flowing around picturesque islands.

Beautiful is this quiet air unweaved by chilling breath of ocean. Beautiful too is the atmosphere of taste and culture emanating from this seat of learning which we have in keeping for the State, and from the homes of our citizens, and beautiful again are the objects which the society we honor to-day is striving for. Thus surrounded by beauties of nature of art and industry, let us endeavor to catch the significance of beauty—

## The Utility of the Beautiful.

Metaphysicians, in their analyses of the beautiful are prone to give highest rank to that which is beautiful in itself and which wins admiration without suggesting uses or adaptations. This is termed pure beauty, and there are other relative beauties of lesser rank. But Sir Wm. Hamilton authorizes our theme when he says what has been distinguished as dependent or relative beauty is nothing more than a beautiful utility or utilized beauty. An object may be beautiful apart from all consideration of the object it may serve, but when it is discerned that it is also a means toward an end, there will be additional satisfaction in the observation of its perfect adaptation to its purpose.

The usefulness of the beautiful may be demonstrated in many ways. Even the metaphysician, who claims that beauty without the idea of use is the only pure beauty, will grant that pure beauty is of high usefulness to man in that its contemplation elevates his thoughts and tends toward the cultivation of taste. The theologian finds the beautiful in nature of transcendent utility when he weaves it into his argument to prove the existence of design in nature. But it is not these lofty utilities which we seek to set forth. The office of the beautiful in the intimate surroundings of our lives is the theme which approaches nearest to idea upon which our work as a society is founded, and is most pertinent to the present occasion. Of what use is it, then, that we live in a beautiful place, and that we, as a society and as individuals, put forth efforts to beautify our surroundings?

## The Influence of Environment

In the formation of physical and mental traits and characteristics has been often remarked by shrewd observers, and is of common acceptance. The dweller on the mountains is usually credited with having borrowed his stature from the peaks amid which he lives, strength from the mountain pine, and loftiness of purpose from the pure air of the higher altitudes, while the lowlands furnish a host of smaller men tremulous in frame and tickle in purpose, kept for a time above the level of the plain by generous doses of quinine. Between these extremes of river bottom and mountain top there are preponderances of strength or weakness according to local surroundings or inherited conditions. Whether this general claim for influence in environment be true or not, it is beyond question that the character of a home and its surroundings has much to do in shaping men for success and for useful lives, or the reverse. A beautiful home is one of the best moral agencies in existence. It appeals alike to young and old. It shapes the disposition and thoughts of the child, and it creates an evergreen old age. Literature is full of tributes to lovely homes and their influences; and it is not in stately architecture or sumptuous fittings that the charms lie. The vine hung cottage has done more for humanity than the Alhambra; the neatly-kept half acre of blade and bloom on the plains or hillside have outlived the hanging gardens of Babylon.

The requirements of home beauty seem to be very simple, but they are imperative. Care and culture are necessary, and neglect is fatal.



Good nourishment and training are indispensable. The affections must be freely bestowed, and devotion must be hearty and unstinted. And as we name the requirements, does it not plainly appear that they are called for alike in what may be termed the externals and the internals of home-making? How, then, can they be bestowed upon one and withheld from the other?

Is not the influence irresistible that if our habitations are uncouth, neglected and unclean, we shall be found also coarse in our manners, neglectful of our families and devoid of those graces of life which are the most precious gifts of enlightenment? It is true that in the contest for subsistence which most of us are forced to wage, there is often little time or money at command for adornment and embellishment, and it is the saving clause in the argument that but little is required. I have seen men going to their work with lovely rosebuds in their button holes and neat patches upon their knees, and I have almost thought them twin ornaments—each expressive of tenderness and devotion. It is the glory of beauty that wealth cannot monopolize it. It is free as air and it is as grand in its utility.

#### Beauty in Towns and Villages.

Pleading for the usefulness of beauty in individual homes is but a step leading to an argument for beauty in villages and their surroundings. For villages are but groups of homes with the important addition of the space which lies between them. The village is the setting; the homes are the gems. There may be hundreds of beautiful homes and yet not a beautiful village; hence, there rests upon the villager a responsibility outside his garden gate. And if this responsibility is assumed and discharged in such a manner that glimpses of beauty greet the eye wherever it may turn, what is the use of it?

The beauty of a town wins the love and loyalty of those who dwell in it. It promotes fellow feeling; it advances friendly intercourse; it ministers to the success of all those agencies by which the taste, morality and general culture of the people are advanced. It brings the village into harmony with itself and with the natural beauties which surround it. It heightens the effects of all individual efforts at beautifying homes. Beautiful homes in a beautiful village are "like apples of gold in pictures of silver."

Beauty in suburban towns serves a special purpose. It draws humanity from the stifling air of the metropolis into the sunshine of the country. Suburban residence gives rosy cheeks to the children and brings radiant beauty to their mothers. And to the sires who pass to and fro it brings each day that peerless restorative—a change of scene and air. It is plain that for the well-being of the race and for the comfort of those who compose it, anything which leads men to their gardens rather than their clubs, which gives the children clean dirt instead of street scrapings for their mud pastry, and which lifts the housewife's eyes from the hackyard or front steps of her neighbor to the hillside or the expanse of waters, is an agency for the elevation of character and of health.

#### City and Country.

The issue between city and country is an old one, and the country is late in choosing its best weapons. For more than a century the English sovereigns fought the growth of London by decrees that people should live in the country, and still London grew. Even the Star Chamber could not stem the tide of seekers after city excitements and allurements. Most forcible acts were employed by the sovereigns to prevent the extension of the corporate limits of the city, and still the suburbs were gathered in. In vain did Elizabeth, James I and the Charleses forbid the erection of new buildings, for still new roofs appeared. Even satire was powerless, for a writer of the time says:

"Everyone strives to be a Diogenes in his house, and an emperor in the streets; not caring if they sleep in a tub, so that they may be hurried in a coach; pinching many a belly to paint a few backs; changing their woods into wardrobes, their leases into laces, and their goods and chattels into gilded coats and gaudy toys." Still the city grew until the writer was forced to exclaim: "Such is the deluge of building that we shall be poisoned by breathing in each others' faces."

The improvement of transportation facilities, a better understanding of sanitary laws, and perhaps a more general appreciation of nature's beauties, which is a mark of a more enlightened people, has accomplished in these later days what kings, queens and courts could not do 250 years ago, for now we see a constant escape of city prisoners to rural freedom, and a yearning for release among hosts who cannot break their shackles.

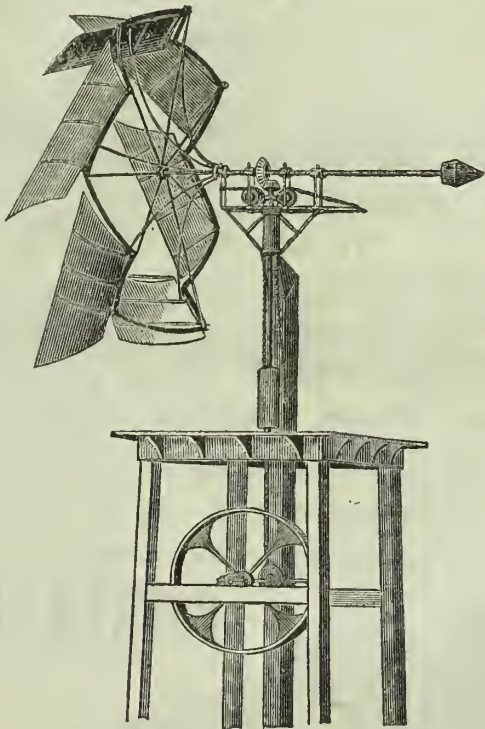
To foster and promote this beneficent tendency nothing is so powerful as the beautifying of suburban towns. Men can be charmed when they will not brook commands; they yield to persuasion when they grow more stubborn under ridicule. If they can look through avenues of trees upon a smiling hillside or upon the placid waters; when they can stroll along neat sidewalks and peep over well shorn hedges into lovely gardens, or roll their wheels over dustless highways through parks fragrant with blossoms and musical with the play of fountains; when they realize that a home-grown rosebud is a sweeter thing to wear than the merchandise of the florist, and when they are assured that they can carry photographs of four-inch strawberries to demonstrate their horticultural success, then we may indeed achieve what royal mandates failed to accomplish.

#### Results of Town Improvement.

The results of the incoming of new beauty lovers to the neighborhood are many. Real estate advances, which satisfies those who own it, and the community in general, for advancing values mean growth, life, popularity, importance and the like, in the town, and every one feels his pride of home and its surroundings grow more intense.

All the local industries are stimulated and merchandising is brisk. Thus the results of beautifying a town are shown to be most practical, and if every local real estate owner and merchant should take a life membership in a beautifying association, and every day laborer should give an idle day now and then to carrying on the society's work, they would promote their own interests and show an enterprising spirit at the same time. These deductions are merely records of experience in other towns where systematic efforts have been made at improvement, as in a score of villages at the East, and all these benefits will be realized here if the people recognize the utility of town beauty and work together for it.

Aside from the benefits upon the people who are won from winds and fogs to the delights of our sunny hillside, and in addition to the advantages to those who will find their property advanced or their business stimulated, there are other benefits which will accrue to every dweller in the town, and they, too, are of the most vital and practical character. The unsightly commons will disappear; stately mansions with their wide lawns and pretty cottages with bright little gardens will multiply. Such will



THE BEAVER WINDMILL.

be the general spirit of improvement, that no front yard will long be a cow corral. Narrow trails through stretches of ruts and rubbish will give place to well-graded walks beneath shapely trees. Then it will be comparatively easy to carry forward a system of sanitary drainage, which will be the surety of health to all. Then will the dust disappear, and the measured clatter of the hoofs upon the sounding roadways will be music on the evening air. The effort for these material beauties will link residents in a community of interest and fellow-feeling. Social intercourse will be promoted, and evening entertainments of the higher class will yield opportunity for recreation and culture. Public institutions, the library and the lecture room, will feed the hungry mind, and all agencies tending toward the promotion of the graces of life and the elevation of thought will be advanced. The town will be better, and all will be better for living in it.

#### Improvement a Duty.

To beautify Berkeley is a duty which should be cheerfully assumed. It is a disgrace to a town to be a blot upon a fair landscape. The more beautiful the surroundings the greater the need that the town should be pleasing to the eye and gratifying to the cultured taste. No town around the shores of the magnificent bay of San Francisco affords so good a view of its beautiful waters as Berkeley. Travelers who have feasted their eyes upon the world's most celebrated scenes, have stood upon the hillside above us and declared the combined land and water view the finest their eyes have ever rested upon; not excelled by the Bay of Naples, which lovers of the beautiful cross oceans and continents to enjoy. It is recorded that those who visit the higher ground to secure an outlook over the lovely Italian waters find the squalid and the loathsome inhabitations and life offending their sensibilities while they are seeking the picturesque and the beautiful in nature. It is within our power to prevent such deplorable discord from lessening the enjoyment of those who come to gaze upon the grandest gift of the Pacific to California. We may show them harmony of nature and of life. We can demonstrate that our civilization is not an insult to the scenes which surround our homes,

but by devotion to the truth in art in our buildings, and their surroundings, truth to the laws of health in our cleanliness of dooryard and street, and truth to the economies in our thrift and enterprise—and in them all prove again that "beauty is truth; truth, beauty."

#### A New Windmill.

Joseph H. Thercin, of this city, has recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, and exhibits at the Mechanics' Institute Fair, an improvement on windmills, which we illustrate on this page. It consists of a novel exterior rim for the wheel, to which the vanes are attached and hinged, the rim being made in zig zag sections, and having the arms or spokes of the wheel extending from the hub to the angles of these sections, so that they stand alternatively forward and backward from a plane and thus brace the rim.

The vanes are also formed in a novel way, being curved similar to a plow share, and are hinged to the angular joint, so as to stand diagonally with the plane of the wheel and they may be adjusted to the strength of the wind by means of arms connected with a sleeve sliding upon a shaft. Mr. Thercin also devised a peculiar socket by which the mill may be mounted on a single post; this socket having a vertical spindle upon which the wheel axle and upper part of the mill is mounted to swing about as the wind may make it necessary.

The engraving shows very clearly the con-

struction of the mill, the fans of which are metal. The whole mill in fact is of iron, either painted or galvanized. A weight acts on a governor and may be proportioned to get more or less speed. The weight closes the vanes toward the center and when the force of the wind overcomes the weight it forces the vanes outward and reduces the power and speed of the wheel. This mill is called the Beaver Windmill. For the large-sized wheels cloth will be used instead of metal. An 8-ft. wheel will give one horse power, and costs \$75; 10½ ft. wheel, two horse power; 12-ft., three horse power; 15 ft., five horse power. The inventor's address is corner 30th and Mission Sts. The inventor informs us that the mills he has built, and which are in practical operation, are in every way satisfactory.

#### A Pleasure Trip.

Just at this season of the year one of the finest and most agreeable trips to be made in the State is that offered by the counties of Napa, Lake and Mendocino. Taking the Vallejo route, go to Napa and Calistoga by rail; from there by stage to any or all of the following springs: Anderson, Adams, Siegler or Highland; then to Soda Bay; thence by boat on Clear lake to Lakeport; by stage to Wilter and Pierson's springs; a day or two at Blue lakes; stage to Ukiah, and then to Mendocino through the far-famed redwood region; visit the mill at this place, where they daily turn out 50,000 ft. of lumber; thence by the Pacific Coast steamship line to San Francisco. We know of no round trip that will give one a better knowledge of the Coast range than this, which is full of picturesque scenery from beginning to end; good hunting and fishing anywhere along; dotted every few miles with medicinal springs, affording good stopping places at almost any specified distance so that one may lay over in comfort when weary. Soda Bay is a wonder of nature; Blue lakes are beautiful, cosy and health-inspiring, with fine fishing, hunting, boating, and the finest will of water in the State. The ride from Ukiah to Mendocino is all the way through dense redwoods, here and there deer jumping

out of the way of the stage; huckleberries lining the road, and occasional glimpses of the vastness of the forest, and beyond the deep, placid, rolling Pacific, had from the summit of some bare peak around which the road winds. At Mendocino one may cruise up and down the river trolling for salmon, whipping for trout, wandering into the solitude for a deer, or gathering shells on the beach. Such a trip gives spice and variety to life, and adds to one's knowledge of the resources and beauties of our State.

#### The Cattle Show.

The show of cattle at the Golden Gate fair this year is rather smaller than last year. There are fewer exhibitors and smaller herds shown. There are, however, some very praiseworthy animals, and the department forms one of the features of the display at the park.

The cattle sheds are good structures, forming the western boundary of the grounds. Nearest to the gate is the Short Horn herd of Colman Younger, of San Jose, a group of well-rounded forms and rich colors, both young and older stock exhibiting much skill in their care and breeding. So far as we saw on Tuesday, the Colonel had the Durham field to himself.

George Bement's famous Ayrshire herd occupies 11 stalls and attracts much attention. The cattle had just arrived from Petaluma, where they carried off nearly all the premiums in their class. Mr. Bement puts his Ayrshires upon their absolute value as milk yielders, and for amount of milk they are truly famous. As we stood by, a young man milked one of the cows, and the large pail was overflowing in short order.

There is quite a group of Jerseys shown, some being the property of well-known breeders, others being the family cows of Oakland residents. There were no large herds shown, three animals being the highest number exhibited by any single owner, and there were several who showed trios. First according to location are three by P. J. Shafter, of Olema, Marin county. Mr. Shafter's "Young Surprise" is the best bull he has ever exhibited according to our fancy. His outlines are good and he is a shapely beast in every way. The cow Romana 2d is a three-year-old, well formed and with excellent milk machinery. "Dew-drop" is a 2-year-old heifer, neat and active.

J. S. Wall has also a trio, the 3-year-old cow Young Dutchess, 2-year-old Bonita, and 2-year-old bull Modoc. Modoc is a noble fellow with a noticeably fine head and stylish generally. He is a very good animal. The cows also have good points.

Henry Pierce has three famous and striking animals. The 3-year-old cow Bloomer won the sweepstakes last year, as the best cow over all breeds. She is a splendid cow, handsome in form and expression, and a heroine at the pail. El Monte is a heifer with a splendid endowment of milk features. She has abundant room for a large bag and veins which indicate that there will be room needed. The young one is Daisy, of Yerba Buena—a little gem in form and features. Daisy is especially interesting, because she is representative of a considerable class of young animals at Yerba Buena, which are the progeny of the imported sires and dams last brought from abroad. The result shows that there has been good blood secured and that it is being well used.

H. A. Mayhew has a heifer, "Setting Sun," interesting because of the in-breeding which has been practiced in her case. Her sire was Jersey Victor and her dam was by Jersey Victor. The heifer is a beauty, and shows no evil from her closely-related parentage.

There are other exhibitors of Jerseys who have animals of greater or less merit and who contribute to the success of the fair. We would notice A. J. Snyders full "James Hayward," an animal showing blood, but being burdened with an over heavy neck. H. H. Emery has the Jersey cow "Edith," and the bull "Terry," eight months old. W. S. McClane, Oakland, shows "Walter," three years old, of good parts. A. M. Burns shows "Glory," three years old; and F. and C. Metzker have a couple of animals which no doubt are very valuable and serviceable for home purposes. W. Z. Stone, of Danville, Contra Costa county, has a Jersey bull, "Joe Bowers," and a grade Jersey heifer, "Chromo." C. M. Selfridge, of Oakland, shows the Jersey cow "Norah W."

Graded cows are shown by F. Rosenstock, of Oakland, H. P. Saxe, of San Francisco, and L. D. Reynolds, of San Pablo.

A LARGE force of Chinamen have commenced the work of filling up a tract of low land lying in the southern end of Portland, Or., belonging to the Oregon railroad and navigation company. This tract is over a mile long and one-quarter wide, and will have to be filled to a height of 15 or 20 ft. The estimated cost of the work is \$300,000. It is the purpose of the company to use the ground for machine shops, depot and warehouses.

THE RURAL PRESS IN MISSOURI.—A reader of the Rural in St. Joseph, Mo., in a letter renewing his subscription says: "Of all the agricultural publications for which I subscribe, none is looked for and perused with such interest as the Rural Press."



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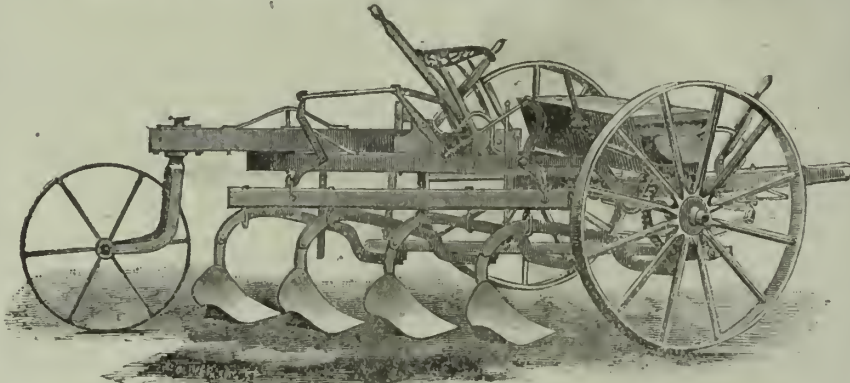
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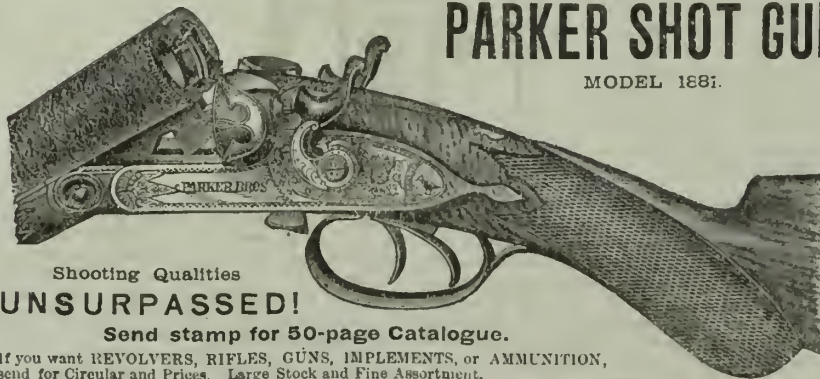
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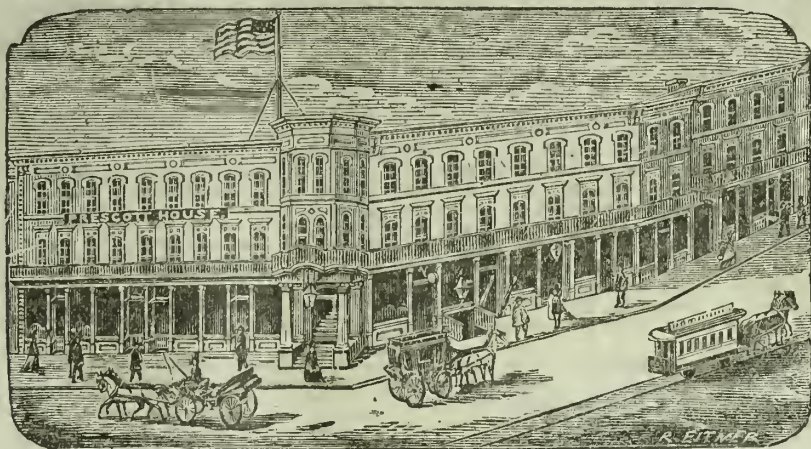
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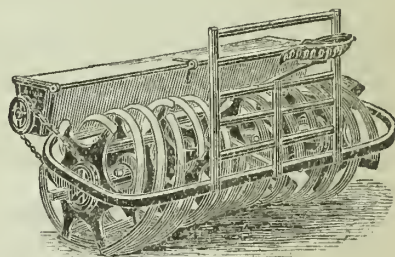
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## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**FEED WATER HEATER AND CONDENSER FOR STEAM BOILER.**—Reese Lewellyn, S. F., assignor to Lewellyn Steam Condenser Manufacturing Co. Dated, Aug. 16, 1881. No. (reissue) 9,840. The invention relates to an apparatus for freeing water fed to steam boilers from earthy matters held in solution therein—such as carbonate and sulphate of lime, magnesia, and the like—and for utilizing at the same time the otherwise waste-heat of the exhaust steam. It consists first and essentially of a chamber provided with a mass of loose stones, probably cobble-stones, supported in said chamber in such a manner as to prevent the free passage of water and steam through and among all the stones, with a pipe in the upper part of said chamber, adapted to supply the water in a uniformly diffused state over the entire mass of stones, adapted to diffuse in like manner the steam upon the lower surface and cause it to pass up through the mass, whereby the salts and other matters—such as carbonate and sulphate of lime and magnesia and silica held in solution and producing scale in the boiler—are precipitated upon the stones and the heat of the steam utilized. It consists in the second place, in injecting the steam horizontally into the lower part of the chamber underneath the stone, whereby it is more uniformly diffused, brought into immediate contact with and caused to penetrate every part of the mass of stones and approximately to heat all parts alike. It consists thirdly, in placing among the stones a layer of filtering material, thereby combining a precipitating and filtering apparatus in one chamber.

**BROOM.**—Geo. Hall, Santa Rosa. Dated August 30, 1881. No. 246,500. In that class of brooms in which the handle projects from the broomhead in a line with the length of the broomstraws, the angle at which the handle is held in sweeping brings only one corner of the brush portion of the broom into action, so that the corners of the broom soon become distorted and unevenly worn, and the broom is rendered unfit for use. The object of the invention is to adapt this class of brooms to the sweeping position by arranging the brush or sweeping end so that it will bear uniformly upon the floor along its whole length at the same time that the broom handle is held in the usual position. To do this, Mr. Hall counteracts the angular position of the handle by giving to the brush or sweeping edge a corresponding angle.

**INSECT-PROOF CLOSET AND SAFE.**—Chas. H. Larrabee, Napa. Dated August 30, 1881. No. 246,397. This invention relates to an improvement in closets, meat safes, or other similar devices, whereby they may be kept from ants and other insects, and also thoroughly ventilated whenever necessary. It consists of a closet or safe, in combination with a supplemental hollow base which is adapted to contain water, the main closet being rigidly attached to the base by means of pillars or supports which stand upon the bottom of the concave base, so that the whole forms one structure, while the outer walls of the closet extend downward around the base without touching it, whereby the tank is concealed from view. The bottom, shelves and top are perforated, to allow a circulation of air and ventilation, and a hinged cover is fitted to close the top entirely when desired.

**DREDGING MACHINE.**—H. B. Angell, S. F. Dated Aug. 30, 1881. No. 246,362. This invention relates to the class of dredging machines, and more especially to certain improvements thereon, consisting in peculiarly constructed irons or nose pieces for receiving and strengthening the ladder timbers, the said timbers having bails attached thereto at certain intervals, provided with pulleys, over which passes the chain connected with the gipsey or windlass. A peculiar hopper is connected with the elbow of the discharge pipe by a swivel joint; said elbow being supported on a pivot pin on a step below, while the pipe is supported on a turn-table, and has a door or opening for the purpose of introducing water to clean it. The object of these improvements is to obviate certain difficulties to each part particularly.

**CART.**—DeWitt C. Putnam, Petaluma. Dated Aug. 30th, 1881. No. 246,555. This invention relates to that class of carts known as breaking carts and is an improvement on one invented by the same patentee some time since. The object of this invention is to provide a cart which shall embody lightness and strength and a convenient mode of access, these objects being accomplished by certain attachments which support a footboard in front, as in the former invention, and by the further improvement of said attachments and appropriate construction thereof, the inventor provides a means of supporting a suitable step behind, whereby the vehicle is adapted to be entered from the rear and may afford convenient access.

**THE ACME HARROW.**—The Acme harrow, shown at the Los Angeles fair last week by Mr. Adams, attracted much attention. The improvement by which the ground is more perfectly pulverized, and without leaving a center ridge is generally commended.

**TANNING OF SEALSKINS.**—The *Shoe and Leather Reporter* furnishes the following interesting item in reference to the method of tanning sealskins and the use to which the leather is put: The tanning of sealskins taken from the hair seal, captured on the northeastern coast of North America, is carried on to a large extent in Great Britain and France. They are made into a pebbled or grained upper, similar in appearance to coarse morocco, or into varnished leather. The skin of the seal is light, but of a close texture, and when properly tanned yields a very tough leather. In Europe it is made up into ladies' shoes. The rough-haired or "blue-back" sealskins are the kind used. The tanning and finishing process for these skins requires six weeks' time. The process is similar to that used for making morocco leather. They are soaked, the grease taken out, fleshed, limed, un-haired, then split, bated and tanned in equal quantities of sumac and oak bark. Some forty years ago a large business was done in this country in tanning sealskins, but although the raw material is obtained on our coast, the industry is not at present pursued here. The catch is mostly around the coast of Newfoundland, and this season it has been very large, amounting to 455,813 seals. They are caught for their skins and oil. The local value of the animal is about \$2 to \$2.50 each, and they weigh, on an average, 50 pounds. The skins sell in London for 50 to 75 cents apiece. The leather made from them averages about 75 to 100 feet to the dozen skins. Many years ago these skins were used in this country for coverings for hair trunks and splints for carriage-makers. An imitation called "seal grain" is now rather fashionable, and a business might be built up and become profitable in tanning the real article for shoe-manufacturers' uses, as is done in Europe.

**INSECT EXHIBIT AT THE STATE FAIR.**—Visitors at the State fair will do well to find the exhibit of insects injurious to crops in California, which will be made by the Horticultural Officer Cooke. This department of the exhibits at the pavilion will be one of the most interesting, and will no doubt receive marked attention by fruit-growers and all parties throughout the State. Mr. Cooke has obtained the use of 20 microscopes and purchased 75 magnifying and other kinds of glasses for use during the exhibit at the fair, and is making all other necessary arrangements, by preparation of specimens in great variety for the occasion. The private exhibit made last year at the State fair by Mr. Cooke created great interest, and has occasioned continuous correspondence from all parts of the State ever since, and the receipt of numerous reports of successful results; but the coming exhibit, aided by an appropriation from the State Agricultural Society, will exceed in variety and interest tenfold any showing upon the subject heretofore made.

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D. W. KLEINER—San Mateo and Santa Clara counties.  
C. E. WETMORE—Alameda county.

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IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

**ANDERSON SPRINGS.** In Lake county, 19 miles from Calistoga (over a grand, picturesque route, via Mt. St. Helena) are among the best in this State. They are situated in the midst of a natural park, full of beauty and interest to the naturalist. Good home-like accommodations at reasonable rates are invariably furnished by the Anderson family.

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## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 14, 1881.

The Grain markets have been interesting this week. Buyers have come to sellers' figures in the case of Wheat, and in Barley, Corn and Rye a substantial advance has been gained. The latest from abroad is as follows:

**LIVERPOOL, Sept. 13.**—Good to choice California Wheat, firm, at 11s 11d. Cargoes are the turn dealer, at 52s 6d for just shipped, 53s for nearly due, and 53s 6d for 53s 9d for off coast. Receipts for the past three days, \$14,000 cts, including 257,000 American.

## Freights and Charters.

There are but few ships disengaged, but the tonnage to arrive is quite large. The prices now paid for last of October cancelling is 75s.

## The Foreign Review.

**LONDON, Sept. 6.**—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: There has been more or less rain every day for a week in Wales and some parts of England. The weather is more stable in Scotland, and harvest only commencing. Much of the grain is yet unripe. The deliveries of native Wheat are increasing, but less than 10% of the samples now offering are in good condition. The consequences of offering such a large quantity of damaged Grain in the country, which formerly depended for three-fifths of the breadstuffs on foreign supplies, has been a rapid lowering of the initial standard of value for native Warrants. The bulk of the second crop will not be fit to thresh for months. The provincial markets have been irregularly cheaper during the week. In London a decline of 1s on Wednesday was not recovered, the interest centering in foreign breadstuffs, which in spite of slow sales closes firm, as regards Wheat and the best makes of Flour. Wednesday's depression is being recovered, although various causes combine to arrest the downward movement, such as continued bad weather and high speculative prices in America. The rapid increase of the floating supply is strengthening the position of buyers. English Flour generally favors the buyers. There are virtually no samples of native Barley or Oats in the market, and quotations for both English and foreign are nominally unchanged. The off-coast business has been small, only 5 cargoes having been sold of the 12 which arrived up to Friday. About 20 cargoes, principally white Warrants, are due during the week. The off-coast market closed firm on Friday, 54s 3d being refused for red winter and Milwaukee, making 52s and Austrian 54s. The sales of English Wheat last week were 33,500 quarters at 54s 5d per quarter, against 23,140 quarters at 62s per quarter for the corresponding week of last year.

## Eastern Wool Markets.

**BOSTON, Sept. 9.**—The past week has been the most active market for two years, sales of all kinds aggregating 5,750,000 lbs, including large lines of Valparaiso and Donkoi carpet Wools. The demand for fleeces has been quite active, and prices are again 10¢ higher for this description, while for all kinds there is decidedly a firmer feeling. Business in washed fleeces has been upwards of 1,000,000 lbs. Considerable Ohio and Pennsylvania sold at 40¢@42¢ for XXX, 41¢@43¢ for XXX, 44¢@45¢ for XXX, with but a small percentage of stock available at these figures. As most of the best and desirable lots of XX are held at 45¢, Michigan XX fleeces have been sold quite freely at 39¢@41¢, and largely at 40¢, but are now very firmly held at 41¢. In unwashed fleeces sales have been very large, some 135,000 lbs, and include considerable fine Western at 25¢@32¢; medium, 27¢@32¢; low and coarse, 17¢@23¢; choice medium, from 31¢@35¢. Texas, Territory and Missouri Wools are largely embraced in these transactions. California Wool has moved slowly, but is held firm, the best grades of Northern Spring selling as high as 38¢. Combing and delaine fleeces are in demand at 45¢@47¢; for fine delaine, 46¢@48¢; medium and combing, 39¢@40¢; coarse combing, 25¢@32¢. Unwashed combing, including coarse and medium pulled Wools, have been quite active at 30¢@41¢ for common super, 35¢@43¢ for good, and 44¢@48¢ for choice. Sales of carpet Wool include 1,500,000 lbs Valparaiso, and 172,000 lbs of Donkoi. Australian Wool has been sold at 40¢@42¢, sales being 432,000 lbs. The market at the close was very firm for all kinds.

**Boston, Sept. 13.**—There is a very firm feeling for Wool of all kinds, with good demand from the manufacturers. Prices are well sustained. California Wool is firm, but sales have not taken place to any extent. Pooled Wools are in demand at 35¢@43¢ for common to good, 45¢@48¢ for choice super. All kinds of foreign are held firm.

**PHILADELPHIA, Sept. 13.**—Wool is in good demand, and stocks are well sold off. The supply is reduced and held for an advance.

**NEW YORK, Sept. 13.**—Business continues in a very promising shape, and while buyers do not allow their wants to lead them into a display of unusual anxiety, they show sufficient interest to keep the market in a good healthy condition, and encourage the sellers who have anything really attractive to offer. The turn, in fact, is toward more decided firmness on all merchantable and attractive parcels of clothing wools, with every reason to hope for a gradual expansion in volume of trades as the season progresses. Other destructive points show a corresponding tendency to gain, and advice from the interior are strong, and have made their appearance in sufficient numbers to afford much encouragement, and while they chop around somewhat as yet, in the hopes of finding some of the cheap lots supposed to be available a short time ago, it is quite likely that when they discover holders unwilling to yield better business will take place. Dealers tell us they could have placed much more stock this week at old rates. The recovery from the lowest to the present actual selling basis is about one cent, though some parcels are held for further improvement. Sales include 35,000 lbs. of spring California at 22¢@23¢, and 5,000 lbs. of scoured fall at 55¢ cents.

## BAGS.—Bags are unchanged and low.

**BARLEY.**—Barley has experienced a notable advance, good brewing Barley having been held in spite of an offer of \$1.52 per cwt. Feed Barley is also high. We note sales: 500 sks old Brewing, \$1.47; 600 sks standard Chevalier, \$1.40; 100 tons old coast Brewing, \$1.32; 300 sks choice coast feed, \$1.30; 300 sks coast Chevalier, \$1.27; 100 tons and 1,200, 300 and 270 sks coast feed, \$1.25, and 300 sks poor do, \$1.23 1/2 cts.

**BEANS.**—Beans have also rapidly advanced beyond last week's rise, and are now much higher than for many months. The range is about as follows: Bayos, \$1.75; Lima, \$5.2¢@5.50; Pink and Red, \$1.50; Pea and Small White, \$3.50@3.75; Small Butter, \$2; large do, \$2.25@2.50; Castor, \$3.50@4 1/2 cts.

**CORN.**—Corn is upward. Large Yellow has sold up to \$1.32, and Small Round at \$1.35. White Corn is nominal.

**DAIRY PRODUCE.**—Butter is improving. Fancy Butter has sold at 40¢ per lb, but the rule is a cent or two lower for choice. Cheese is unchanged.

**EGGS.**—Eggs are at the high marks, some choice California having reached 40¢ per doz.

**FEED.**—Bran has advanced to \$1.15 and Corn Meal to \$30 per ton.

**FRESH MEAT.**—The list is just the same as last week. Supplies are sufficient and the trade steady.

**FRUIT.**—Oranges are selling better as the Peaches and other fruits go out. There are still a good many very sweet Oranges in Los Angeles county which could well be eaten now. Grapes are a little cheaper by the box. Figs have sold higher.

**HONEY.**—Choice Comb Honey has sold up to 20¢ per lb. The southern counties refuse their sweets this year, and prices will rule high.

**HOPS.**—Picking is proceeding in the California yards, and an excellent quality is reported. We get no definite data as to amount of crop. Emmet Wells, in his New York circular of September 23, says:

The new hop season opens under favorable auspices for the grower. Although the early hops thus far received and sold here have not brought quite as good figures as is usual for first sales, there is every reason to believe that fully as good, if not better, prices will rule the main crop than ruled last season, and the range of prices will be nothing like as wide as then on account of the better quality of the crop now being harvested. Picking is now fairly under way. By another week it will be far enough advanced to be out of reach of any serious damage by the elements or by vermin. There will be some mouldy hops, as is already indicated by samples received of the first pickings; but, generally speaking, the quality will be better than last year. We hope growers are taking extra pains in picking. Where this rule is not observed, it will be impossible to produce a fine sample.

**OATS.**—Oats have sold rather more freely, but the range is about the same. We note sales: 500 sks Humboldt, \$1.00; 400 sks do, \$1.01; 400 sks do, \$1.55; 600 and 500 sks coast, \$1.50; 200 sks poor do, \$1.37, and 200 sks do do, \$1.35 1/2 cts.

**ONIONS.**—Prices are a shade lower; the best Silver Skins going at 80¢ per cwt.

**POTATOES.**—Potatoes are in scant supply and the best have advanced to \$1.53 per cwt.

**PROVISIONS.**—Trade is about as last week, and recent advanced prices are maintained.

**POULTRY.**—Hens are doing better, selling up to \$6.50 per doz., and the best broilers bring \$3.75 per doz. Turkeys are 1¢ lower this week.

**VEGETABLES.**—There is no change except an excess of Cucumbers, which brings many of them down to 15¢ per box. Egg Plant is also cheaper.

**WHEAT.**—We note sales: 130 and 20 tons and 6,000 sks No. 1, \$1.70; 25 tons and 643 sks do, \$1.63; 90 and 70 tons No. 2, \$1.65; 405 sks do, \$1.62; and 100 and 600 sks do, \$1.60. Receipts today were the largest ever known in this market, being 383,739 cts, although the greater part consisted of cargoes from Port Costa, Vallejo and Benicia.

**WOOL.**—Wool prices are about the same, except that a better grade of Northern fine now arriving, brings 17 to 20¢. The trade is still quiet and in an expectant condition.

## General Merchandise.

WHOLESALE.

WEDNESDAY M., September 14, 1881.

**CANDLES.**  
Crystal Wax Candles, 16 @ 18  
Paraffin, 20 @ 22  
Patent Sperm, 23 @ 25

## CANNED GOODS.

**Assorted Pie Fruits.**  
2 1/2 lb cans, 2 25  
Table do, 3 40  
Jams and Jellies, 3 75  
Pickles, 1/2 gal., 3 25  
Sardines, 1/2 box, 1 67  
Hf Boxes, 2 50 @ 1 90  
Merry, Faulk Co's  
Preserved Beef  
2 lb, doz., 3 25 @ 3  
do 4 lb doz., 6 50 @ 6  
Preserved Mutton  
2 lb, doz., 3 25 @ 3 50  
Beef Tongue, 5 75 @ 6 00  
Preserved Ham  
2 lb, doz., 5 50 @ 5 60  
Deviled Ham, 1 lb  
doz., 3 00 @ 3 50  
do Ham 1 lb doz 2 50 @ 3  
Boneless Pig Feet  
3 lbs., 3 50 @ 3 75  
3 lbs., 3 75 @ 4  
Spiced Fillets 2 lbs 50 @  
Head Cheese 3 lbs 3 50 @

## COAL-Jobbing.

Australian, ton, @ 8 50  
Coos Bay, 6 50 @ 7 50  
Bellingham Bay @  
Seattle, 7 00 @  
Cumberland, @ 13 00  
Mt Diablo, @  
Lehigh, @  
Liverpool, @  
West Hartley, @ 9 00  
Scotch, @ 8 50  
Vancouver Id., @  
Wellington, @ 9 00  
Charcoal, sack, @  
Coke, hush, @

## COFFEE.

Sandwich Id lb, @  
Costa Rica, 12 @ 14  
Guatemala, 12 @ 14  
Java, 18 @ 20  
Manilla, 15 @  
Ground, in c, @ 22 1/2

## FISH.

Sac to Dry Cod, @ 5  
do in Cases, @ 5  
Eastern Cod, 7 @ 7 1/2  
Salmon, blisk, 7 00 @ 7 50  
Hf blisk, 3 50 @ 4 00  
1 lb cans, 1 12 1/2 @ 1 22 1/2  
Pick Cod, blisk, @  
Hf blisk, @  
Mackerel, No. 1, 9 50 @ 10 00  
Hf blisk, 9 50 @ 10 00  
In Kits, 1 75 @ 1 85  
Ex Mess, 3 50 @ 4 00  
Pickled Herring, 3 00 @ 3 50  
Boston Smoked Herring, 65 @ 70

## LIME, etc.

Plaster, Colton Gate Mills, 3 00 @ 3 25  
Land Plaster, ton, 10 00 @ 12 50  
Lime, Suta Cruz hbl., 1 25 @ 1 50

## SUGAR, ETC.

Cal. Cane lb, @ 12 1/2  
Powdered, @ 12 1/2  
Fine Crushed, @ 12 1/2  
Granulated, @ 11 1/2  
Golden C, @ 11 1/2  
Cal Syrup, kgs, 65 @  
Hawaiian Molasses, 25 @ 30

## TEA.

Young Hyson, 40 @ 65  
Country pkd Gun powder & Imperial, 35 @ 75  
Hyson, 30 @ 35 1/2  
Poo-Chow O, 27 1/2 @ 32  
Japan, medium, 35 @ 37 1/2

## Bags and Bagging.

[JOBBER PRICES.]

WEDNESDAY M., September 14, 1881.

Eug Standard Wheat, 8 1/2 @ 8 1/2  
40 inch, 8 1/2 @ 8 1/2  
Hland Sowed, 22 1/2 @ 22 1/2  
20x36, @ 9  
23x10, 12 @ 13  
24x10, 12 @ 13 1/2  
Machine Swd 22x36, 8 1/2 @ 9  
Flour Sks, halves, 9 @ 10  
Quarters, 5 1/2 @ 6  
Eighths, 3 1/2 @ 4  
Hessian, 60 inch, @ 12 1/2

45 inch, 8 1/2 @ 8 1/2  
40 inch, 8 1/2 @ 8 1/2  
Wool Sks Hand Swd  
3 1/2 lb do, @ 25  
4 lb do, @ 25 1/2  
Machine Sowed, @ 24 1/2  
Standard Gunnies, 14 @ 15  
Hean Bags, 6 @ 7  
Twine, Detroit's, 3 1/2 @ 3 1/2  
AA, 35 @ 37



Domestic Produce.

WHOLESALE.		WEDNESDAY M. September 14, 1881.	
<b>BEANS &amp; PEAS.</b>		<b>POTATOES.</b>	
Bayo, cti.	21 75	Oregon	25 00
Butter, cti.	2 00	New	25 00
Castor.	3 50	Petaluma, cti.	25 00
Pea	3 50	Tomatoes	25 00
Red	21 50	Humboldt	25 00
Pink	3 50	" Kidney	25 00
Small White	3 50	" Peablow	25 00
Lima	5 12 1/2	Jersey Blue	25 00
Field Peas, blk eye	5 00	Cuffey Cove	25 00
do, green	1 75	River, red	25 00
<b>BROOM CORN.</b>		Chile	25 00
Southern	3 00	Sweet	25 00
Northern	4 00	<b>POULTRY &amp; GAME.</b>	
<b>CHICKEN.</b>		California	4 00
German	6 00	Roosters	4 00
<b>DAIRY PRODUCE, ETC.</b>		Broilers	4 00
<b>BUTTER.</b>		Ducks, tame, doz.	4 00
Cal. Fresh Roll, lb.	35 00	Mallard	13 00
do Fancy Brands	37 1/2	Sprig	13 00
Pickle Roll	37 1/2	Teal	13 00
Firkin, new	27 00	Wildgeon	13 00
Eastern	20 00	Geese, pair	1 25
New York	20 00	Wild Gray, doz.	1 00
<b>CHEESE.</b>		White do.	1 00
Cheese, Cal. lb.	13 00	Turkeys	13 00
do, Swiss	13 00	Snope, Eng.	2 50
Ducks	20 00	do, Common	1 00
Oregon	20 00	Quail, doz.	1 00
Eastern, by exp's	20 00	Rabbits	1 00
Pickled here	20 00	Hare	2 00
Utah	22 00	Venison	8 00
<b>FEED.</b>		<b>SEEDS.</b>	
Bran, ton	21 00	Cal. Bacon, extra	13 00
Corn Meal	20 00	clear, lb.	13 00
Hay	7 00	Medium	13 00
Middlings	22 00	Light	13 00
Oil Cake Meal	22 00	Lard	13 00
Straw, bale	42 00	Cal Smoked Beef	13 00
<b>FEED.</b>		Shoulders	13 00
Extra, City Mills	5 25	Hams, Cal.	12 00
do, Country Mills	5 25	Dupe's	16 00
do, Oregon	4 50	Whittaker	16 00
do, Walla Walla	4 50	Royal	16 00
Superfine	2 75	Stewart	16 00
<b>FRESH MEAT.</b>		Golden Gate	16 00
Beef, 1st quality, lb.	5 00	Alfalfa	15 00
Second	4 00	do Chile	15 00
Third	3 00	Canary	4 00
Mutton	3 00	Clover, Red	14 00
Spring Lamb	3 00	White	45 00
Pork, undressed	3 00	Cotton	22 00
Dressed	3 00	Flaxseed	22 00
Vend.	3 00	Hemp	7 00
Milk Calves	7 00	Italian Rye Grass	25 00
do, choice	8 00	Perennial	25 00
<b>GRAIN, ETC.</b>		Millet, German	10 00
Barley, feed, cti.	1 20	do, Common	7 00
do, Brewing	1 35	Mustard, White	3 00
Chevalier	2 00	Brown	10 00
do, Coast	2 00	Rapo	3 00
Buckwheat	2 00	Ky Blue Grass	20 00
Corn, White	1 30	2d quality	16 00
Yellow	1 30	Sweet V Grass	16 00
Small Round	1 30	Orchard	20 00
Oats	1 30	Red Top	15 00
Milling	1 50	Hungarian	8 00
Wheat, No. 1	67 1/2	Lawn	30 00
do, No. 2	62 1/2	Mesquit	10 00
do, No. 3	40 00	Timothy	10 00
Choice Milling	61 00	<b>TALLOW.</b>	
<b>HIDES.</b>		Crude, lb.	5 1/2
Hides, dry	19 00	Refined	9 00
Wet salted	10 00	<b>WOOD, ETC.</b>	
<b>HONEY, ETC.</b>		<b>SPRING—1880.</b>	
Beeswax, lb.	25 00	Oregon, Eastern	24 00
Honey in comb.	14 00	do fine, heavy	21 00
Extracted, light	10 00	do Valley	27 00
do, dark	8 00	<b>SPRING—1881.</b>	
<b>HOPS.</b>		San Joaquin, choice	17 00
Oregon	16 00	do	14 00
California, new	16 00	Southern Coast	17 00
Wash. Ter	16 00	Slightly Bury	15 00
Old Hops	16 00	Bury and Seedy	15 00
<b>NUTS—Jobbing.</b>		Northern choice	25 00
Walnuts, Cal.	8 00	Bury or Seedy	20 00
do, Chile	7 1/2	Sonoma	20 00
Almonds, bds lb	8 00	cino, Humboldt	29 00
Soft shell	12 00	fancy	29 00
Brazil	10 00	<b>FALL—1881.</b>	
Pecans	16 00	San Joaquin and	11 00
Peanuts	4 00	Lamb's	11 00
Filberts	14 00	Southern Fall	11 00
<b>ONIONS.</b>		Northern, free	17 00
Red	20 00	do, defective	14 00

Fruits and Vegetables.

WHOLESALE.		WEDNESDAY M. September 14, 1881.	
<b>FRUIT MARKET.</b>		<b>VEGETABLES.</b>	
Apples, bx.	50 00	Pears, sliced	8 00
Bananas, bunch	2 50	do whole	7 00
Cantaloupes, crt.	50 00	Plums	3 00
Cocoanuts, 100	6 00	Pitted	11 00
Crab Apples	50 00	Prunes	9 00
Cranberries, bbl	50 00	Raisins, Cal, bx.	2 25
Figs, bx.	50 00	do, Halves	2 50
Grapes	50 00	do, Quarters	2 75
Limes, Mex.	12 00	Eightbs.	3 00
do, Cal, box	12 00	Zante Currants	8 00
Lemons, Cal, bx	2 50	<b>ASPARAGUS, ETC.</b>	
Sicily, box	2 50	Asparagus, bx.	10 00
Australian	2 50	Artichokes, doz.	10 00
Nectarines	2 50	Beets, cti.	65 00
Oranges, Cal, bx	2 00	Beans, Lima, lb.	5 00
do, Tabiti M	20 00	do, String	1 00
do, Mexican	2 00	do, Wax	1 00
do, Loreto	2 00	do, Fountain	1 00
Peaches, bsk.	75 00	Cabbage, 100 lbs	75 00
do, Mount'n, bx	1 00	Carrots, sk.	40 00
Pears, bx.	50 00	Cauliflower, doz	60 00
do, Bartlett, bx	2 00	Cucumbers, bx.	15 00
Pineapples, doz	7 00	Egg Plant, bx.	50 00
Plums, bx.	40 00	Garlic, lb.	1 00
Prunes, German	50 00	Green Corn, doz.	10 00
Quinces, bx.	50 00	Green Peas, lb.	10 00
Blackberry, cti.	5 00	do Sweet	1 00
Raspberries, cti.	5 00	G'n Pepp'rs, bx.	50 00
Sugar Cane, btl.	5 00	do, Chile, bx.	50 00
Watermelons, 100	5 00	Lettuce, doz.	10 00
<b>DRIED FRUIT.</b>		Mushrooms, lb.	2 00
Apples, sliced, lb.	5 00	Okra, lb.	2 00
do, quartered	4 00	Parsnips, lb.	2 00
Apricots	14 00	Horseradish	50 00
Blackberries	23 00	Rhubarb, box	50 00
Citron	23 00	do, chest.	50 00
Dates	9 00	Scotch, Marrow	8 00
Figs, pressed	5 00	fat, tou.	8 00
do, loose	4 00	do Summer, bx.	40 00
Nectarines	14 00	Sprouts, lb.	20 00
Peaches	12 1/2	Tomatocs	20 00
do pared	17 00	do, Bay	20 00
		Turnips, cti.	50 00

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending September 13, 1881.						
HIGHEST AND LOWEST BAROMETER.						
Sept. 7	Sept. 8	Sept. 9	Sept. 10	Sept. 11	Sept. 12	Sept. 13
29.98	29.94	29.96	30.003	30.014	30.060	30.143
29.90	29.874	29.889	29.916	29.958	29.911	30.032
MAXIMUM AND MINIMUM THERMOMETER.						
61	60	66	60	59	62	69
51	51	51	51	52	54	54
MEAN DAILY HUMIDITY.						
88	86.3	83.7	88	83.3	81.3	73
PREVAILING WIND.						
SW	W	W	SW	W	W	SW
WIND—MILES TRAVELED.						
327	285	219	246	241	235	251
STATE OF WEATHER.						
Fair.	Foggy.	Foggy.	Fair.	Foggy.	Fair.	Clear
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1881, — inches						

Retail Groceries, Etc.

WEDNESDAY M. September 14, 1881.	
Butter, California	25 00
Choice, lb.	25 00
Cheese	17 00
Eastern	25 00
Lard, Cal.	25 00
Eastern	20 00
Flour, ex. fm, bbl.	8 00
Corn Meal, lb.	2 1/2
Sugar, wh. crsld.	12 1/2
Light Brown	3 00
Coffee, Green	23 00
Tea, Fine Black	50 00
Finest Japan	55 00
Caudles, Adm'te.	15 00
Soap, Cal.	7 00
Rice	8 00
Yeast Powder, doz.	1 50
Can Oysters, doz.	2 00
Syrup, 8 F. Gold'n.	75 00
Dried Apples, lb.	10 15
Ger. Prunes	12 1/2
Figs, Cal.	9 00
Oils, Kerosene	50 00
Wines, Old Port	3 50
French Claret	1 00
Cal. doz bot.	2 00
Whisky, O. K.	50 00
French Brandy	4 00

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]  
 SAN FRANCISCO, September 14, 3 P. M.  
 SILVER, 1. GOLD BARS, 890@910. SILVER BARS, 10@13 3/4 cent. discount.  
 EXCHANGE on New York, 5@10 premium; London, 49 1/2@49 3/4; Paris, 5 20 francs @ dollar; Mexican dollars, 40@91.  
 NEW YORK (4 per cent), 11 1/2.

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**MILLER & CO.**  
 J. P. HULME.  
**Wool and Grain**  
 Commission Merchants.  
 10 Davis Street, near Market,  
 SAN FRANCISCO.

Liberal advances made on all consignments, and prompt personal attention given to all sales.

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 Wool, Grain and  
 General Commission Merchants,

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**Doing Business Exclusively on Commission.**

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 Personal attention given all consignments.  
 Special attention given to Wool, Grain, and Country Produce.

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**WOOL and GRAIN**  
 Commission Merchants.

NOS. 211 AND 213 CLAY STREET.  
 SAN FRANCISCO.

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**MEYER BROS. & CO.**

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**Wholesale Grocers,**  
 —AND DEALERS IN—

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 P. O. Box 1940.

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And Wholesale Dealers in all kinds of  
**Country Produce, Fruits, Etc.**  
 404 and 406 Davis St.  
 Bet. Washington and Jackson, SAN FRANCISCO.  
 CONSIGNMENTS SOLICITED.

**DAVIS & SUTTON,**  
 No. 75 Warren Street, New York.  
 Commission Merchants in Cal. Produce

References.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

**HATCH & BARCLAY,**  
 Commission Merchants,  
 (Members of San Francisco Produce Exchange)  
 20 California Street, San Francisco.

**COSTIGAN, COHEN & CO.**

**COMMISSION**  
**Grain and Wool Brokers.**  
 OFFICE—28 California St., San Francisco.  
 REFERENCE—LAZARD FRERES, BANKERS.

**EUGENE AVY,**  
 Wholesale Dealer in Sheep and  
**Wool Commission Merchant,**  
 320 Sansome St., S. F. Advances made on consignments.

**Grangers' Business Association of California.**  
 Principal place of business, No. 38 California Street, San Francisco, State of California.  
 Notice is hereby given that, at a meeting of the Directors of said corporation, held on Monday, the 27th day of June, A. D. 1881, an assessment has been levied of ten per cent. upon the capital stock of said corporation, amounting to the sum of two and one half (\$2.50) dollars upon each and every share of said capital stock, payable July 28, 1881, to Amos Adams, the Secretary of said corporation, at his office, No. 38 California Street, in the city and county of San Francisco, State of California. Any stock upon which this assessment shall remain unpaid on the 24th day of October, A. D. 1881, will be delinquent, and advertised for sale at public auction, and, unless payment is made before, will be sold on Monday, the 21st day of November, A. D. 1881, to pay the delinquent assessment, together with costs of advertising and expenses of sale.  
 AMOS ADAMS,  
 Secretary of Grangers' Business Association of California.  
 Office—No. 38, California Street, San Francisco.

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**HEADER WAGON ATTACHMENT,**  
 Which keeps the load level and over the center of gravity at all times. Patent right for sale, or contract given for its manufacture on royalty. Send or call on TAYLOR & DERRICKSON, Clayton, Contra Costa County, Cal.

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 Besides the largest and most complete general stock of Fruit and Ornamental Trees in the U. S., we offer many Choice Novelties. Priced Catalogues sent as follows: No. 1, Fruits, 10 cts. No. 2, Ornamental Trees, etc., 15 cts. No. 3, Catalogue of Strawberries and other small fruits, free. No. 4, Wholesale, free, and No. 5, Catalogue of Roses, free. Address,  
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**Whitmore's Improved Gear,**  
 ADAPTED TO  
**Buckwagons, Buggies and Light Business Wagons.**  
 Weight carried to the extremities of the Axles. Long, soft, double sweep springs. No side sway or pitching motion. It is jointed, relieving all strain.  
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We, the undersigned, hereby certify that we compose the partnership transacting business under the firm name of Robinson & Hallidie.  
 The principal place of business is the City of San Francisco, in the State of California, and the full name and respective place of residence of the partners are signed hereto,  
 ANDREW J. ROBINSON,  
 ANDREW S. HALLIDIE.

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 The only Horizontal Ram made. Will do good work on light fall. Send for Circular  
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Stable manures require frequent irrigation in order to develop its properties; it is expensive, voluminous, and requires great labor to spread and absorb it; it propagates weeds, worms, snails and destructive animalcules, the pests of the farmer. On the other hand, Bone Powder can be easily handled, transported at low rates of freight, in bags. It checks the propagation of insects and luxuriates the growth of hops, vices, fruit trees, etc.; can easily be spread around the plants and is most efficacious as an impediment to the rapid and terrible encroachment of the FLYBLINDERS.

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Situated in Calaveras County, near Blue Mountain, 5 miles southeast of West Point, containing 320 Acres; 70 Acres Bottom Land, the balance Timber Land (the Licking Fork running through the land furnishing plenty of Water the year round for irrigation). I have now 5 Ditches full of Water, it is also the best of Drinking Water, clear and cold. I have about 50 Tons of Alfalfa Hay, 5 Acres of Potatoes, 1 Acre of Cabbage, and other Garden Truck, 4 Horses, Wagon, Machinery and Plows, all Tools belonging to a Ranch, 18 Head of Cattle, 2 Fish Ponds, stocked with Carp. Said Ranch has an Orchard, one New House containing 9 Rooms, 2 Barns—one has been built this summer. It is situated in one of the healthiest parts of the State, a good Market for everything you raise, a good Range for Cattle or Sheep outside the Ranch. It is as good a Vegetable Ranch or for Dairy purposes as can be found (Good Title), all of which I wish to sell.

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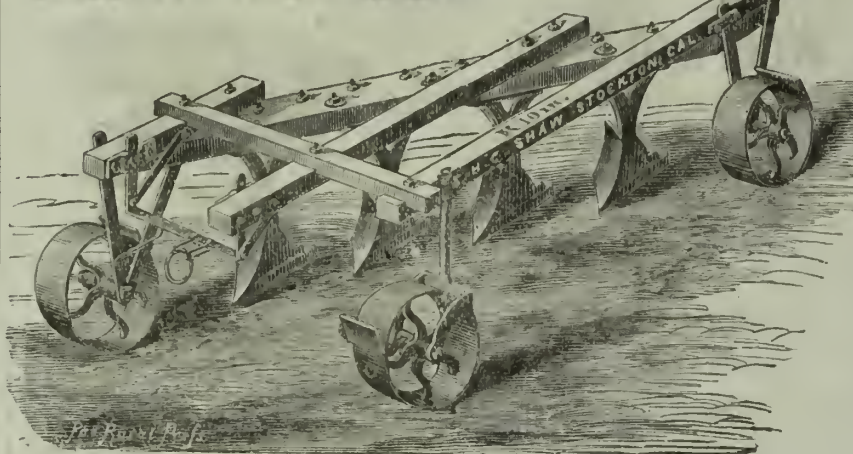
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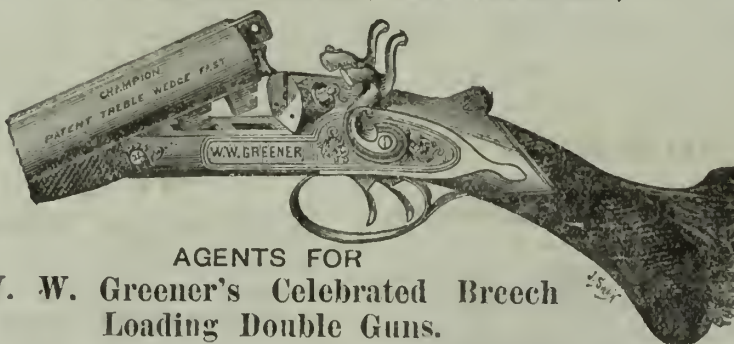
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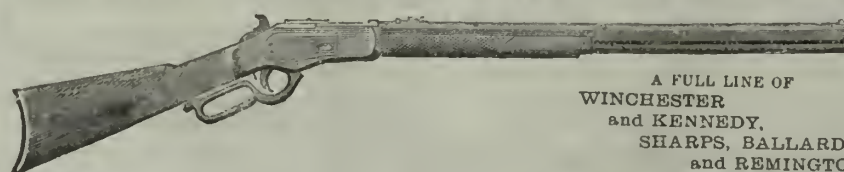
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Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to Suit. Liberal discount to the trade. Send for Special Price List for Marlin's New Repeater and Ladd's Improvement on the Kennedy Rifles.

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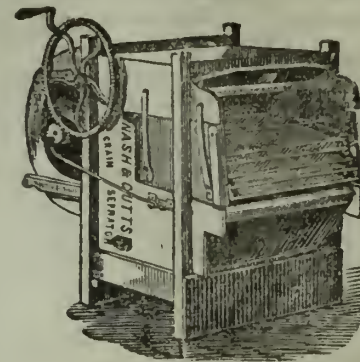
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Five sizes, warranted to clean from 50 to 200 bushels per hour, perfectly. The fact that we have taken EVERY Diploma that has been offered by the State Agricultural Society for 11 years proves that we have the best.



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Composed of perforated zinc and patent rolled wire. The zinc is not punched as of old, with all holes of a size, but they grow gradually larger as they reach the lower or out end of the gang, thus allowing the wheat to pass through more readily. The patent rolled wire that we use is more instrumental to the efficiency of the cleaner than one would at first suppose; being rolled after it is wove, it is perfectly smooth, thus allowing Barley and Oats to run over more rapidly, while the Wheat being smooth will pass through readily, thus increasing the capacity both in speed and quality. Notwithstanding the extra expense incurred by the purchase of this patent Wire and Zinc, the prices are reduced this season, thus giving the farmers the benefit of this new combination.

Farmers and Dealers are particularly cautioned against spurious imitations. Be sure that the one you buy bears this Trade-Mark: "THE IMPROVED NASH & CUTTS' GRAIN CLEANER." All others are frauds. See that it is manufactured by "H. D. NASH & CO., Sacramento, Cal." We mention the above for the protection of our customers who want the GENUINE. Every Cleaner fully warranted. Prices at Factory.—No. 1, \$30; No. 2, \$40; No. 3, \$50. For further particulars address

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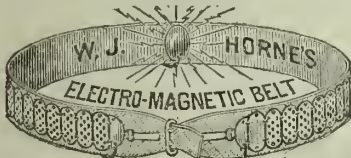


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Patent, Nov. 11, 1879,  
Patent, Nov. 9, 1880.  
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Electro-Magnetic Belts, New Style, \$10; Electro-Magnetic Belts,  
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GUARANTEED ONE YEAR. BEST IN THE WORLD.  
Will positively cure without medicine—Rheumatism, Paralysis,  
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Nervousness, Dyspepsia, Spinal Disease, Ague, Piles and other  
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**RUPTURE GUARANTEED, RELIEVED,  
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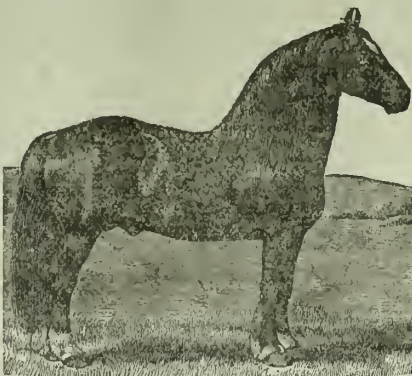
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MOST EFFECTUAL!

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It is Superior to any Lin-  
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RINGBONE, SPAVIN,  
SWEENEY,  
CALLOUS LUMPS,

And OLD SORES, apply  
freely so as to blister, from  
three to five days in suc-  
cession, and in four or five days  
if not cured repeat as at first.

SPRAINS, STIFF JOINTS, BRUISES, WIND GALLS,  
and all slight ailments, apply a small quantity so as not  
to blister. SADDLE SORES, CUTS, and all other sores  
where the skin is broken, mix the Liniment half and half  
with any kind of oil and apply in moderation.



THE BEST!

AS A  
FAMILY REMEDY.

We are safe in making the  
bold assertion that no Lin-  
iment exists that will com-  
pare with the H. H. H. in  
curing the following diseases:  
RHEUMATISM,

Apply freely to the parts af-  
fected, and take internally  
from 10 to 20 drops in from  
2 to 3 tablespoonful of water

3 times a day. DIARRHOEA, dose, as above. COLIC,  
same as above, repeated every half hour until relieved.  
TOOTHACHE, saturate a piece of cotton and put it in  
the tooth, repeat in 15 minutes if not relieved. All other  
aches and pains apply freely to the parts affected.

Price—mall ize, 50c.; Medium, \$1; Large, \$2.50.

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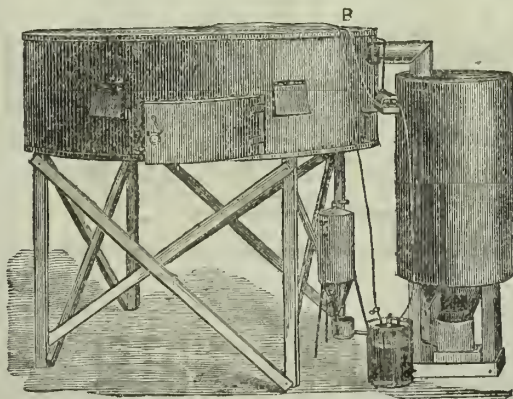
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AT TORONTO EXHIBITION, 1879.

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The Baby National Incubator

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Understood. Will Hatch where none other  
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success.

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Principal Office—No. 38 California Street, San Francisco.

The Association is now prepared to receive Grain on consignment for sale and storage in its warehouses at Port  
Costa, on which advances will be made at the usual rate of interest. Until the buildings are fully completed, Grain  
will be received and temporarily piled on platforms and insured at the expense of the Association till the Grain is  
placed in the warehouse, or loans effected on it. **AMOS ADAMS, Business Manager.**

## GRANGERS' BUSINESS ASSOCIATION

Shipping and Commission House,

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Consignments of Grain, Wool, Dairy Products, Dried Fruits and other Produce solicited, and ad-  
vances made on the same. Orders for the purchase of Grain and Wool Sacks, Produce, Merchandise, Farm Im-  
plements, Wagons, Etc., solicited and promptly attended to.

**AMOS ADAMS, Business Manager.**

54 All Gold, Chromo and Lithograph Cards, no 2 alike.  
name on, 10 cts. C. DePuy, Syracuse, N. Y.

50 Lithographed Chromo Cards, no 2 alike 10c. Name  
in fancy type. Conn. Card Co., Northford, Ct.

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## TEXAS LANDS.

I am prepared to sell lands in various counties of Texas  
and at prices ranging

From 50 Cents to \$5 Per Acre,

Owing to nearness to Railroads and improvements, sup-  
ply of wood, water, etc. These lands are carpeted with a  
rich and nutritious growth of MESQUIT GRASS, green  
the year round.

I have a solid body of 9,200 acres in Zavalla County,  
fronting Leona River.

Plenty of Grass, Timber and Water,

At \$1 25 per acre, unfenced, and 15 miles from Railroad.  
Also tract in Frio County, of 10,000 Acres, fronting on  
Frio River. NEVER-FAILING water, well coated with  
Grass; ALL FENCED. Well adapted to Cattle, Sheep,  
Swine or Farming, five miles from Railroad Station, at  
\$3 per acre, one-half cash, balance in one and two years  
at 8% interest.

Also 4,605 acres on same river, two sides fenced and  
near County seat at \$2 per acre.

Also some 640-acre tracts of rich land at \$2.50 per acre,  
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counties.

**JAMES M. THOMPSON,**  
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For Sale in large or small tracts, on easy terms, in  
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Goods Crops every Season without Irrigation

Farms, Stock Ranches, Dairy Farms, Fruit Farms,  
Vineyards, Chicken Ranches and homesteads of every  
class and description in this and adjoining counties for  
sale or rent on reasonable terms. State requirements  
and obtain suitable particulars from the Real Estate

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PERKINS' PATENT

Self Regulating

## WINDMILLS,

Pumps & Fixtures.



These Mills and Pumps are  
reliable and always give sat-  
isfaction. Simple, strong and  
durable in all parts. Solid  
wrought iron crank shaft with  
double bearings for the crank  
to work in, all turned  
run in babbitted boxes.

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with no coiled spring or springs  
of any kind. No little rods,  
joints, levers or balls to get  
out of order, as such things  
do. Mills in use six to nine years in good order now, that  
have never cost one cent for repairs.

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use. All warranted. Address for circulars and infor-  
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San Francisco Agency, LINTH, RICE

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from \$1,600 to \$20,000. Full particulars of.

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The Sweepstake Plow Company's Works

have been removed to

**Benicia from San Leandro.**

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**BENICIA AGRICULTURAL WORKS,**

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**E. MAIN, 315 Folsom Street,**

Makes to order Gents' Fine French Calf Boots from \$8 to  
\$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens'  
Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; Cal-  
ifornia Leather, \$3.50; Men's Working Shoes from \$2.50 to  
\$3; Children's Shoes made to order. Persons in the coun-  
try ordering to the amount of \$12. I pay the express  
charges. I sell nothing but my own manufacture.

## PENNOCK'S PATENT ROAD MACHINE.

KEEPS THE HIGHWAYS FIVE TIMES BETTER FOR HALF THE PRESENT  
COST IN CITY OR COUNTRY. PARTICULARS FREE. S. PENNOCK & SONS

MACHINES SENT ON TRIAL. KENNETT SQUARE

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JACOB PRICE, Sup'r.

W. H. GRAY, Sec'y

AT WORK.

## SAN LEANDRO PLOW CO.

Location—San Leandro, Cal.

The works of the above named Company, comprising a Foundry, Machine Shop, Planing Mill, Blacksmith Shop, Plow Shop, etc., etc., are now running, and are prepared to fill orders at short notice, and reasonable prices for

Gang Plows,

Sulky Gangs,

Stockton Gangs,

Seed Sowers,

HAY PRESSES (Price's and Dederick's),

Harrows,

Wagon Beds,

AND A GENERAL LINE OF

## Farm Machinery.

ADDRESS:

San Leandro Plow Co.,

SAN LEANDRO, CAL.

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## Hogs &amp; Cattle.



Langshans, Brahmas, Cochins, Leghorns, Oldenburghs, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Houdans, and Pekin Ducks. Bronze and White Holland Turkeys, Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Magpie Po and China Pigs, Jersey Cattle.

The Illustrated Pacific Coast Poultry Book, which contains a short practical article on nearly every subject connected with Poultry Raising and the prevention, as well as the treatment of the diseases peculiar to Poultry. There are over 25 large life-like illustrations of Poultry. This work I will mail to any address for 50 cents (simply cost of publishing). In cloth binding, 75c. Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES,  
Los Angeles, Cal.

## ERADICATE NOXIOUS INSECTS.

Lewis's Exterminator is efficient in mixing and applying any solution. London Purple, Paris Green and Blue Stone are the safe, sure and leading remedies for the eradication of Insects and Fungus.

Lewis's Hand Force Pump throws spray or a solid stream of water over and into foliage, and cleanses from Plant Lice, Scale Buz and Insect life, leaving the foliage brilliant in color and healthy in tone.

It is an excellent Greenhouse Syringe to drive minute insects from Strawberry and Pot Plants. As a Fire Extinguisher it is ever ready, successful, simple, cheap, durable. Satisfactory trial sought. Orders solicited by D. N. DILL. 825, Twenty-Ninth Street, Oakland.



## LAUREL RANCH!

Thoroughbred

## Spanish Merino SHEEP.

We offer for sale 400 HEAD OF YOUNG EWES AND RAMS. Prices always reasonable and terms liberal. Quality and condition superior to any flock in this State.

J. H. STROBRIDGE, Hayward, Alameda Co.

E. W. PEET, Agent.

## TURNER'S NURSERY,

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## 60,000 HALF-YEARLING TREES,

For sale coming season, from one to three feet high, consisting of leading varieties of Apricots, Peaches, Nectarines. These trees if cut back in spring and treated as dormant buds will make first-class trees by the next season. Buds taken from bearing trees, also general nursery stock. Prices on application to DAVE TURNER, or to R. F. CUNNINGHAM, Riverside, Cal.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 527 Commercial St., S. F.

## Moulting Fowls and Young Chickens,

IF FED DURING THE NEXT FEW MONTHS—THE MOST TRYING SEASON OF THE YEAR—WITH

## THE IMPERIAL EGG FOOD,

Will do much better, keep healthier, Grow Faster, and commence laying months earlier than they can possibly do without it, for it furnishes the Nourishing and Stimulating Diet which they so need, but are now unable to procure owing to the heated, dry condition of the soil.

## The Imperial Egg Food

Always proves greatly beneficial, and no one having fowls should fail to avail themselves of an article so absolutely necessary to success with poultry.

ONE OF MANY TESTIMONIALS.

Salinas, Cal., July 27th, 1881.—"After using the Imperial Egg Food, we consider it all that is claimed for it; in fact, one of the best preparations we have ever used in our poultry yards. We take pleasure in recommending it to Poultry Raisers." Signed: J. K. Alexander, Superior Judge; H. C. Tuttle, Poultry Breeder; J. P. Stanley, C. Johnson, J. B. Tucker, S. P. Carter, S. Chiklers, Harry V. Morehouse and W. M. R. Parker.

Prices List.—Sample packages by mail, 50c. and \$1, post paid. One pound package, 50c., two and one half pound packages, \$1, six pound box, \$2, 10 pound can, \$3, 25 pound keg, \$6.25.

## The Eclipse Self-Regulating Incubator,

Successful in the past; again greatly improved, and as now offered, the most Complete, Simple and Reliable Self Regulating Incubator ever invented. The only one with a Pacific Coast record. Will be exhibited in operation during August at the Mechanics Fair, San Francisco. Don't fail to see it.

Send stamp for Circular containing California Testimonials, not Eastern.

G. G. WICKSON,

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No. 319 Market Street, San Francisco, Cal.

## The Best is the Cheapest.

AVERILL  
MIXED  
PAINT.

THE PIONEER IN MIXED PAINTS. Is prepared ready for immediate use, and of any shade or Color desired. Any one who can handle a brush can apply it. It is impervious to our damp atmosphere, and is equally as good on Wood, Stone or Iron Work.

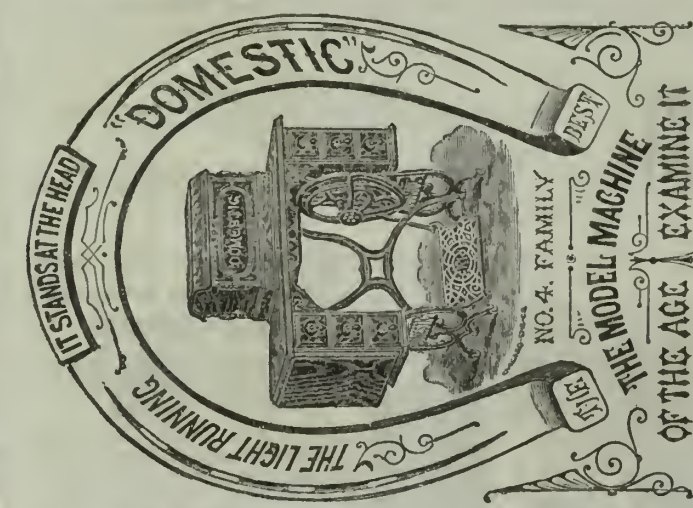
It does not Crack, Chalk or Peel Off, but retains for years that beauty of finish for which it is so justly celebrated.

Sample Cards of Colors, Testimonials and Price List furnished free, on application to

O. S. ORRICK, General Agent for Pacific Coast,

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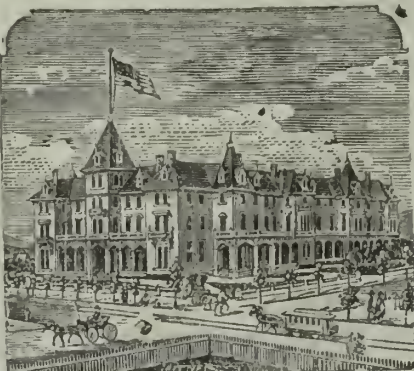
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SAN FRANCISCO



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Having been Thoroughly Refitted and Refurnished, Painted and Frescoed, is now Open for the Reception of Guests. Rooms can now be secured at the Hotel.

S. I. KELLOGG, PROPRIETOR.

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Manufacturers and Importers of all kinds of

## MUSICAL BOXES

Of Standard Reputation. The largest and finest assortment in the city. Musical

Boxes with changeable cylinders always on hand at low figures. The latest style

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Repairing Musical Boxes and Furnishing Material a Specialty.

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## Holstein Cattle.

## CLYDESDALE AND HAMBLETONIAN HORSES.

The largest and deepest milking herd of Holsteins in the world. 225 head pure bred, mostly imported, males and females of different ages.

A Large and elegant stud of imported Clydesdale Stallions and Mares of all ages.

Hambletonian Stallions and Mares of superior breeding. Personal inspection invited. Separate catalogues of each class, and milk records of cows mailed free on application. All inquiries promptly answered. State that you saw this advertisement in the Pacific Rural Press.

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Lake-side Stock Farm, Syracuse, N. Y.

## BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

15th and A Streets, Sacramento City, Cal.

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For Warming and Ventilating Private Residences and Public Buildings.

Introduced into TEN PUBLIC BUILDINGS and over FORTY PRIVATE RESIDENCES the past year with satisfactory results. Less attention and less fuel required to heat 4 rooms with this system than would warm 1 room with the open grate. Highest testimonials. Address

C. D. HARVEY,

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## GOLD MEDAL AWARDED

the Author. A new and great Medical Work warranted the best and cheapest. Indispensable to every man, entitled the "Science of Life or Self Preservation," bound in finest French muslin, embossed, full gilt, 300 pp. Contains beautiful steel engravings, 125 prescriptions. Price, only \$1.25, sent by mail; illustrated sample, 6 cents. Send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch street Boston.



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JAMES T. MURPHY,

Jefferson Block - - - San Jose, Cal.

## Grain Bought and Sold.

## MONEY To Any Amount LOANED

On Grain Receipts.

## DAIRY COWS WANTED.

Wanted, from TWENTY to FORTY GOOD DAIRY COWS that will come in between August and October.

Address, with particulars, B. MARKS,  
Fresno, Cal.

ESTABLISHED 1868.

## FURNITURE AND BEDDING.

The largest stock, best variety, and lowest prices of substantial furniture on the Pacific Coast is at

W. D. COMSTOCK'S,

Fifth and K Streets, Sacramento, Cal.

## FOR THE LADIES.

## TURKISH RUG PATTERNS

A Pleasant and Profitable Fancy Work. Patterns stamped in colors on lustrous turkish, Animals, Flowers and Scrolls. Can be made of rags or waste yarn. Full printed directions furnished with pattern. Send for Catalogue. Address

CHAS. PEAKE &amp; CO., 209 Kearny St. S. F.

THE NEW IMPROVED VANELESS

## ALTHOUSE WINDMILL AGENCY.

S. H. KILMER, of San Rafael, has the Agency for all Counties North of the Bay. Having them in stock orders for any size can be filled at once.

## THE DAVIS IRON WAGON.

E. A. SCOTT &amp; CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 1202, S. F., Cal.

## The La France Steam Fire Engine.

Circulars furnished on application.

50 Lovely Floral, motto, hand and bouquet chromo cards, beautiful colors, name 10c, Chas. Kay, New Haven, Ct.



# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 24, 1881.

Number 13

## The Assassination.

Veil, now, O' Liberty thy blushing face.  
At the fell deed that thrills a startled world;  
When fair Columbia weeps in dire disgrace,  
And bows in sorrow o'er the banner furled.

No graceless tyrant falls by vengeance here,  
'Neath the wild justice of the secret knife;  
Nor red Ambition ends its grim career,  
And expires its horrors with its life.

Not here does rash Revenge misguided burn  
To free a nation from the assassin's dart;  
Or roused Despair in angry madness turn,  
And tear its freedom from the despot's heart.

But where blest Liberty so widely reigns,  
And Peace and Plenty make a smiling land;  
Here the mad wretch its fair, white record stains,  
And blurs its beauties with a "bloody hand."

Here the elect of millions, and the pride  
Of those who own his mild and peaceful rule—  
Here Virtue sinks and yields the crimson tide  
Beneath the vile unreason of a fool.

## The End.

A wasp flew out upon our fairest son  
And stung him to the quick with poisoned shaft;  
The while he chatted carelessly and laughed,  
And knew not of the fateful mischief done.

And so, this life, amid our love begun,  
Envenomed by the insect's hellish craft,  
Was drunk by Death, in one long feverish draft,  
And he was lost, our precious, priceless one.

Oh! mystery of blind, remorseless fate!  
Oh! cruel end of a most causeless hate!  
That life so mean should murder life so great!  
What is there left to us who think and feel,  
Who have no remedy and no appeal,  
But to damn the wasp and crush him under heel?  
—J. G. Holland.

## The Nation's Loss.

The President is dead. For 80 days the country watched with longing eyes for every indication that his precious life would triumph over the wretched stroke of the assassin and has balanced hope and fear with almost affectionate anxiety. Meantime with heroic fortitude he has borne indescribable pain, and with brave heart awaited the result, longing to live and yet not afraid to die. And now he has gone hence, leaving to the country a rich legacy in the memory of a noble life and the example of high and disinterested patriotism. To-day the people mourn. The emblems of mourning are fixed upon a nation's homes and marts, along the country roads and beside the city streets. Everywhere hearts are heavy with the sense of the nation's bereavement.

James Abram Garfield was born on November 19, 1831, in the district known as the Western Reserve, about 15 miles from Cleveland, Ohio. His father, Abram Garfield, was a hard-working farmer, but the rough pioneer labor exhausted him before his prime. The mother was a woman of large frame and strong common sense. Of four children James was the only one who betrayed uncommon capacity. The elder brother is now a farmer in Michigan and the two sisters farmers' wives. In James, to the father's passion for work was added the mother's desire for knowledge. He worked early and late, but all his efforts were put forth to get an education. Labor on the farm through the summer, work at the carpenter's bench during the winter filled up his time, but, unlike his companions, he was never satisfied with this life. He had a strong desire to go to sea, and he walked 40 miles to Cleveland to ship on one of the lake craft. The captain swore at him and he retired discomfited, but compromised his nautical longings by hiring out as a canal boy. He drove the horses, and after a season of this apprenticeship was allowed to take charge of the helm of the boat. In the winter he turned his hand to any rough farm work. But even this active life could not satisfy him. He felt the stirrings of ambition—he had a consuming desire for knowledge. With a small amount of money which he got from his mother he set out for the nearest school. Here he studied hard, supporting himself by work at the carpenter's bench at morning and evening, and teaching school during the winter months. At 23 he concluded that he had gained everything possible from the academy. He had saved up money enough to carry him through one year at college. So, with that energy which

always characterized him, he insured his life, made over the policy to a business man for a loan of ready money, and thus equipped, started for Williams College. In 1856, Garfield was graduated from college, receiving one of the best honors. On his return home he accepted the position of professor at the College of the Disciples, in Hiram, Portage county, Ohio. After two years of this work he was elected President of Hiram college. While a professor, he married Miss Lucretia Randolph, the daughter of a farmer in the vicinity, whose acquaintance he had made while preparing for college. They married because they loved each other. Neither had money, but the young girl sympathized with Garfield's tastes and aspirations; she encour-



THE LATE JAMES A. GARFIELD.

aged his ambition and stimulated him to study and reading by her own scholarly tastes. In subsequent years he has acknowledged that no small share of his success in life has been due to her unwavering faith in him, and the encouragement which came from her intelligent companionship and womanly devotion.

The young college President was elected in 1859 to the State Senate of Ohio from the counties of Portage and Summit. The summer of 1861 saw him a Colonel, in command of the Forty-second Ohio Infantry—a regiment largely composed of his friends and of the students of the college. His army record is full of honors for honorable service, and he rose to the rank of Major-General. While in the field, Garfield

was nominated for Congress and elected by a large majority, in December, 1863. He showed at once that, though unpracticed in parliamentary tactics, he was no mean antagonist in debate. Before the first session was over he had won an assured place in the regard of his associates, and had made his mark as a ready debater. He showed in his first session a great fondness for the study of financial questions, and when appointed later on the Ways and Means Committee, he did good service in enforcing his idea of specie payment. He never wavered in his convictions, nor faltered in defense of what he regarded as the only safe financial policy of the government. In January, 1880, he was elected to the seat in the Senate which was then occupied by Allan G. Thurman, whose term expired March 4, 1881. After Garfield's nomination for President by the Chicago Convention on June 8th of last year, he resigned his seat in the Senate to which he had been called, but which he never occupied. He was elected President by a decided majority, and inaugurated March 4, 1881.

The events of the last summer are too fresh in the minds of the people to need rehearsal. None can forget the darkness of that Saturday, July 2d, when the news was spread abroad that the President had fallen at the hand of a miscreant; none can forget the long days of suspense from that time until the patient sufferer was released.

Tributes to the worth of the dead President will occupy the tongues and pens of orator, poet and historian for a long time to come. Just at the moment, it is difficult to frame fitting praise, but the following from the New York Tribune is excellent:

At the very moment when he was stricken to the earth he was considered among the most acceptable of all the rulers of the nation. His ability, his statesmanship, and his personal purity of character, were recognized by all. He was esteemed as an example to all who claimed a share in the honor that such a ruler bestowed upon his country, and would also share in the brilliant prospects of his administration. He stood confessed as one of the foremost men of the age. The great chieftain, and what is more, the Executive of a great people, has been stricken down in the moment of his fame. Long will he be lamented. Long will the atrocity of his fate be cited in future times. Generations yet to follow will forever link the name of Garfield among the brightest and most glorious of the rulers of the American people. By the side of the name of Abraham Lincoln the American people have now reverently inscribed James Abram Garfield. These two great names will live forever in history. As they mourned Lincoln, they will mourn Garfield, with a feeling of reverential tenderness, with gratitude for the example of his lofty, pure life, and with pity for his cruel, untimely death.

It is fitting as we mourn for the dead, that we should express sympathy with those whose personal loss is greater than ours can be—the honored mother, heroic wife and beloved children. The President loved his family with a love which is a shining example for a nation of sons, husbands and fathers. As a contemporary writer says: He died as a pure, upright Christian would prefer to die, with an unblemished record, wholly unmindful of personal pain and the abrupt termination of his highest political hopes, and grieving only for his cherished wife and children, whose love and affection made his home an earthly heaven. Around his bedside the American people have for weeks gathered in sympathy and prayer. To-day the same people will mingle their tears with those of his venerable mother, his wife and children, as members of one common family, mourning one common father and friend.

The Governor of Michigan has issued a proclamation to the people of the United States, urging upon their attention the needs of 15,000 homeless and destitute sufferers by the recent fires, and detailing the vast amount of territory burned over. The case really seems to be desperate and to call for united and generous efforts from every section of the country.

SALMON are just beginning to put in an appearance in Big river and other streams on the coast.



MRS. GARFIELD—MOTHER.



MRS. GARFIELD—WIFE.



THE CHILDREN.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

## Sights and Sounds on the Columbia.

EDITORS PRESS:—From the time one crosses the bar of the Columbia river, a continuous but varied panorama of beauty and grandeur greets the eyes until the arrival at The Dalles. For a person desiring a fortnight's recreation out of the beaten track of the professional tourist, I know of no other trip which so strongly appeals to him of a moderate purse and an eye for the beautiful; especially if he be able to withstand the tendency to the *mal de mer*, and is sufficient of a sailor to retain a good appetite and get his money's worth out of the larder of the corporation which carries him over. It was six o'clock in the morning, and the waves were dancing and glittering in the sunlight, when the old steamship *George W. Elder* after a stormy passage of nearly 70 hours from San Francisco rested outside of the

## Columbia River Bar

For an hour, awaiting the most favorable condition of the tide, to cross the sand reefs which obstruct the mouth of that mightiest stream of the Pacific slope. The captain here turned over the entire command of the vessel to the experienced, and withal somewhat pompous little man who acts as bar pilot on this and the steamer *Oregon*, whose place the *Elder* was temporarily filling. Each steamer of the line carries one of these pilots, whose sole business is an hour's oversight of work, perhaps once a week, in guiding the ship through the treacherous channels. For this he receives good pay. During the remainder of the time he is indistinguishable from the ordinary passenger as he mingles with the throng. But during his brief command no small degree of responsibility devolves upon him in filling a position which requires years of careful study and observation of the shifting sands at the mouth of the river. On we churn, through the yeast waves, past the wreck of the *Great Republic*, whose ribs, side wheels and walking beam are all that is visible of the noble vessel which ran aground several years ago. As we pass inside the bay, into which the mouth of the river widens, the deck begins to swarm with passengers who have heretofore, during the voyage, been in hibernation—but now they escape from exclusion and duranco vile which the state-room grants, and emerge with a haggard look and blinking eyes into the bright sunlight, with a half triumphant look, as though they would ask, "Who has been sick?" All admire the bright surroundings and the picturesque promontory on which is located Fort Canby, whose site is clad in refreshing green of pines and grasses. Yes, even the government soldiers, who have made the trip up in the steerage, detailed, machine-like, to the fort, seem to regard the change from wave to picket as "a consummation to be devoutly wished for." The bay is dotted with countless white and gleaming little sails—fishing smacks from the salmon canneries along the river, pulling in or resetting their nets, and examining their morning catch. It is this industry, mainly, which keeps alive the little

## City of Astoria.

Which now looms in sight. The significance of the pretty name becomes apparent when we are told that John Jacob Astor established a trading-post here many years ago, even before American sailors had taken up the cry, "Fifty-four, forty or fight." "Boom!" goes the signal gun, and we glide up to what looks like a town on stilts. All the business portion of Astoria is built out over the water, and its main street is nothing but a long wharf. But back of this, on the steep hillside, among the pine tree stumps, are numerous pretty cottages, with an occasional pretentious residence, a church or school. Although still a mammoth industry, the salmon fisheries and canneries have not done such a rushing business for the past year or two as formerly, owing to a decline in the yield of salmon.

Your correspondent was shown through the cannery of Hume & Co., which is perhaps as large as any of those on this part of the river. All told, there are no less than 23 canneries within a radius of 10 miles. The canneries generally fit up their own fishing yachts or smacks with nets and all the requisite paraphernalia, at an expense of about \$500 for each boat. These are then each let out to one fisherman, who hires his own assistant and receives 50 cents for each salmon, large or small, laid down in good condition on the company's wharf. The size of the meshes of the net, however, preclude the catching of any that are not of fair size—a plan whose merits are obvious, discriminating not only in the interests of the company, but preventing the extermination of the tribe by allowing the smaller ones to grow.

It was a novel and almost imposing sight to see piled up on the dock a heap of beautiful salmon, numbering, we were told, about 1,000 fish, weighing from 15 to 35 lbs. each. An average catch for one smack during the four months' season, I am told, is about 3,000 fish. It is not, perhaps, necessary to detail to the readers of the PRESS an operation with which most of them, either from reading or observation, are doubtless familiar. Suffice it to say, that from the time the salmon are cleaned, sliced up into chunks that are

crowded into pound cans, soldered up, boiled, and the cans varnished and labeled, until they are tested and boxed up ready for market, is a process wherein they pass through scores of hands and numerous machines, consuming several hours' time. Upwards of 200 hands are employed, those in the cannery being mostly Chinese. Everywhere is visible neatness, economy and dispatch. During the time outside of salmon season, this and several other canneries employ their time in canning beef and various meats, and their goods are shipped by the thousands of cses to all parts of the world. Although the observer may be traveling to see the beauties of nature, if his mind is of an inquiring or utilitarian turn, these things touch a responsive chord. While most plentiful near the mouth of the river, the traveler finds canneries occasionally as far up as The Dalles.

By noon the whistle pipes all hands aboard, and we are

## Off for Portland.

Plowing a wide furrow up the broad river. There is an old idea, that if you desire one to appreciate the joys and delights of heaven, give him first a good strong whiff of the sulphur and brimstone of what the Revised calls "Hades." Doubtless there is philosophy in this, and it may have been the law of contrasts that helped to raise the enthusiasm of so many to such an ardent glow on that memorable afternoon and evening. But be that as it may, it would certainly be hard to find a crowd of sight seers who ever drank in more solid enjoyment from the ever changing beauties on either side of that noble and here placid stream. There is something about rivers of the first magnitude that appeals forcibly to the imagination. Now we are within shouting distance of the Oregon shore, and then we draw so near Washington Territory that the breeze wafts to us the fragrances of the firs. Distances viewed across the water are deceptive. It is hard to realize that the little toy cottage we see yonder on the bank is a full-sized farmhouse, and those must surely be Lilliputians waving their tiny kerchiefs at us. The panorama unrolls, and we see here a stretch of woodland, there a rocky bluff; now a glimpse of a busy saw-mill, then a graceful little river steamer shoots by; and then we pass an island, luxuriant in its vegetation. Just before sunset Mt. St. Helena appears, followed by more distant glimpses of those kingly peaks, Adams, Rainier, and finally Mt. Hood, whose fair and graceful form piercing the skies, almost precludes the use of the masculine adjective, "kingly." These lofty peaks so tower above their neighboring surroundings, that the Cascade range seems but a great plateau, on which they rest like monarchs seated upon a mighty raised throne. They are not merely snow-capped—they are covered clear down to their waists in the fleecy envelope. The gray twilight slowly deepens, and presently the full moon appearing above the tree tops casts upon the quiet waters a glamour of its own, which, alone, is needed to complete the quiet loveliness of a scene which continues until we turn into the bright Willamette, and presently arrive at Portland, where the jargon of hotel runners puts an end to further pensiveness.

If the traveler finds the Columbia below the Willamette full of placid, quiet beauty, he will be agreeably surprised in proceeding up the river, Through the Cascade Mountains,

To find the scenery infinitely grander, more beautiful, rugged and peculiar than he had anticipated. None of the celebrated rivers of the East combine all the distinctive types and features of the Columbia. We have here and there suggestions of the Hudson, now a glimpse of lagoon and hanging vine, which reminds one of Southern rivers, and then a ruggedness resembling the upper Mississippi and almost pertaining to the grand canyons of the Colorado; but through and above it all runs a distinctiveness of tone and feature which makes it the one Columbia—novel and original among rivers. One almost beguiles the time spent at breakfast after leaving Portland and before reaching the pretty military post of Vancouver, for fear he may lose sight of something en route that should be seen. Although the boats are well furnished and administer well the creature comforts, it is no temptation to remain in the cabin. The distance between Portland and The Dalles comprises a region which appeals most forcibly to those having a smattering of geology. Through four-fifths of the journey the river makes its way through the Cascade range of mountains, many of whose peaks are snow-clad, and some of them attaining an altitude of over 1,200 ft. Scientists differ as to the causes of this huge thoroughfare, cut through the solid rock. Some attribute it to glacial action, and back up their theories with arrays of data and figures, showing to their own satisfaction at least, that mighty rivers of ice first plowed their way with irresistible force through the everlasting hills to the Pacific. Others attribute it to volcanic, and point to the great peaks, Hood, Adams, Jefferson, Baker, St. Helena, Rainier, and others, standing almost to their waists in their own lava—the cooled flood which they have in past times belched out. According to these latter theorists, the lava contracted so in cooling as to make the mighty fissure which now forms the bed of the Columbia—not so large then as now, but worn greater by attrition and disintegration. The mighty basaltic cliffs rise perpendicularly in places, presenting a sheer wall without crack or crevice, over 300 ft. in height. Suddenly the wall turns at an acute angle to continue for a ways its unbroken surface. Its sides are covered with mosses and lichens, giving it the appearance of a mighty and forgotten

stronghold that has passed out of the world's history. Here and there the splash of a little cascade is heard as it comes over the edge of the cliff, first gliding, then ricocheting, and finally bounding, loses itself in its own rainbow-lined spray. Some of these lovely falls, which may be counted by the score, possess all the elements of beauty of the Yosemite itself. Above the great stretch of rampart there is a grassy slope covered with tress—yellow firs and pines. Above that again comes another great terrace and more bastions, and so on, in regular gradation until the eyes finally reaches the crest of the plateau. The imagination may here run riot, and in a reverie one can see grander ruins than those of the Rhine; Gothic chapels of wonderful regularity and architectural beauty, save that they are somewhat crumbled by the hand of time. Occasionally the architectural idea is helped out by the columnar form which obtrudes itself strongly in the majestic cliffs, and which is strongly marked in Castle Rock. The mighty terraces constitute the grandest portion of the scenery, rising in regular gradation to a final height of 2,000 or 3,000 ft. Here the tall and straight firs on their slopes look down upon mazes of wild roses and syringas, and they, in turn, upon the softest, daintiest carpeting of velvety green. Through this, with many devotions windings, trickle tiny streams from half hidden springs, wandering slowly down across the terrace, but still moving toward the edge, where, uniting with others, they pour their crystal spray into the abyss below. Here is a combination of rugged grandeur and soft loveliness, whereby the contrasts of each heighten the charms of the other. As an invigorator and tonic a ramble over the rough trails in these mighty hills is as good as a sea voyage with none of its discomforts. The soft air is laden with the combined fragrance from the balsam of the firs and the blossoms of the wild shrubs. The twittering of the birds warbles a harmonious accompaniment to the ripple of streams and splash of waterfalls. The sun's rays slightly obstructed by the fleecy clouds lose their glare, but softly gild everything with a radiant glory. The blood boils in the veins, and one feels an intense delight in living, where existence is a rapture.

It seems a pity that so grand a river as the Columbia should not have a clearly navigable stream throughout its length, but it is far from the case. In the 135 miles between Portland and Celilo, there are two great

## Impediments to Navigation.

The cascades and the dalles, which have always been passed by railroad portages, since steam navigation began on the river. These necessitate much extra labor in the transfers and many handlings of freight.

Readers of the PRESS will please not confound the word *dalles*, as here used, with the brisk and growing municipality below, on the river's bank, called by that name. The word is often defined now as meaning rapids, but that is not comprehensive enough. The word is one of the French bits of rude eloquence by which the voyageurs of the Hudson Bay company described striking objects. Its original scope comprehended the pavement of a terrace, and did not so much apply to the current of the stream as to the banks and their immediate surroundings. Although no one word in our language is so unctious enough to convey the idea in full, one writer has elaborated it into the phrase "broad flight of noble flagging," implying the grandeur of a noble terrace, and the splendor of the pavement of a palace. The whole character of this river here is changed, and what was seen a few hours ago as a majestic stream over half a mile in width, now seems like its former self turned on edge and crowded down into a crooked and angular gorge, across which a man could hurl a stone—a swift, seething and almost bottomless torrent. And all this gorge is chiseled out of rock that seems as hard and unyielding as iron. While Congress has been appropriating means for the assistance of navigation, it has concluded that money would be better spent in building a canal at the cascades, where it is but little steeper than are the St. Lawrence rapids, than here, where the laborers would have to cut, crash and rend with Giant powder, a distance of between six and nine miles. Accordingly, the government canal works at the cascades are in operation, and from present appearances are to consist of two strong walls in the river, close to the southern shore, through which the water can flow unvexed by the rocks that abound in the rapids, and which are formidable obstacles at low water. While under ordinary circumstances this might do, the planners of the work are much criticised because they did not build the canal on the Washington Territory side, where the mountains here do not terminate abruptly at the edge of the stream. It is a patent and acknowledged fact that the mountains along the cascades are rapidly disintegrating, and great beds of shale are annually sliding down. From present indications it will, although on a smaller scale, require as much vigilance to keep this canal clear from the debris which is bound to slide into it, as it does to keep the Suez canal free from the shifting sands of the desert. The same remark applies in many places to the railroad now building between Portland and The Dalles. It looks like a dangerous location for a road, as no one is able to tell at what minute thousands of tons of loose, shaly basalt may not come sliding down on the track in an avalanche. However, time will prove whether these fears are well grounded.

## An Afternoon Scene.

Which I viewed from this place, is a picture to

hang on memory's walls, and be referred to again and again with delight. The scene had all the elements of the beautiful, picturesque and grand. Directly in front the hurrying river dotted with woody islands and "rushing onward to the sea." To the right the old block house, Fort Sheridan, perched on an eminence, the scene of many a bloody border fray in earlier days. To the left the lofty whispering pines, while directly over the water, scarce seeming a mile distant so wonderfully clear was the atmosphere, and yet at a distance of a day's journey, Mt. Hood reared her lofty and graceful proportions, forming an enchanting background to the scene. From this aspect, Mt. Hood is totally devoid of the rough and rugged features, but, on the contrary, there is that in its delicacy and clearness of outline and elegance of pose which is instinctively suggestive of feminine grace and beauty. To the lover of this beautiful in nature Hood is synonym of purity, of peace. A white pyramid standing in relief against the blue sky, not merely snow-capped, but snow-clad and glistening in the declining rays of the July sun. It seems needless to attempt to describe what is indescribable. The glory of color, the glowing tints upon the horizon, as the day god slowly sinks, reflecting against the white snow masses the supernal tones of halos and coronas, whose only regret is their evanescence. Through a long, long twilight it slowly fades until it becomes a faint cloud against the evening sky where the stars are already twinkling faintly. W. B. TURNER.

## Tuolumne County Notes.

EDITORS PRESS:—The fruit season is coming to an end. Most of the spare fruit has been dried and sent to market. It is much less in quantity than in former years. Frost, mildew and the codling moth have done their work well—assisted by a congregation of small and large birds, who seemed to enjoy a general picnic season at the expense of the orchardists.

Nature is donning her fall garb. The fields are brown and bare; the sky has a sickly, hazy appearance, partly caused by the many fires which the smoker is accountable for, also the hunter.

In visiting a worthy neighbor's homestead—Mr. Walker—we encountered some productions worthy of note. The farm and garden are located among the foothills, comprising some 320 acres. Pre-emption and homestead is the usual method of small capitalists making a beginning. The land seemed well fenced, and has been under cultivation, but as years begin to tell on the strength, stock raising and gardening seem to be the easiest and best methods of making two ends meet.

It is singular to note the difference of soil and productions within a radius of a few miles. Vegetables grow in abundance and of huge dimensions, but fruit trees do not seem to prosper. Irrigation water is procured from a large spring, conveyed to a cistern in pipes, and distributed over the garden. I noticed that the soil looked greasy where the water flowed, creating an impervious slum, so that the roots of trees were left in a dry condition. Hence a sickly appearance to tree and fruit. An orange and persimmon tree seemed to do well, and were in full bearing, although quite young. Flowers seemed to flourish; a noble passion vine covered the front of the dwelling house, while verbenas lined the well-kept walks in front. The many-headed verbenas are very lovely when kept fresh by plenty of water and attention.

## Under the Fig Tree.

Another grand feature of this backwoods homestead was wide-spreading fig trees, covering a large space of ground at the end of the dwelling house, beneath which the family makes it their home in summer. Lounges, chairs, tables, beds and other conveniences are all under the grateful shade of three huge fig trees. Rest, was written beneath the green foliage, while eating a crisp, ripe watermelon.

It was somewhat saddening to witness the grapy. Mildew had done its work—one third might be passable, two-thirds blighted past redemption.

Here, in the shade and sunshine, live, peacefully and happily, Mr. and Mrs. Walker. Far sweeter is such a life than guawing, worldly cravings, amidst gilded domes and closets full of skeletons.

JOHN TAYLOR.

Sept. 13, 1881.

MASSACHUSETTS HORTICULTURE.—The progress of horticulture in Massachusetts is fitly portrayed in the history of the Massachusetts Horticultural Society which was published in 1880. The society itself is 50 years old, having been organized in 1829, and the steps by which it has advanced are exceedingly interesting. The preparation of a history by the Secretary, Robert Manning, has no doubt been a labor requiring much zeal and application, but the result justifies the effort, and is very creditable to the organization. It is safe to say that no horticultural society—certainly none in this country—has ever published such a record, nor has any society had such a record to publish. The work should be in the libraries of our horticulturists—and our California horticulturists are now so prosperous we shall expect them all to have large horticultural libraries. The book is handsomely printed and bound and has 545 pages. It can be had for \$3 a copy, of Robert Manning, Sec., Mass. Hort. Society, Boston, Mass.



## THE DAIRY.

## Dairy Notes.

We take the following notes on dairy practice from the September issue of the *Chicago National Live Stock Journal*, the leading exponent of the stock interests of the country:

## Prevention and Treatment of Milk Fever.

One of the best methods of preventing milk fever, is to feed the cow, several weeks to several months before calving, according to its danger—if in winter, on ordinary dry hay only, with a quart or so of wheat bran, night and morning, to keep the bowels open; if in summer, let her run on a poor pasture, and at all times have a large lump of Liverpool rock salt, to lick at pleasure. If the cow has been dried off a couple of months before due to calve, watch the approach of parturition, and if the bag shows extra full, then begin to draw a small quantity of milk from it two weeks or less before her time, and increase this, according to the fullness of the bag, till the calf is dropped; then milk her clean after the calf has sucked, at three equal intervals of every 24 hours. In the meanwhile, do not increase her feed for a month or more till all danger of fever is passed. If the cow has continued to give milk up to within a few days of the time for her to calve, as is sometimes the case, then perhaps it will not be necessary to milk her till after calving. Keep her dry and sheltered from storms and from excessive cold or heat. See that the water she drinks is pure, and that she has all she wishes to take, at least three times per day. Never let this water get icy cold, and after calving give it slightly warm for a few days.

As soon as affected, if not already in a comfortable stable, put the cow into one, litter the floor well, and always keep this dry and clean. One of the most simple and effectual prescriptions of this disease is half a pound of Epsom salts dissolved in three or four quarts of warm water, mixed with two tablespoonfuls of sweet spirits of niter. Wet up a small feed of wheat bran with this. If the cow will not take it so, then put the salts and niter solution into a strong-necked bottle, trice up her head and pour it down the throat. Repeat this every morning till cured. This simple remedy rarely fails, even in the worst cases, if all the above directions are carefully followed. Rub the bag with lard, mixed with the last strippings, every time the cow is milked. This renders the bag soft and pliable, and prevents the milk from caking in it.

## Difficulties in Churning.

The milk of a farrow cow, mixed with the milk of a fresh cow, will retard the churning of the fresh cow's milk, and it is better to churn separately. But some good butter-makers have expressed the opinion that when the cream of different cows has been thoroughly mixed together and ripened evenly, it will all churn together. But where there is a suspicion that only a part of the butter has come, let this be skimmed from the buttermilk, placed in cold water to harden, and then let the churning proceed. Some have asserted that the second churning has produced half as much as the first. The larger globules of cream burst their pellicles first, the different sizes following in order; and the cream from the same cow having these different-sized globules, the largest, which yield their butter first, are likely to be over-churned if they remain till the finer globules yield their butter. This no doubt often renders some otherwise good butter rather salvy. The matter of the size of the globules of cream is the simple cause of difference in time required to churn the cream from different cows. Some butter-makers, having learned this cause of quicker or slower churning, and having also discovered that the larger globules, which rise first on milk, make the highest-colored and finest-flavored butter, adopt the plan of skimming the milk twice—the first at 12 to 16 hours, and the second when the cream has all risen—churning these two skimmings separately. The butter from the first skimming is so delicate and high-flavored as to bring a much higher price, and the second would bring an ordinary market price. This practice obviates the difficulty of churning two kinds of cream together. It is not very troublesome to follow this plan in dairies of considerable size, as the large globules may be churned one day, and the small ones the next.

## First Year's Growth Most Important.

Let any large dairyman look through his herd, and he will find his most profitable cows to be those of the greatest digestive capacity, and the history of these will show that they were thrifty growers as calves. The first year is the critical period in the growth of the future cow. A respectable size cannot be attained at two years old, without a vigorous growth the first year; besides, it should be remembered that it requires less food to produce a given weight the first year than the second. It will cost very little more food to produce 600 lbs. growth the first year than 300 lbs. the second year—this law of growth has become familiar to the readers of the *Journal*, both from precept and example. It is therefore very bad economy to feed heifer calves sparingly, as the older they become, the more it will cost to put on the weight required. After many experiments and careful observation, the practice of having heifers come in at two years old is rapidly gaining ground, both in the United States and in all the dairying districts of Europe. It

is the general observation, that a heifer coming at two years develops into a better cow at four, than if she came in at three years; and this is attributed to the early development of the milking habit. It therefore becomes imperative that the heifer calf should have generous food and care the first summer. There can be no valid excuse for neglecting it. The patron of the cheese factory may raise very fine heifer calves upon whey by adding other food to it. He must not fear the cost of the small amount of other food required to balance the defects in the whey. The cost of this food will not represent half the extra value of the calves from its use.

## THE FIELD.

## What to do With Twenty Acres at the South.

G. R. Hinde, of Anaheim, wrote an essay to compete for the prize offered at the Los Angeles fair. The essay is printed in advance of the award by the *Anaheim Gazette*. Mr. Hinde is a practical farmer and we print his advice as to the use of 20 acres of land for family support and profit. Of course it refers especially to conditions to be found in the southern portion of the State, although some hints of universal application can be drawn from it:

In this fertile climate, with good soil, much of value can be raised on 20 acres of irrigable land. It is not difficult to get three good crops therefrom with irrigation in one year. We will now deal, however, with unimproved good land. Break it up fine early in winter season, put in eight acres of it to chevalier barley for the finest hay. In a fair or good season from this we should take out from 20 to 25 tons of the best hay if well managed, worth from \$6 to \$10 per ton. Three-fourths of this can be sold and the remainder kept for the team—ample for them till next year's crop is in, fed economically with other farm products. Keep a team of lively but gentle mules, they require little, keep fat, and work hard. Or if this does not please, it is good management to have a team of good American mares, yielding colts worth \$100 each when a year or 18 months old. After taking out your hay crop, irrigate well the land and plant a crop of corn; this will be worth, if successfully accomplished, \$200. Reserve three acres of this eight next season and permanently for hay, harley or alfalfa, and set out on the other five a lot of number one budded orange and lemon trees, say 50 each, Mediterranean Sweet, Wilson's best, Wolfskill's ditto, Sweet rind lemon and the balance Washington Navel orange. This disposes of the best advantage of eight acres permanently. Just one remark there to add: It is better to let your ground be worked as we have stated, the first year, to sweeten it and mellow it before orange trees are set in it so they will thrive from the first. In case the best orange culture should get to be overdone, an impossible conception to a rational thinker, we propose to set aside eight acres to vineyard; if our land is situated inland sufficiently distant to be free from the cool moist atmosphere and daily breezes which intensifies the nearer you approach the sea coast. We should certainly prefer the Muscat of Alexandria or raisin grape as a source of income and profit. This crop is quite a bonanza when well managed. If rooted cuttings are set out, it yields more than enough of crop the second year to pay for the cost of the cuttings, if we have not raised our own; and this treatment has the advantage in this, that all well-rooted cuttings grow, and the vineyard is complete at the start. If the land is situated within the above mentioned moist belt, a vineyard of Mission, Malvoise, Berger or Zinfandel would be, and is considered, a valuable and paying crop to raise. I know of an instance where 3,000 vines, seven years old, of the commonest of these, the Mission variety, yielded \$180 worth of grapes at \$21 per ton. Let the vines be far enough apart, 7 or 8 ft., to admit of working them with a two-horse cultivator; on this you can ride and save yourself in 20 years, or less, immense labor. I have raised a crop of peanuts with great advantage between the rows of cuttings the first year in this way.

After irrigating thoroughly the vineyard about the 1st of April, plow from the vines, planting only two rows of nuts, 18 inches from each other, between each two rows of vines; this leaves a furrow on each side of the cuttings all ready for irrigating, which will probably not be required before the first or middle of August, after which narrow up the one-horse cultivator and pass up and down these rows with it and the vines will thrive and grow and it will leave the soil in good order. I have got \$30 an acre in peanuts from my young vineyard the first year by this management, and my vines were praised for their healthy growth and appearance by every passer-by. Try it. I got this last season, and peanuts were very low then. Peanuts require but little moisture and do not draw from the vines. The second year the vines take full possession of the ground. One acre will be required for house, barn, hay-shed, corral, etc. Chickens and more domestic animals than are absolutely required, I do not recommend; they gobble up the grapes and other valuable products of the ranch whenever they get a chance; and to prevent that chance is a constant anxiety, to say

nothing of the loss which the various and unexpected diseases afflicting them occasion. The land well managed in valuable products, I find, pays the best in the long run, and gives freedom and time to properly work it. No man can get along who spends half his time doing chores over domestic animals, and raising food for them on his little ranch can't be done profitably.

The three acres we have left, we propose to set out to deciduous fruit trees, chiefest of all the apricot as most valuable and productive. In two varieties only, viz: the Royal and the Peach apricot. A delicious fruit, tolerably certain to be forever in demand; few parts in this wide, wide world producing them, as we can here, in perfection, profitably. Peaches come next on the list. The Alexander is the best early peach, and will doubtless be worth five cents per pound when the new peaches come into the market. We have set them out largely after testing them.

I have been very successful in getting seedling trees of great value and productiveness, bearing good fruit every year, from seeds taken from the fruit of good seedling trees in an orchard mixed up with good budded trees. These trees yield pleasure and profit every year, especially in a year like the present, when our choice budded trees yield less than half a crop on an average.

I now give a list of fruit trees essential for the family orchard, which must form part of the three-acre orchard, and will occupy a little over one. If there is a surplus of fruit from these, which is very certain as they grow larger, it can be utilized very profitably by drying in the sun, or better still, in a good family drier. We would have of peaches, two each of the following sorts: Briggs' Red May, Early Beatrice, Australian Sancer, Strawberry, Large Early York, Thurber, Early Crawford, Late Crawford, Susquehanna, Morris White and Solway. This list will give an unfailing succession of ripe peaches for domestic use or for drying from the beginning till the close of the season, viz.: June 1st till October 1st.

Pears.—Set out two each of Madeline, Beurre Gifford, Seckel, Flemish Beauty, Beurre Hardy, Glout Morceau and Orange Quince, also 10 Bartlett and six Winter Nelis pears—all standards.

Plums.—Two Kentucky Wild Goose, two Green Gage, and four Petit Prune D'Agen for drying.

Apples.—Two each of Belle Flower, Newtown Pippin, Golden Russet, Red June, Red Astrachan, Jonathan, Rhode Island Greening and 10 White Winter Pearmain—our very best apple and winter keeper.

Figs.—Give these sufficient water, and the following varieties will please—three of each sort: Brown Turkey, White Genoa, White Smyrna, White Ischia and Large Purple Brunswick.

Nuts.—Six of each—English Walnut, Pecan Nut and Italian Chestnut. The latter will make a noble shade tree when grown mature. Add two olive trees and two limes.

A few varieties of grapes might be added—10 each of White Sweetwater, Isabella, Rose of Peru, Flame Tokay, Black Hambrug, Malvoise and Morocco; also 100 Muscat of Alexandria. These might be planted at the side of the vineyard nearest the house.

We know that it will be quite an undertaking to get these trees and vines set out, but "where there's a will there's a way."

A strawberry patch is useful, ornamental and profitable—that is, if standard varieties only are set out. I will mention only three that have given me great pleasure, the Cumberland Triumph, Sharpless Seedling and Forest Rose. The latter is a superb fruit; of it I have had berries measuring fully seven inches in circumference. Such berries produce, on account of their high flavor, a sensation of ambrosial delight as their delicious juices melt away upon the palate. They sell readily at 8 lbs. for \$1 all through the season, and need irrigating but once in 3 or 4 weeks.

An abundance of melons, sweet corn and good vegetables can readily be raised for all family requirements in a small patch set apart for that purpose, or between some of the young trees, not approaching them nearer than 8 ft., so you can cultivate and irrigate them freely when they need it. Store up in heaps to rot all the refuse of the land and stable manure. This will be needed some time.

## Shall We Bluestone?

EDITORS PRESS:—The time is approaching when Jupiter Pluvius will sprinkle his blessings over this thirsty land. Soon the soil will be ready to receive the seed, and bluestoning will begin. This, then, would be the proper time to inquire whether bluestoning, which is so universally practiced in this State, is really a reliable preventive against the smut of wheat, or whether it is a remnant of olden times, to which we cling by the force of habit.

That people have bluestoned for many years is, I believe, no proof of its efficacy. If it is the remedy *par excellence*, as so many believe, why is it that it fails so often? Have doctors not bled for scores of years and caused the death or ruined the constitutions of millions of people by it? To-day, they only very seldom, and in exceptional cases only, resort to this expedient. Did not at one time almost all men of science believe in the gift of the kings of England to cure the king in the back (*lumbago rheu-*

*matica*) by the touch? And who does not consider, at present, such credulity ridiculous? *Tempora mutantur et nos mutamur in illis.*

To err is no wrong, but to believe what others say, without scrutinizing, is a sin against the human intellect, and a step backwards to the lower animals. To test the question practically, whether bluestone is effective to destroy the smut fungus, the most systematic experiments ought to be made. Have such really been undertaken here?

Some time ago this matter was thoroughly investigated in Germany by sowing bluestoned wheat upon one part of the field, and wheat without the same upon the adjacent one. This has been done in several seasons, and with many different fields. The result was, that no appreciable connection could be detected between smut and bluestone applications.

Last year I sowed some wheat without bluestone, and had neither smut nor rust, while a neighbor of mine on upper, badly-drained land, who had bluestoned with all seriousness, had much to complain about both. The reverse might have happened eventually without proving the least, pro or contra. We bluestone and have smut; we do not bluestone, and have no smut; but all our failures do not shake our childlike confidence.

Herewith I dismiss the practical part of our question, and will now try to prove by a few theoretical remarks, that a solution of sulphate of copper applied to the seed can do nothing in the way of preventing smut on wheat. That this drug will destroy the fungus, nobody will dispute, but this does not involve that it will prevent smut 100 days later on the ripening plant.

The grain, after having been imbedded in the soil, commences to germinate. In this process, the starch of the grain is converted in a gummy matter, called dextrine. The cause of this change is due to a particular principle found in the grain at that period, named diastase, which acts as a sort of ferment. In the continuance of this process the grain becomes entirely disorganized. The adherent smut fungus is implicated in this process, and the growing germ does not absorb as nutriment the starch or any other of the organized constituents of the seed or of the fungus adhering to it, but their ultimate principles, carbon, hydrogen, oxygen, nitrogen, and perhaps a little ammonia and phosphorus.

Plants cannot absorb organized bodies; they draw their nourishment from the inorganic world. Is, therefore, the fungus not absorbed as such, but only its ultimate principles, which vary in nothing from their similars among the many elements which exist in nature, and how can it have contaminated the grain three months later?

It is therefore evident that the new grain has not received the fungus from the old one; but it has inherited from the same its constitution—the degree of power of resistance against anomalous conditions of soil, heat, wet, electricity or atmospheric influences. If this power of resistance is below a certain normal standard, or the surrounding influences too strong, then the plant will be disturbed in its function of nutrition; it will become diseased, or, what is the same, may have smut, rust, animal parasites, or may be merely stunted in its growth. We find the same condition with the lower animals and with man. The child will inherit, not the disease, but the predisposition to it; for disease is only the product of inherited qualities and external conditions. No more comes the smut fungus from the direct influence of the fungus which infested the parent grain, than it can be admitted that the itch, favus, scabies, or any other parasitic disease, be directly imparted to the offspring from its parents. Chickens, when properly fed and stabled and originally free from lice, will never suffer from this pest to any extent. They are not poor, if they become so, because they have lice, but they have lice because the deterioration of their state of health has properly prepared their system for the louse well to thrive upon. Analogical cases convince me of the truth of this observation.

Microscopic examinations have failed to show a continuance of the growth of the fungus between the time when the young plant started in life and its maturity when the smut attracts our attention. If such a connection would be necessary to produce smut, why is it that we find occasional cases of smut on orange and lime trees? Such an occurrence alone should lead the bluestoner to think.

If there exists then no connection of cause and effect between the fungus on the seed grain and the smut at the ripening plant, which I believe to have proven, bluestoning should be abandoned as useless and expensive, and in place of it we should look out for more rational means of prevention. What is left for us to deal with in practice would be—

First. To ascertain the resistance which one kind of wheat possesses in a higher degree than another one; and

Second. To examine the conditions of soil, heat, wet, and the atmospheric conditions, single or combined, which are active to produce the fungus.

The viticulturists did not succeed in destroying phylloxera by external applications, and had come to the conclusion that a deficiency of some material constituent of the soil be the cause of the trouble, and as they could not solve this problem, they did the next best thing and grafted on our native wild grapevines, which are believed to possess more of this power of resistance of which I have spoken.

Some have made experiments with Odessa

(CONTINUED ON PAGE 202.)



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Shall We Go to the State Grange?

[Written for the RURAL PRESS by MRS. MARIA B. LANDER.]

Another year has rolled around, and the momentous home question and fireside talk is, shall we go to the State Grange? To this query comes answers as varied as are the characters filling our many Grange homes. First in procession comes our hard-working, brawny-fisted brother, whose partial crops make even more scant a hardly living income; and from this is eked out, not grudgingly either, monthly dues. Winter and summer work was made easier by the plans of a bountiful harvest, and crowned by thoughts of a Grange pilgrimage in the fall. This dream is ended, for the harvest bins will not receive back the needed seed and feed for another year, while the bairns must have winter clothes and the old kitchen's leaky roof must be replaced by one that will not shed raindrops upon the working home-mother.

Our next brother and sister say: "Why should we go? We cannot 'speak in meeting,' 'taint our privilege to vote; in fact, the brotherhood has our moral support. We will not be missed, and, too, there are those who are always on duty." Do you not recognize in this class a very large proportion of this society world of ours? Those who sit with folded hands piously wishing all well, but whose consciences are so elastic that outside society duties are lost in their own selfish ends, while they, in feigned humility, become such molecule workers that their labors may be shifted upon shoulders tried and true, namely, upon those who are not only up and doing at home, but are foremost in all that tends to the general good; these, too often, represent our well-to-do workers; they who have for years

"Tugged and saved, denying half their needs,  
And all to show for it, is tax receipts and deeds."

Of such, oftentimes, their starving children, though hungry in the midst of plenty—mind hungry only—rise in judgment with involuntary questioning thoughts, and "wonder if it really pays to be land poor." Is there needed the gift of second sight or a brilliant imagination to guess the sequel of such family stories, that when the fledglings have left the home nest, will come from the darkened and forsaken hearth this sad refrain—

"Oh, if we had built a cosy house and made a happy home,  
Our children, once so dear to us, had never learned to roam."

Another says I cannot leave my children; they would not know what to do without me. Oh! short-sighted father and mother, except the helplessness of infancy is the burden of your prayer, are not the few days of care thrown upon your children a bumpy, as well as proud foretaste of that world-wide responsibility that is theirs on the morrow? Are not their thoughts quickened and growing life widened by their childish assumption of a few days' bundle of care, while your shoulders are rested and mind brightened by this slight shifting of some duty, even though it may be in exchange for the no less onerous one of public good? Are not these self-reliant lessons at home, playing as it were house-keeper and farmer, worth as much if not more than a few days of latter day school cramming? Will not these love labor hours of our wide awake boys and girls be fit points from which this data may be fixed?

"We started aright, our plans were not too far ahead," and warrant the old man and woman when life-sands are almost counted, to triumphantly cry: "We've not worn the cream of life away to leave too much to the dead."

The wearied tramp and doleful voice of a fourth brother despondently sighs I cannot find the time. I wonder how my neighbor can always go, take his wife and daughter, too; why, it would take a big lump right out of that new 40-acre lot joining me that I must have. But hark! I hear a plaintive moan from an over-worked, enfeebled wife, which says from sheer desperation.

"There is no use in talking, Charles, you buy that 40 more and we'll go scrimping all our lives, and always be land poor."

Is not this "land poverty" the keynote to the stagnant, depressing state that now encompasses about the farmer. "Tia well to turn often to Grange precepts, on well the lessons there taught, and make this one common motto,

"Small farms well worked are best."

Thus doing, may we not rightfully hope for a new era in all that pertains to country life in the next decade of years.

In the summing of these excuses for not attending Stato Grange, only the first has our sympathy, for too well we know amid family cares and wanta how little the pittance can be set aside for non-absolute necessities. Flimsy the texture of other excuses, and, when the cobwebs of error have been lifted by the silent workings of a progressive life, plaintively is murmured this regret,

"Were I to start my life again, I'd mark each separate day,  
And never let a single one pass unenjoyed away."

Ob Patrons, brothers and sisters of Santa Rosa are opening wide their doors and have

willingly taken upon themselves the duties of host, bidding all come in the name of Pomona, who sits as high Priestess over the Lares and Penates of the Grange household; come workers, tire not, for through you the wheels must be kept in motion; come listeners, and no talkers, bring with you the oil of patient cheerfulness and charity; come grumblers, cease growling, let hand and tongue be set to righting wrongs, and your mantle of charity will be broader and wider than before; come lukewarm hearts, lay bare your cooling thoughts that they may be bathed anew from that living zeal that has carried many a weary and footsore Patron through dire disaster, only to leave him upon that greater light sacred alone to the true and tried. Echo says, come one, come all.

Martinez, Sept. 13th, 1881.

### The Wheat Growers' Association.

Our report in last week's PRESS gave the first day's proceedings of the wheat growers' meeting, on Wednesday, Sept. 14th. The convention re-assembled on Thursday morning, H. M. La Rue presiding. The committee on incorporation reported in favor of calling the association "The Wheat Growers' Association of California," the purposes of the organization to be the establishment and maintenance of a statistical bureau in San Francisco, to collect and disseminate among the members of the association reliable information regarding growing crops, grain on hand, finance, tonnage, bags, and such other information as may be beneficial to the members. The corporation is to exist for 50 years, and the directors are to be nine in number, all of whom must be citizens. The annual election is to be held on the second Monday in October. The report of the committee having been adopted, the following directors were elected: A. C. Paulsell, of San Joaquin; H. M. LaRue, of Sacramento; John McPike, of Napa; W. B. English, of Contra Costa; A. D. Logan, of Colusa; J. C. Campbell, of Colusa; Thomas Upton, of Merced; D. M. Hickman, of Stanislaus; and E. Jacob, of Tulare. Messrs. Paulsell, Hickman, McCarthy, Overhiser and Upton were appointed a committee to prepare a code of by-laws and report on the second Monday in October. The following statistics, prepared by A. D. Bell, were read, and a vote of thanks tendered him.

	Tons.
September 15, 1881.	
In port, loading and cleared.....	64,599
In port, disengaged.....	4,693
At Wilmington, loading.....	5,145

Total registered tons.....	74,420
Total tonnage advertised as on the way or up for this port from Atlantic and foreign ports.....	416,754

Deduct 20,000 tons Pacific coast craft and unsuitable for wheat.....	20,000
.....	471,174

Vessels which will not arrive, from marine disaster, will be more than counterbalanced by vessels arriving in the next 150 days, not yet announced. For difference, add \$.....	23,587
.....	494,761

The average of 20 vessels carrying wheat alone was 67 over registered tonnage.....	331,485
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Equal to short tons to arrive before February 15, 1882.....	826,249
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There are four or five steamers in addition, capable of carrying, say, 10,000 tons or more.

The association adjourned until 2 o'clock on the second Monday in October, and the Board of Directors organized by electing the following officers: H. M. LaRue, President; A. C. Paulsell, Vice-President; W. B. English, Secretary; and D. M. Hickman, Treasurer.

**THE SOCIAL FEATURE.**—The social work of the Grange should show in every meeting in the cordial grasp of the band and the honest inquiry concerning each other's welfare. It should show itself in the informal mingling together and pleasant, unrestrained conversation. It should show itself in the pleasant farewells at parting. It should show itself in the disposition to help one another, to bear with one another. The social work of the Grange should show itself outside the Grange room in visits and mutual help. It should show itself in the determination never to speak ill of a member of the Order. What if one has wronged us even, let us keep it to ourselves. It is a shame to speak to the world outside of the failings of our brothers and sisters.—*Profit and Pleasure, in the Grange.*

**PRIDE IN GRANGE WORK.**—Take a pride in your Grange work. We all do best and most thoroughly that in which we feel some pride. The boy who is proud of the appearance of his coat, washes and curries and tends to it as you could not possibly get him to do for any other motive. So with everything. Therefore we would urge upon members of the Grange to take a pride in their Granges and in their Grange work. Let it be your ambition to see how tasty and attractive you can keep your hall, how well you can go through the drill, how regular and punctual you can be in attendance. Let every member be proud of his membership, and be proud of being one of the best Granges.—*Live Patron.*

ONE of the features of the centennial celebration at Los Angeles, which attracted the greatest attention, was an old-time "carretta," on wooden wheels, which contained two Mexican women, Benamina, aged 117, and Laura, aged 102.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### FRESNO.

**APPLES.**—*Republican*, Sept. 15: There has been an erroneous impression prevalent amongst our people in reference to the culture of the apple in the valley. It is not unusual to hear persons say that apples of good size, quality and flavor cannot be grown on our valley fruit lands. All theories, however, must give way to stubborn facts. A. T. Covell brought to our office, one day this week, nine varieties of fine, solid apples. Four varieties were not named, but the Yellow Newtown Pippin, the White Winter Pearmain, the Rhode Island Greening, the Winesap, and Yellow Bellflower, were among the varieties named, and we have seldom seen finer specimens in the famous apple orchards of Illinois and Michigan. One Rhode Island Greening weighed considerably more than a pound, was beautiful in shape and color, had firm juicy flesh, and a rich aroma and delicate flavor. No finer fruit ever came from Oregon or the mountains. What Mr. Covell can do, why may not others? Mr. C. has a peach tree five years old that measures 30 inches in circumference.

#### KERN.

**SHEEP ON ALFALFA.**—*Californian*: J. M. Keith, who keeps his flocks in alfalfa fields, with which he is very much pleased and refers to as a credit to the county. Mr. Keith is an experienced wool-grower and has found that a small flock well cared for, and their wool not fouled and deteriorated with burrs and other substances, is more profitable and satisfactory than the average of large ones on outside ranges.

**BELLEVIEW COTTON.**—At the Belleview farm, on the same ground that was planted last year, is 85 acres of cotton. It has had the advantage of an earlier start than that of last year, and is a better crop. It presents a very fine appearance. On the same stalks on which bolls are opening are others just forming and blossoms. A small number of pickers have been at work for about two weeks, and the force will be increased as the season advances. The picking season here does not close until about Christmas. In this cotton field about all the known varieties have been planted, among which are the Sugar-loaf, the Boyd, Sea Island, etc., with the view of finding which is best adapted to this locality. Very little difference is perceptible at this stage, except as regards the Sea Island. While the stalks of this variety present as strong and rank a growth as any in the field, the bolls are few and far between, and, as far as present indications go, it does not give promise of success. With this exception, the crop looks better than it did at this time last year, when a good yield and satisfactory profits resulted.

**THE ALFALFA CROP.**—A considerable quantity of alfalfa seed will be produced here this season which will be of great advantage to those who wish to increase their areas of this valuable forage plant. In sending to the San Francisco and other markets for seed buyers are liable to have a bad article imposed on them. The seed deteriorates rapidly with age and soon becomes worthless, while in appearance it may be as bright and fresh as ever. A great deal of money and labor has been lost in this vicinity through imported seed, and it is gratifying to know that enough is likely to be produced here this year for home consumption. Mr. W. Canfield is gathering a crop of 250 acres and Dr. Stockton one but little smaller. The yield will be heavy and the quality superior. Their fields are free of weeds or any other kind of growth, and buyers of this seed, besides the assurance that it will be perfectly fresh, will have the satisfaction of knowing that they are not incurring the liability of stocking their farms with noxious weeds.

**WHEAT.**—The finest crop of wheat in this valley, the present season, was grown on the farm of Mr. John Day. It was about 180 acres in extent and the variety was purple club. The yield was 43½ bushels per acre.

**HORSE BREEDING.**—This section of the State has peculiar adaption for horses. Alfalfa seems to be their natural food. They thrive here in a wonderful manner and attain to the highest perfection. The progeny is always better than the parentage. The climate, food, etc., works an immediate improvement. Should the breeding of horses continue here it will not be long before they will be in demand and bring the highest prices wherever the best stock is required.

#### LOS ANGELES.

**THE PASADENA PEACH.**—*Commercial*: The committee in charge, Messrs. I. B. Clapp, J. S. Mills, S. P. Lukins, are more proud of the new peach which they have the honor of naming than even the premium awarded for best display. The most notable peaches on exhibition was a seedling cling propagated by Dr. O. H. Congar, from pits of the Crawford, large, showy, fine flavor, and declared to be superior to even the popular lemon-cling. To the above committee the Dr. gave the honor of naming his lucky "find" and thereupon Mr. J. S. Mills "struck it" by the apt name of "Pasadena-cling," by which name it is destined to become famous throughout this coast as well as in the East. The committee consisting of Mr. East, Dr. White and Mr. Gay, of Woodhead & Gay, declares this peach to stand far above all

others exhibited and think that for its large size and great excellence it will take front rank in its season, especially as a shipping and canning peach.

**LONG BEANS.**—*Commercial*: John Arick, living about two miles below the race track, yesterday exhibited in the streets a specimen of snap, or string beans, growing without irrigation. The pods were 2 ft. 7½ inches in length, with about 40 beans in a pod. These beans had three or four pods from a single tendril, and yield enormously. They were grown in a field of corn and if planted by themselves would doubtless do much better. The seeds were obtained from the Centennial Exposition at Philadelphia in 1876. The quality of the beans as an article of food is said to be excellent.

#### MARIN.

**FRUIT IN OLEMA.**—*San Rafael Journal*: The impression has been general that fruit could not be successfully cultivated in or about Olema, the climate being unfavorable. But many of the old theories of early settlers in Marin county, as well as in other parts of California, have been overturned by experiment. Mr. B. J. Shippee has about two acres in fruit at Olema, embracing apricots, noctarines, grapes, currants, gooseberries, peaches, apples, etc., all of which are remarkably thrifty, bearing largely, and having extra good flavor. His Belleflower apples are pronounced by a Sonoma county orchardist the largest and finest he ever saw. Mr. Shippee's orchard is sheltered from the harsh sea breezes, but otherwise has no extraordinary advantages over other places in Olema.

#### MERCED.

**MERCED BANANAS.**—*Valley Argus*, Sept. 17: M. D. Atwater, Esq., informed us, on Thursday last, that he has a banana plant now in process of fruiting, on his farm six miles from town. He put out the plant two years ago, and last winter succeeded, by covering it thoroughly from the cold winds, in keeping the plant alive about three ft. above the ground, and on Wednesday morning he told his family that he dreamed the night before that there was a bunch of bananas on the plant, and on examination it was found that the dream was realized. This, we presume, is the first banana plant ever successfully cultivated in the county.

**REACHING FOR THE WATER STRATA.**—A new plan has recently been tried in Fresno county, by which a vineyard has been successfully irrigated at trifling cost, doing far better than applying moisture by any other artificial process, as it is ever regular, and never introducing more moisture to the roots of the plant or vine than is required for healthy growth. The following is the way in which it is done. In planting an orchard or vineyard, holes should be bored down to water (a depth generally in this valley of from 6 to 20 ft.), and then let down a single strand of rope by a weight attached to the lower end, and fill up the hole with loose dirt, leaving the rope for a conductor of the moisture, like a lamp wick; fastening the end at the surface to the root of the plant. By this means the moisture is conducted from the great reservoir of nature to the surface, and directly to the root of the vine or tree, and at the same time applying loose soil for the roots to follow down to perform the office of the rope when that is decayed. An auger sufficient to answer the purpose can be made at small cost by any handy man with tools, in this way: Provide a round shaft of 10 or 15 ft. in length, and the size at one end you desire to make the hole, say two and one-half to three inches. A piece of saw blade of sufficient length to make the circle of the shaft at the large end, leaving a slot of say half an inch, to facilitate cleansing or letting air escape in filling, will make a churn auger that will answer the purpose better than any other machine yet invented, and with which a hole can be bored 12 ft. deep in that many minutes; and can be extended by attaching a line to the upper end of the shaft, to any reasonable depth, making a clean and true shaft into the earth to the depth required for the purpose. This style of augers was used by well diggers in Mississippi and Tennessee when we were a boy, and with which they hored down to find water without running afoul of rock, before digging, thus saving in many places the expense of digging at great depth at a cost of a dollar a foot, and the additional cost of timbering; as safety required that the curbing should follow the digger as he progressed down with the well. The auger will answer equally as well for a four-inch bore for wells in this valley where pipes and small pumps are used.

#### NAPA.

**GRAPE CLUSTER.**—*St. Helena Star*, Sept. 17: The boss bunch of grapes for this season was picked at Krug's Saturday. It was of the Chasselas variety, and weighed over five lbs.

#### SANTA BARBARA.

**FAIR PROPOSED.**—*Lompoc Record*: The Press says that "the agricultural society of Santa Barbara county has been formed, and all arrangements will be speedily completed for holding a fair this fall. Seasonable notice will be given in the Press of the time of holding the fair and of the list of premiums. Parties having stock or agricultural products to exhibit will do well in the meantime to get ready for the exhibition. Mr. Jesso Franklin, of Carpinteria, is Secretary of the association." We can see no reason, if it is properly managed, why an association of this kind should not be as successful here as elsewhere. Both ends of the county



should be represented upon the Board of Directors and all committees, so as to create a mutual feeling of pride in the success of the fair, and prelude any sectional opposition. We trust that our farmers, fruit growers and stockmen will see that the products and industries of this section are well represented at the forthcoming exhibition.

#### SAN BENITO.

**THE PRIDE OF THE VALLEY.**—Gilroy *Advocate*: This giant of all separators constructed in Whitney's shop in this city on the eve of harvest, has given great satisfaction to its enterprising owner, Job Malsbury. It has done wonderful work in the fields of San Benito county during a run of 54 days. Its average work was 720 bags a day, equal to about 1,800 bushels. Malsbury & Rader, the projectors of the machine, claim that it will clean from 4 to 5 sacks a minute. We believe that no separator in existence is of equal capacity. Application has been made by these gentlemen for patents covering everything they claim as original.

#### SAN BERNARDINO.

**BIRD KILLING.**—Riverside *Press*: The fruit growers of Riverside have come to the conclusion that a systematic warfare must be waged against the linnet and other birds that prey upon fruit buds and maturing fruit, else large profits will be cut down to nothing. Capt. B. B. Handy says he has now struck a remedy, and wishes to urge the people to act at once, so that the supply of birds may be materially lessened before they get a chance at next year's crop. His remedy is simple. He picks all the figs from his trees but a dozen or so on each of a few trees. He then cuts off the blossom end of the fruit and with a knife spreads strychnine on the exposed pulp of the fruit. The birds take kindly to this fruit, and they drop dead under the trees by the score. Capt. Handy poisoned but a few figs, yet in two days' time he picked up 128 birds that did not get off his premises, and he says his neighbors report dead birds in all directions. There are no more birds on his place. He estimates that 50 cents worth of strychnine, judiciously applied, will kill every bird in the settlement. Every one who has bearing fig trees should commence work. The experiment is worth trying.

#### SAN JOAQUIN.

**HOP GROWING.**—Independent: For several years, citizens residing at and near Lockeford have been growing hops with varied success, financially, but in the end fairly demonstrating the feasibility of growing the plant, in that section at least, in large quantities and of excellent quality. The yield per acre, in well-cultivated fields of sufficient age to fairly test the merits of the soil for productive capacity and aroma of the plant, has proved satisfactory; and no doubt now remains that hop culture will become a permanent industry in the section mentioned. At the ranch of Mr. Putnam, five miles above Lockeford, one of the pioneers in the work, are hop yards 12 acres in extent, a portion of which are not in full bearing. He contends that hops should be replanted as often as eight or ten years, and gives good reasons therefor. His land is a warm, sandy loam, capable of growing the finest fruits or grain. Of his ranch in general, mention will be made at another time, as well as of the others mentioned in connection with the hop interest. He, as all the others are, is prepared for curing and pressing. He has been in the business 10 years, as has his neighbor and former partner, Mr. Whipple. He has seen great fluctuation in prices. Three years ago prices ranged from 25 to 33 cents, last year from 15 to 25 cents. He has 75 bales, weighing each from 180 to 200 lbs. His former partner and next neighbor, Mr. Whipple, has about the same area, or less, and 52 bales each of 200 lbs. and over. These gentlemen have an excellent quality of hops, and will command the top prices. The hop yard of Mr. Whipple is on a loam bottom heavily covered with sand from overflow, and yet his yield is good and quality excellent. Some two miles below them, Mr. Clements has 40 acres, as yet ungathered, but the prospects are excellent for a large yield. He says that, were it not for having a variety of products, he would prefer alfalfa, as the ground is excellent for that plant. Then comes the Megary place, with 10 acres; but, as he was not at home, no particulars, except that they have 65 bales, were learned. Next is the ranch of Squire G. C. Holman, and then that of Dr. Locke, at Lockeford, who has 17 acres and a fair yield. Neither of these crops have yet been gathered. But enough has been done to show that the hop industry will prove quite an item this season in the list of the agricultural resources of San Joaquin county, and that it is but yet in its infancy and capable of development to far larger proportions.

#### SOLANO.

**THE BRAN PACKING.**—Martinez *Gazette*: Mr. Dietz, the Vacaville fruit raiser who has succeeded so well in preserving grapes, peaches, and other delicate fruits, by packing them in carbonized, or charred bran, is about testing the value of his discovery for application to the transportation of such fruits to the East as slow freight—at half the cost of sending in refrigerator cars with the express trains, on first-class passenger time—by shipment of a car load, packed in charred bran. If it is found that the fruit so packed stands the three weeks' bumping and jolting of the freight trains, and preserves its freshness and flavor, it will open an Eastern market for ten times the quantity of California fruit that would otherwise be shipped;

and it may be found that finely pulverized carbonized sawdust, or wheat straw, is equally as good a preservative packing as bran, while the comparative cost will be inconsiderable.

**QUICK WHEAT.**—Dixon *Tribune*: Crops on overflowed lands on the river are remarkably rapid in growth. Mr. D. S. Stuart has a crop of Sonora wheat on his ranch below Maine prairie, which is now in the milk, although sowed only six weeks ago. He has also 160 acres of buckwheat, and showed us some fine large stalks in flower, which were the growth of five weeks.

#### SONOMA.

**APPLES DRIED BY SOLAR PROCESS IN 24 HOURS.**—Heraldshurg *Flag*: W. Aitken, lessee of the Bigelow orchard, one mile southeast of this city, has succeeded in drying apples in 24 hours, simply by hanging them as they come from the paring and coring machine upon fence wire in the open atmosphere, the process of curing going on in the night as well as in the day time. This at least proves the dryness and the purity of our climate. Fruit dried in this way carries proof of being hand-picked, otherwise it could not have sustained itself on the wires by reason of the bruises. Mr. Aitken claims that another advantage gained by this process is in the fact that as the apples are always in motion insect eggs are not deposited among them.

**SUMMER-FALLOW.**—Mr. Benj. Clark, of Windsor, informs us that wheat grown on summer-fallowed land in his vicinity was plump and of good quality, and the yield was nearly, if not quite as large as last year's. On late-plowed land the wheat is generally shrunken and the crop falls considerably short of last season. The last crop of grain was threshed yesterday.

**SUCCESSFUL SEASON AGAIN.**—Geo. Kennedy, our veteran thresher, had two machines in the field again this year, and both were financially successful. The first worked a few days on the San Joaquin and then went into Yolo, threshing 50,000 sacks in 51 days. The other machine had a run of 41 days in Butte, and Mr. Kennedy is again at home on his ranch south-east of Windsor.

#### OREGON.

**SHEEP AND MILKWEED.**—The *Lake County Examiner*, Sept. 3: A hand of 2,964 head of sheep, belonging to C. C. Webb, of Corinne, Utah, left this country about the 4th of August for that place in charge of John Zumalt. The sheep got along very well until in the neighborhood of Stein mountain, when they got hold of the poison milkweed, and in two or three days 1,900 sheep died out of the band, and our informant says that many more were likely to die. Mr. Webb has lately been very unfortunate with his sheep. During the hard winter of 1879-80 he was wintering about 20,000 head in Western lake, and came out in the spring with only 7,000 head, all the rest having perished.

#### WASHINGTON.

**WHEAT.**—Portland *Oregonian*: Dr. N. G. Blalock, occupies the high position of the champion wheat-grower in the world. We have in our office specimens of heads of wheat from his grain fields south of Walla Walla, 5½ and 5¾ inches in length, and the highest count out 116 kernels to the head. The doctor has 1,000 acres of wheat, of which the Chile club, with us, is one of a variety which will average 50 bushels to the acre in a continuous field. This is asserted to be unprecedented in the history of the world. Dr. Blalock is entitled to and has the admiration of the people of all Oregon and Washington Territory in his pioneer assiduity to prove to the world the unexampled fertility of presumed barrens, and his triumph is a much prouder tribute to the man than earned in any other of the avenues of pursuit through which men attain to honor or glory. The doctor sold his entire crop, aggregating 75,000 or 80,000 bushels, to Gibson, Church & Co. of this city, last week, at a price which was gratifying to both parties, and it is now being received here at the rate of 80 to 100 tons per day.

#### More Cars Wanted.

When we remember that early grapes from Vacaville sold for \$100 a ton and other early fruits at a corresponding high figure, for shipment to the East; and when we recall the fact that the first fruits at the East cannot be sent to market till the first of September, we can easily see that from May first to August and September we can have all the Eastern market to ourselves. Cherries and apricots in May, and by the last of June grapes, we can see what a field there is before us. Before the opening of next season, much more perfect arrangements should be made to supply the great eastern demand for early fruit. The number of cars should be doubled, or tripled, thus reducing the rate. Three freight trains a day might easily be loaded from our orchards and vineyards next year for three months. In May they could be increased and continually added till August, and even then our fruits are so far superior to anything raised in the East, that after theirs are in the market in August and September, there would be a demand for ours. The new methods of packing are such that most fruits can be delivered safe and sound in Chicago, or any Eastern city, with very little loss to the shipper. What a field is here for enlarged enterprise.—*Oakland Tribune*.

#### Premium List Second District Fair.

The fair of the Second District Agricultural Society was held at Chico, Butte county, Sept. 6th to Sept. 10th. The rich district adjacent to Chico contributed well, and the fair is reported to us as very creditable. We print below the list of premiums awarded in the agricultural departments:

##### Horses.

Best thoroughbred stallion 3 yrs, Duke of Norfolk, Theo Winters; second best, Langford, Jos Courtney; thoroughbred mare 2 yrs, Blue Bonnet, J. T. McIntosh; thoroughbred mare 2 yrs, Duchess, Theo Winters; graded stallion 3 yrs, Comet, J. E. Endicott; graded stallion with colts, Prompter, J. T. McIntosh; graded mare 3 yrs, Daisy D, R. L. Douglas; graded mare, Orland Baby, L. C. Oxidine; mare 2 yrs, Lucy Tolman, David Schneider; graded mare 1 yr, Ribbon, W. B. Rodgers; stallion of all work 3 yrs, Washoe, A. K. Lamb; mare of all work, Dalton, J. W. Fritter; draft stallion 3 yrs, French, Geo. L. Selsor; pair of draft mares, Nell and Daisy, Allen Henry; draft mare 3 yrs, Mollie, P. Doyle; roadster 3 yrs, Singleton, J. T. McIntosh; roadster 2 yrs, Laharp, J. T. McIntosh; roadster mare 3 yrs, Bessie, J. T. McIntosh; carriage team, Dexter and Nellie, J. E. Endicott; carriage horse, Charlie, Frank Rhinehart; roadster team, Lottie and Lettie, L. A. McIntosh; best roadster team, Zoe and Don, Allen Henry; saddle horse, Nettie Moore, L. Kilgor; saddle horse, Bummer, C. C. Salmon, special; yearling colt, Tom, J. W. Hodge; suckling colt, Bummer, G. L. Selsor; pair of mare colts, Lucy and Elsie, J. T. McIntosh; pair of horse colts, Major and Prince, L. H. McIntosh; horse colt, Rockwell, L. D. Jenkins; horse colt, Ralph T, B. F. True, special; sweepstakes stallion, Singleton, and sweepstakes mare, Elsie, J. T. McIntosh; pair of twin colts, A. B. Collins, special; native horse, Charley Henry, special; saddle mule, Jep, J. M. Decker, special; span of mules, Queen and Polley, J. M. Decker.

##### Cattle.

Best Durham bull 3 yrs, Maj. Butler, M. Wick; Durham bull 2 yrs, Lewis, A. B. Collins; bull calf, Cottonwood, M. Wick; Durham cow 3 yrs, Frantic Louan 1st, M. Wick; Durham cow, Gem, M. Wick; Durham cow 1 yr, F. Louan, 24th, M. Wick; Durham heifer calf, F. Louan 33d, M. Wick; best Devon bull 3 yrs, Ben Butler, R. McEnespy; Devon cow 3 yrs, Queen, R. McEnespy; Devon cow 2 yrs, Nancy, R. McEnespy; Devon cow 1 yr, Julia, R. McEnespy; Jersey bull, Colonel Hawkins, A. B. Collins; Jersey cow 3 yrs, Roxanna, Col. Hawkins, second best, Duchess, Col. Hawkins; sweepstakes bull, Maj. Butler, M. Wick; sweepstakes cow, Frantic Louan 1st, M. Wick; best Jersey cow 2 yrs, Blacky, A. B. Collins; second best Jersey heifer, Maud, A. B. Collins; Jersey heifer calf, Bessie, W. Hawkins.

##### Goats, Sheep and Swine.

Angora buck and Angora doe, M. Wick; also Poland China boar and sow, M. Wick; best Berkshire boar and sow, A. B. Collins; also litter of Berkshire pigs, A. B. Collins; best Merino buck, L. H. McIntosh; second best, A. B. Collins, special prem.

##### Poultry.

Display and 10 single premiums awarded to A. B. Collins; best Brahma cock, J. W. Paden; best trio Dominique, J. W. Paden; Bronze turkeys, R. McEnespy; turkeys, Mr. Clarke; trio of geese, Chas. Henry.

##### Vegetables and Plants.

Mrs. M. Z. Moore, sack of Oregon white potatoes; J. Bidwell, best table of vegetables; Mrs. J. Bidwell, best and largest collection of flowering plants, best collection of ornamental foliage plants.

##### Dairy and Domestic.

J. H. Guill, display of butter; Hattie Mandeville, wheat bread; Nettie Shearer, domestic wheat bread; Mrs. S. L. Walker, biscuit and bread; special by H. C. Wilson; Miss Ava White, white, corn and Graham bread, Miss Lulu Tilden, brown bread; Miss Emma T. Mayhew, handmade dried fruit; Mrs. Levi Smith, dried figs; John Bidwell, display of dried fruit; Mrs. Levi Smith, preserves and jellies; Mrs. S. L. Walker, assorted fruit; Mrs. J. Bidwell, jellies and jams; Annie Rhinehart, sweet pickles; E. B. Stuckey, honey.

##### Fruits and Grains.

Mrs. M. V. Salmon, peaches; J. Bidwell, second best display of apples; best display of pears; Wm. Boness, best display of apples, peaches; second best pears and pomegranates, C. W. Harris; 4 premiums on apples; J. M. Burt, display of grapes; Wm. Burt, oats; A. B. Collins, white wheat and barley; John Bidwell, best display of wheat; Thos. Gunn, Sycamore Lake club wheat; L. H. McIntosh, Australian blue stem wheat; John Bidwell, best display of corn, rye, potatoes, nuts.

#### The Burial of the President.

##### Proclamation by the Governor.

STATE OF CALIFORNIA—EXECUTIVE DEPARTMENT: The Nation is in great sorrow. For weeks it has watched by the bedside of its dying Chief Magistrate with a unanimity and tenderness unexampled in the history of the world. But its sympathies, devotion and prayers have been unavailing. It has pleased Almighty God to remove James A. Garfield, the President of the Nation, a great and good man. One of the noblest representatives of Republican institutions has fallen. But in a Republic, the Nation survives when great men fall. The Government continues when the President dies. Our dependence is not on any one person, however great or good, but on the intelligent virtue and patriotism of the people and the blessings of God.

I, therefore, George C. Perkins, Governor of the State of California, recognizing the common sentiment of dependence on the Supreme Ruler of the universe, which has characterized the country during all this long agony of watching and waiting, do hereby appoint the day that shall be designated for the obsequies to be a day of humiliation and prayer, and I recommend all citizens of the State to suspend their usual business on that day and assemble in their respective places of worship, that they may humble themselves before Almighty God and supplicate His blessings upon the nation that this visitation may not be the beginning of a series of national calamities; that it may be overruled for good to the country; that in this hour of our great sorrow we may not forget the anguish of the bereaved wife, stricken children, and aged mother; that the new President and all the associate officers may be prepared to meet the exigencies in the changed conditions, and that the whole people, by a fresh consecration of themselves to the ways of righteousness and patriotism, may so live that the nation will have honor. God reigns, and with His blessing a true republic can never die.

In testimony whereof I have hereunto set my hand and caused the great seal of the State to be affixed at the City of Sacramento, this 20th day of September, 1880.

GEO. C. PERKINS, Governor.

Attest: D. M. BURNS, Secretary of State.

#### Tulare Valley Fair.

EDITORS PRESS:—Please notice in your valuable paper, that the Tulare Valley Agricultural Association will hold its first annual exhibition on the 20th, 21st and 22d of October, at Visalia. Liberal purses will be offered for speed and stock on exhibition. Owing to the late start and organization of the Association, there will be only an exhibition of stock and races.

JNO. F. UHLHORN, Secretary.

#### News in Brief.

RAIN storms prevail at Portland, Or. FROSTS prevail in the vicinity of St. Louis. LAST week 7,340 immigrants arrived in New York.

THE coal miners at Nauaimo, B. C., have struck.

ANOTHER brick block is going up in Gridley.

A NEW \$20,000 sawmill is to be built at Seattle, W. T.

THE losses by the fire at Austin, Nevada, foot up about \$50,000.

THE Petaluma Woolen Mills are turning out 700 yards of cloth daily.

RUSSIAN river, at Guerneville, has been stocked with black bass.

THE new Welland canal is open, and vessels are being towed through.

THE pay roll of the Virginia & Truckee railroad for August amounts to \$35,000.

THE fire on Mt. Tamalpais, Marin county, is still raging, but with diminished force.

THE passenger time between St. Louis and New York is to be reduced to 28 hours.

A SPECIAL Court-martial is to be ordered to try Mason, who attempted to kill Guitteau.

LABOR is unattainable at Victoria, B. C., and there is an increasing demand for real estate.

THE fastest four-year-old stallion time on record was made at Oakland by Romero—2:22½.

IT is expected that the Mexican Central railroad will reach Chihuahua in six months.

HORACE HAWES, of San Francisco, ran 220 yards, Thursday, in 21 3-5 seconds—the fastest time on record.

ALBERT HART, Private Secretary of Gov. Perkins, was painfully injured by a fall at San Jose, Thursday.

THE estimated cost of the narrow gauge railroad which is now being talked of in Los Angeles, is from \$5,000 to \$6,000 per mile.

FOR the last two or three days extensive brush fires have been burning over the mountains some 30 or 40 miles east of San Diego.

WHEN the question of State division was up before, says the *Visalia Delta*, it received 16 supporters in this county. Out of this number several have since died.

ON the line of the Atlantic and Pacific railroad between Albuquerque, N. M., and the end of the grading operations in Arizona, about 350 miles there are 240 saloons.

MUCH anxiety is manifested, says the *Anaheim Gazette*, by the orchardists in the southern and western parts of the city on account of their trees putting out full blossoms out of season.

A ROLLING mill is to be established by a number of Oakland capitalists, at West Oakland. Prominent among the promoters of the same are F. K. Shattuck, A. Chabot, and A. J. Snyder.

THE grading on the Oregon and Nevada railroad has been completed 20 miles from Reno. Ten miles of rails have been laid, and as soon as the iron arrives a mile of track will be laid daily.

IT is said that France has proposed and England has accepted, a proposal that an Anglo-French military commission be appointed to re-organize the Egyptian army, so as to prevent any future revolts.

LIONEL SACKVILLE WEST, successor to Sir Edward Thornton as British Minister to the United States, will sail from Liverpool for Philadelphia on the American steamer *Pennsylvania* on October the 15th.

THE San Bernardino *Times* reports that 50 sacks of picked ore were stolen from the Silver King mine, Grapevine district, Calico mountains, the other day. Eight sacks were also stolen from the Hartman claim.

FOR some time past a petition has been in circulation by the Good Templars of Riverside, to which they have obtained the signatures of 299 men, women and children, asking saloon-keepers to close their places of business on Sundays.

AN order was issued out of the Superior Court of Yuba county Saturday, in the suit of the city of Marysville vs. the North Bloomfield gravel mining company et al., citing the managers of the Excelsior water and mining company, one of the defendants in the suit, to appear on the 27th instant and show cause why they should not be punished for contempt of Court in operating their hydraulic mine at Smartsville.

THE CALIFORNIA REFRIGERATOR.—This was an exhibit at the late Mechanics' fair, of three refrigerators, designed according to size for family and hotel use. They were an improvement on those used in Boston for over 30 years. The ice-chamber is so arranged that there is maintained a free circulation of dry air, keeping provisions cool and free from taint. The heat material is used, are finished in the highest style of workmanship, and are an ornament to any room. In this climate these refrigerators are a necessity, and are sold at a price that places them within the reach of every household. With a view to economy these refrigerators can be stocked with ice at a cost of from 5 to 10 cts. per day, resulting in a saving in ice and provision enough to pay for one yearly. Factory and office, 1123 & 1130 J street, Sacramento city, Cal.

BARTLETT PEARS AND APRICOT TREES.—Milton Thomas, of Los Angeles, announces Bartlett pear and apricot trees for sale. In view of the reported scarcity of these kinds of trees, the announcement will no doubt interest many.





## Lives of Men.

The lawyer leads a harassed life,  
Much like a hunted otter;  
And 'twixt his own and others' strife  
He's always in hot water.  
For foe or friend  
A cause defied,  
However wrong, must he, sir;  
In reason spite  
Maintain 'tis right,  
And dearly earn his fee, sir.

The doctor's styl'd a gentleman.  
But this I hold but humming;  
For, like a tavern waiting man,  
To every call he's "coming."  
Now here, now there,  
Must he repair,  
Or starve, sir, by denying;  
Like death himself,  
Unhappy elf,  
He lives by others dying.

The soldier, deck'd in golden lace,  
Looks wondrous fine, I own, sir,  
But still, I envy not his place  
When hattered to the bone, sir.  
To knock my head  
Against cold lead,  
I never had a notion;  
If that's the way  
To rank, I say—  
Excuse me the promotion.

The sailor lives but in a jail,  
With all the risk besides, sir,  
Of pillage, founder and of gale—  
This cannot he deny'd, sir.  
While I, so snug,  
Enjoy my mug,  
Or kiss my wife and so forth—  
When rain and storm  
The nights deform,  
His duty bids him go forth.

A farmer's life then let me live,  
Obtaining, while I lead it,  
Enough for self, and some to give  
To such poor souls as need it.  
I'll drain and fence,  
Nor grudge expense  
To give my land good dressing:  
I'll plow and sow,  
Or drill in row,  
And hope from Heav'n a blessing.

## Mary Mountain.

Mrs. Mary Jameson Locke (Mary Mountain of the PACIFIC RURAL PRESS), was born in Irtsburgh, Vt., June 11th, 1831, of parents of Scotch descent, as the name indicates, from central New Hampshire, who tilled the soil; was educated in the common schools and academies of her native State—in the latter by her own efforts—and, after teaching several terms, in 1853 came to California, and in the same year was married to D. M. Locke, then of San Francisco, now of Santa Cruz.

She leave two children, a girl and boy, now at the University in Berkeley.

From girlhood Mrs. Locke possessed a very ready pen—a style at once easy and pleasing—and eagerly devouring all the books and magazines that came within her grasp, it was soon recognized by her early teachers and friends that she was endowed with unusual powers. Many of her early letters to friends fortunate enough to receive them fairly sparkled with wit, humor and sentiment run wild, and she was often urged to permit their publication, but without avail.

She occasionally contributed to the general press, until the earnest appeals of the publishers of the PACIFIC RURAL PRESS induced her to become a regular contributor. Of the charm, truth and real value of her articles we need not speak, for the old readers of the RURAL will remember them well. Of the esteem in which she was held by the Home Circle, we need not say that wherever we have been through the length and breadth of the State, our readers have testified to the value of the "Farm House Chats" and their appreciation of the writer.

As a companion and friend she was always bright and cheerful—inconstant in her efforts to please and make happy, and never tiring of serving her friends—giving up freely any and everything for their comfort and enjoyment. Old readers of the PRESS may remember the following beautiful sentiment (Vol. 3, page 378.) "And yet, and yet, O Gail!" Is it not true that hearts of gold are purchased by just this sacrifice of itself, just that possibility of giving and doing without stint for the happiness and comfort of others?

And the home of such a woman! such a wife and mother! need we add that it was always bright and cherry. The embers upon her home hearth were always kept at full glow.

Her own life has always been absorbed in that of her children, and taking them to the University at Berkeley last month and seeing them entered has been her last work—a work in which it would seem some supernatural power must have come to her aid in wonderfully prolonging her life until this was done.

And then completely exhausted by disease and pain, she passed away at last, peacefully as

one going to sleep, surrounded by her stricken husband and children and other sorrowing relatives; and now her body lies at Lone Mountain, where few will visit the spot and keep it bright and in remembrance forever.

## Gems from "Farm House Chats."

It is quite fitting in this connection that we should cull from the "Chats" which our readers enjoyed so much, a few gems of thought and expression, which reflect the author's beliefs and earnest aspirations for the well-being of her readers; also some of the lighter touches with which she made her writings pleasing and attractive:

"The arrival of No. 1 (of the PACIFIC RURAL PRESS) was as good as a surprise party that comes in at the back door, and surreptitiously fills the pantry with sweet cakes and all sorts of goodies."

"I, too, have my mission—not for suffrage—alas! I would fain be excused from that threatening supplement to womanly duties; but my labor of love should be the preaching of an amended 'Gospel of Graham,' viz.: The cooking of plain, wholesome food in such variety and excellence that the palate should always be satisfied and the stomach never outraged; while brain, adipose, bone and muscle should each have due supply of congenial nutriment, to the end that all may jog merrily onward to the utmost limit of serene, healthful old age."

"If you have a grand, noble farm, try to feel like a king and treat your wife like a queen."

"A careful woman may learn the wise and useful chemistry that enters into vital growth, builds up mind and matter,

quire more than all our time and a great deal of money, so we must plan for simple pleasures that claim no sort of relationship with the latest fashion plates, and all hints in this direction will be received with applause."

"If we see a lady mincing uncomfortably along, with pinched waist, pinched feet, high heels, enormous hump on her back, and three-score and ten founces—let us take a good, long, easy breath, stand firmly in our broad boots, and remember that to keep up with fashion at the present rate of changes, involves as much labor and nervous wear and tear as to hear and rear plainly a family of good, smart children. Which is the best life-work for a large-hearted woman?"

"The pen seems feeble, and I am wishing for Gabriel's trumpet, or something loud and fierce enough to startle these dull souls into the line of duty; these men who dare to assume the care and ownership of neck and lowly brutes, and can look on coolly day after day and see them starve, and shiver, and die! Common humanity pleads for them; religious feeling forbids such cruelty; and the shrieking curse of the proprietors of dead carcasses is a ghastly reproach of his theory of 'lick'—a diabolical exponent of the leanness of his practice."

"I want to see farmers look better than they do—dress better, carry themselves with as much easy grace and confidence as though they felt in every muscle that handling the plow, the shovel and the hoe is just as dignified and gentlemanly as measuring dry goods, dealing physic, reading law or managing 'rugs.' His best suit of clothes would have made better bargains, would have given a sense of freedom and enjoyment, a higher tone of manliness and perfect security from the slouching manner that invites snubbing."

"Probably the world has never seen more sensible, reasonable, patient women than can be found to-day among the rough farm homes of California. To be sure, the angelic part of them must be spread so very thin in the vain effort to cover up the rude privation of their lives, that it some-



MRS. MARY JAMESON LOCKE.

keeps it healthy, jolly, and finally, as a grand result, sends forth stalwart sons and blooming, beautiful daughters to rejoice and rejuvenate a despairing, drugged and humbugged world."

"The strongest character—he it masculine or feminine—will take the 'rights,' and the other will lose in proportion. The weaker party will secretly rebel—will often hate the ruling power—but the status remains the same; and regardless of sex my sympathies are with the weaker party. If I see the strong wife go forth triumphant to manage the business affairs of the farm, I give a pitiful thought to the subdued husband at home wearily blinking under the shelter of a wilted hat. Political influence may be a good thing for a woman to have, but the mothers who patiently teach their children justice, mercy and the golden rule; who impress upon their minds the value of health, temperance in all things, and the proud independence that industry gives—these are the women that will save the country. And let my 'sister farmers' remember that a great part of this national business is in their hands. \* \* \* The coming woman is almost sure to be a farm girl."

"For conquering the sternness or stinginess of man, Mrs. Home Interests recommends good dinners—all the favorite dishes placed in huddle array—and when the hungry stomach lays over them all, and the 'savage' is quelled by surfeit of goodies, then open with smiles and the coaxing words you can think of, not forgetting to put on your prettiest gown, a bow of bright ribbon, and look as young as you can."

(How true and prophetic is the following in her own case, we leave to surrounding friends in her last sickness.—EDS. PRESS.)

"'Tis true, the little children don't know enough to thank us now; but if our labor and self-denial for them is so truly and wisely given as to help them become good men and women, will not their gratitude and love brighten our declining years? Will not the kind mother-face be ever beautiful in the eyes of those children who finally do know what weary burdens she bore for them during their thankless baby days. If the revolutionary mothers of glorious memory had refused to harden their hands with labor, or wrinkle their brows with the great anxieties of that intense period, how different would be the song and story with which we hail the date of our nation's birth!"

"To plant homes worthy woman's toll and care were also needed, and hallowed be their memory. When we have found our leisure, we must do something with it or it will 'sour' on our hands."

"Now, perhaps he has not a single dollar hoarded, nor many dollars carelessly wasted, but all strictly in the business and duly swallowed by 'contingent expenses.' If the blind, mistaken man would only tell her this—go carefully over the figures that prove it and explain all his hopes and plans—why, the tears would be in her eyes in a minute, and giving him a shy kiss, she would cry out, 'Oh, John! I thought you was real mean and stingy, but now I can be patient and contented till you bring things around all right.'"

"Yes, hard knocks pay if they give us self-reliance and fortitude; if they broaden instead of hardening our sympathies; if they knock out of us arrogance and self-conceit, instead of putting more in."

"The working clothes may be patched and soiled. All right! Dame Nature wears more dirt than anybody, and what a rousing, faithful worker she is; but so dainty and fine in her beautiful garments, all our poets get desperately mixed up with adjectives and heartaches whenever they try to sing her praise."

"To be ornamental in this fashion-frantic age, would re-

times break through, and you see only a worn-out, discouraged woman. But generally they bear up with true womanly grit."

"If they are never heard from in future histories, it will be, perhaps, because their lines were cast in pleasant places, and they became too comfortable and lazy to make a mark. As for the pilgrims of the ox-wagon, those hardy little urchins stand quite as good chance to become grandfathers and grandmothers of Presidents as the petted darlings who sleep in lace and ruffled garments under the mansard roofs of San Francisco."

"Many a night I used to cry myself to sleep in perfect despair of ever being allowed to 'go away to school,' and when finally my turn came to go with an older sister, it was like a trip straight into fairy-land, and the charm was not at all broken by the stern realities, for with all our work, we found time for gay pranks, and to listen in unlawful hours to the traditions of former hold students of high renown in the annals of mischief."

"Some women may be born with a faculty for using yeast and making it always behave itself; but I would as soon undertake to tame wild horses as live over again the painful experiences I had with all sorts of refractory yeast. Of course, I finally got the better of it, and we have lived on friendly terms these many years, but I have a strong thrill of sympathy for all young housekeepers who approach this irrepressible conflict, and must find out for themselves the heart-breaking tricks that yeast will play on the most critical occasions."

"Ah, blessed and beautiful Santa Cruz! No hed-hugs, no moss-troops, no grasshoppers, no fleas 'to speak of,' and the old-fashioned fire-place in nearly every house!"

"Not good food for the favored few alone, but plenty of it for every living soul upon the rich and fruitful earth. I would like to have a rousing religious revival upon this basis, as affording the best ground work for the spiritual growth that should follow. If we comfortable Christians were as much in earnest to feed and educate poor little children as we are to rival each other in building costly and elegant churches, what a different Christian world we should make of it!"

"I have very little to spare for the world's heroes, who are generally mere fighters lifted only above the ranks of butchers by the dazzle of military success."

## Woman, the Queen of Home.

There is probably not an unperverted man or woman living, who does not feel that the sweetest consolations and the best rewards of life are found in the loves and delights of home. There are very few who do not feel themselves indebted to the influences that clustered around their cradles for whatever good there may be in their characters and condition. Home, based upon Christian marriage, is so evident an institution of God, that a man must become profane before he can deny it. Wherever it is pure and true to the Christian idea, there lives an insti-

tution conservative of all the noblest instincts of society.

Of this realm woman is the queen. It takes the cue and hue from her. If she is in the best sense womanly—if she is true and tender, loving and heroic, patient and self-devoted—she consciously and unconsciously organizes and puts in operation a set of influences that do more to mould the destiny of the nation than any man uncrowned by power of eloquence, can possibly effect.

The men of the nation are what mothers make them, as a rule; and the voice that those men speak in the expression of power, is the voice of the woman who bore and bred them. There can be no substitute for this. There is no other possible way in which the women of the nation can organize their influence and power that will tell so beneficially upon society and State.—Scribner.

## Mr. Garfield's Belief.

On February 8, 1876, after the regular business of the day, it is stated, in the formal phraseology of the *Record*, that Mr. Phelps (Connecticut) offered a resolution that the House has received with profound sorrow the announcement of the death of Orris S. Ferry, and that proper tributes be paid for his public and private virtues. One of the speakers was James A. Garfield, who delivered a touching and fraternal tribute, ending with the following:

"Before closing, however, let me refer to the crowning glory of his life. Mr. Ferry had a strong religious element in his character. This was with him a great controlling force, and not a sentiment. No cloud obscured the effulgence of his hope or dimmed his vision. Clear and high, his intellect and his faith rose above all storms and darkness, and sustained him in sweet companionship amid the unrevealed mysteries of pain. As his end drew near he came back to his home after a brief absence. There, under his own roof, with the angels of his household about him, he passed to his rest. Thinking of trials past, and knowing as we do how well he had wrought for the future, trusting in the merits of his dear Lord, he could repeat the sweet lines of Bonar:

'Beyond the parting and the meeting,  
I shall be soon;  
Beyond the farewell, and the greeting,  
Beyond the pulse's fever beating,  
I shall be soon.  
Love, rest and home!  
Sweet hope!  
Lord, tarry not, but come.'

Beyond the frost-chain and the fever,  
I shall be soon;  
Beyond the rock-waste and the river,  
Beyond the ever and the never,  
I shall be soon.  
Love, rest and home!  
Sweet hope!  
Lord, tarry not, but come.'

"Ay, the sweeter word of inspiration—in the volume of the Book it is written: 'Lo! I come quickly. Even so, come, Lord Jesus.'"

And thus is chronicled the memory of a scene so unusual, so profound that the great hall of legislation, with its scores of careless, worldly men, seemed for the time transfigured. We all seemed to be "sitting in heavenly places in Christ Jesus." Even the reporters' gallery, a cool, phlegmatic region, as you may guess, showed a suspicious, surreptitious display of pocket handkerchiefs, and tears were in the eyes of many members on the floor. I have often heard General Garfield eloquent, but I have never, before or since, heard him approach the touching pathos of that hour. The occasion was ripe for him when he rose; he felt the solemn glow reflected from all hearts around him, and his voice, always sympathetic, took on an almost priestly function and an unconscious tone of exaltation that seemed above mortality, as he recited the dead man's tribute to the dead. The poem that formed its fitting climax seemed to glow with beatific flame.

THE CHILDREN'S BATH HOUSE.—A Kansas correspondent of an Eastern exchange writes: The children have made a very simple, convenient bath house, and cheap enough for everybody to have one. They took a store box about 6 ft. long and 4 ft. wide, and about 3 ft. high. To the top of this they nailed pieces of board to make it about 6 ft. high, and around the posts or boards they stretched old carpet and blankets with carpet over the top also. This makes a nice little room into which they can set a large tub and then have room enough to dress in the other end. One end is not closed up with carpet, but is boarded up about 3 ft; this is where they put in the tub and water and where they step into the room. The whole thing is movable and can be pushed around the yard, so as not to be long enough in one place to cause an odor from the waste water. The bottom of the box is the floor, and it is a nice clean place in which to bathe. The children draw a tub of water every morning, and let it set in the sun till nearly noon or afternoon; then they take turns in bathing, and sometimes the boys play an hour in it. But the girls like it quite as well, and every day they make their ablutions. Little three-year-old Fred enjoys it ever so much, and one-year-old cousin Robbie, who lives near us, cries to take a bath whenever he sees the house.

A RESTAURANT keeper writes his own bill of fare, thereby saving the cost of printing. It announces: "Coffy, supe, roste befe, fried ham, boyled and baked pertaters, fried and could pudden, mins pys, mutting chops, vele cnlverts, and hasch."



## Chaff.

Don't be too generous with your temper. Keep it.

BOB-TAIL comets are like one-horse cars—very little room for stars.

"THERE must be lawn order," said the policeman when he mowed his fruit yard.

THE traffic in eggs in this country is estimated to aggregate \$180,000,000. Hens our prosperity.

LIFE must be very short. Six months ago "Baby's got a tooth," and now the refrain is "The cradle's empty—baby's gone!"

SUMMER tourists should take with them a bottle of brandy for snake bites, and chloroform and a syringe to quiet yellow jackets and hornets.

A MAN being accused of extravagance, declared that the accusation was unjust. "For," said he, "I am very careful to live within the means of my creditors."

AN Oakland man last Saturday night had to climb in at the pantry window. When he lit the gas he found a note on the table telling him the turkey was under the door mat.

THE girl who gets married on the 29th of February and thinks she's smart, won't feel as proud of the job when she comes to want to celebrate tin and crystal and silver weddings.

IT's lots of fun to go to a picnic and have some one to put a supposed-to-be hard-boiled egg in your pocket, and come to find out, it's one of those kind of eggs that you can't boil hard.

I SAID to my little girl one day: "What a large forehead you have got. It is just like your father's. You could drive a pony carriage round it." To which her brother, five years old, said: "Yes, mamma; but on papa's you can see the marks of the wheels."

AN Englishman "who had seen better days" was riding in the coach to Leadville, the new mining town in Colorado. "Will you please," said the Englishman, "open that window; I want to see the mountain scenery." An Irishman, who was snoozing in a corner, looked up on hearing the remark, and observed, "Bedad, you'll see plenty of it a month from now, when ye're comin' hack on fut."

COUNTRY GIRLS.—Meta Victoria Fuller, in a sisterly way, thus talks to country girls: "The farmers' daughters are soon to be the life as well as the pride of this country—a glorious race of women which no other land can show. I seek not to flatter them, for before they can become this they will have to make an earnest effort of one or two things. There are some who deprecate their condition, and some who have false pride in it, because they demand more consideration than they merit. A want of intelligence upon all of the subjects of the day, and of a refined education, is no more excusable in a country than in a town-bred girl, in these days of many books and newspapers. Many girls are discouraged because they cannot be sent away from home to boarding schools; but men of superior minds and knowledge of the world would rather have for wives women well and properly educated at home. And this education can be had wherever the desire is not wanting. A taste for reading does wonders, and an earnest thirst after knowledge is almost certain to obtain a sweet draught from the 'Pierian Spring.' There is a farmer's daughter in this very room in which I am writing—a beautiful, refined and intelligent woman—in whose girlhood books were not so plentiful as now, and who obtained her fine education under difficulties which would have discouraged any but one who had a true love for study."

KNOW THYSELF.—Horace Mann justly remarked—"A spendthrift of health is one of the most reprehensible of spendthrifts. I am certain I could have performed twice the labor, both better and with greater ease to myself, had I known as much of the laws of health at 20 as I do now. In college I was taught all about the motions of the planets as carefully as if they would have been in danger of getting off the track if I had not known how to trace their orbits; but about my own organization, and the conditions indispensable to the healthful functions of my own body, I was left in profoundest ignorance. Nothing could be more preposterous. I ought to have begun at home, and taken the stars when it should come their turn. The consequence was, I just broke down at the commencement of my second college year, and have never had a well day since. Whatever labor I have been able to do has been done only on credit, not on capital—a most ruinous way, either in regard to health or money. For the last 25 years I have been put from day to day on my good behavior, and during the whole of this period, as an Irishman would say: 'If I had lived as other people do for a month, I should have died in a fortnight.'"

WHEN a man wants to enlist in the army of China his courage is subjected to a very unusual test. The recruiting officer places the candidate in a chair and proceeds to extract a tooth, and the conduct of the patient under this ordeal is said to decide the question as to his fitness for the military service of the empire. If he howls and jumps up and down he is pronounced unfit; but if he smiles and exhibits general feelings of satisfaction he secures a permanent place in the ranks.

## Young Folks' Column.

## Dick's Journey.

As most children are aware, Cleveland is a city in Ohio, and Cape May is a watering-place at the very point of New Jersey's great toe. In the early part of this month of August two lads, whose homes are in Cleveland, were at Cape May together, but one of them was obliged to return with his father in order to get ready for school. Phil was the boy who took the train westward bound, and Harry was the lad who stood on the depot platform at Cape May and shouted: "Good-bye; don't forget Dick!"

"Dick" was not a boy, but a bird—as pretty a pigeon as ever was. His cote was at the Cape, and there also were his wife and children. Phil gave him some crumbs and carefully stowed the cage away under the car seat. All that night and the next day Phil and his pigeon traveled westward, coming finally to Phil's house in Cleveland. That evening Phil wrote the following in very small words on a tiny bit of tissue paper:

"Home safe. Tom's busted the cover off his ball and Prof. Jenkins got throwed off'n his horse and is laid up with a broken leg. All well. Your ma says you ought to come with us. Both of my pups can see, and Susie's cat's got kittens. Burglars got into your pa's house and stole everything. Good-by. PHIL."

Early the next morning Phil tied the note to Dick's neck, wrappingsilk about it securely, and let Dick out of his cage. Dick flew up above the houses and went round in a circle. Then he mounted still higher and made another circle, and all at once darted in a straight line toward the southeast. Why he took that direction Dick didn't know himself. He felt it in him that he was right and nothing could have induced him to change his course. Phil couldn't see the sun when he let Dick go, but as soon as the bird got a few hundred feet above the treetops he caught a glimpse of the sun's round rim, just rising far to the east. Dick made up his mind to see his wife and children before night. He gave the air strong strokes and before Phil could count a hundred was out of sight. Dick saw houses and trees and fields below him, and a dark gray mist shrouded the earth, but he kept on. As the red rays of the sun shone upon his body he looked to other birds like a darting thing of light. A crow with a "hawk-hawk" flew across his path, a bee-bird tried to head him off and a flock of swift-winged swallows joined in the race, but not an inch from his air-line did Dick swerve. Soon away to the south he saw great clouds of smoke rising from Pittsburg and just ahead of him was a blue line of mountains. Dick wanted a drink of water very badly. The sun began to burn. The air was still and hot and only in cleaving it like an arrow could Dick gain a hit of comfort. On he flew, over the smoky oil country, into the blue of the high hills, and thus he passed many towns looking like flocks of toy houses far below. An eagle sat at the top of a dead hemlock on the summit of one of the Alleghanies and when Dick swept by the eagle shrieked at him and gave chase. Dick put on more speed. His wings cut the air so quickly that they looked as though they were standing still and long before the brave bird came to the Susquehanna he had left the old pirate of the mountains behind.

Dick heard the steam whistles harshly telling of noon. The sun was above, and the poor fellow was becoming tired, but he didn't want to drop down to earth to rest. Flying swiftly on for two hours more, he saw an object floating directly in his path. He saw with his quick eyes that it wasn't a live object, and so approaching he perched upon its peak. And what do the children think it was? A little balloon, no more or less! It was about the size of a hushel basket, and below hung a small car in which was a 'cute little doll. Whence did it come? Dick didn't know, nor did he care. He hopped down into the car, and was overjoyed to see a bit of bread that had been put there, no doubt, for the use of Miss Dollie. Dick heaped himself to crumbs, blinked at the sun as if to say, "I've rested two minutes, at least," and then darted away on his journey. Broad fields were below him and the skies were blue, but off to the north the air look hazy, and from that direction came low mutterings of thunder. It was sunset, and the storm was rolling rapidly down. Would the whistling wind stop him? It was a race between the great clouds and the little bird, but Dick was brave, and he wanted to see his children before dark. The clouds, black, angry and full of noise, swept along. Dick flew higher and higher. Drops began to fall and Dick caught them upon his thirsty tongue. Lightning ran fleet-footed beneath him, but the bird's eyes were keen, and soon he found himself above the very topmost point of the storm. Up there the air was still. As Dick passed over Philadelphia a great black curtain hung around the city, but he could hear a humming noise below. Not a moment did Dick stop to listen. To the south he saw in the twilight a great stretch of water. The moon came up out of the sea to the east. On Dick dashed until, with a soft coo, he put his head in at the door of his cote and kissed his children one by one.

OBSERVING little brother's remark before a room full of company: "I know what made that red mark on Mary's nose; it was the rim of John Parker's hat." And there are girls who believe that little brothers never go to heaven.

## GOOD HEALTH.

## Laws for Hair.

The general law for the care of the hair is cleanliness. But this essential condition is not always to be brought about by the same methods. In some cases the scalp and the hair itself require washing as often as once every month; in other instances, once in three months is sufficient. When the hair is in a healthful condition the glands at the roots are strong and vigorous and supply a natural oil. These glands often become obstructed or weak in their action, and finally dead. So long as they are inactive through obstruction or weakness, the hair may be restored, but when they are actually dead, and the scalp assumes a shining appearance, nothing will remedy it. Baldness may be prevented; it cannot be cured.

The obstructions are to be removed first by thoroughly washing or shampooing the head. This is to be done by using water and castile soap as warm as it can comfortably be applied. It must then be thoroughly rinsed. Three or four rinsings with tepid water are not too much. After this cleaning the hair for a day or two is apt to be harsh and dry. Special attention should then be given to rubbing and brushing the scalp. One of the most effectual methods to keep the glands in good working order and to bring out the oil, is to rub the head gently (either night or morning, when you have the most time to devote to its care) with the balls of the fingers. In this way the hair is not only separated, and the air allowed to pass through it, thus drying it from an unpleasant moisture, but the pressure upon the secretions of oil causes activity and brings it to the surface.

The hair should be thoroughly brushed every night or morning with a brush of good stiff English bristles. Wire brushes irritate the scalp and are very detrimental. For the same reason fine-tooth combs should not be used. It should always be remembered that while friction is necessary, irritation is to be avoided. Excessive irritation will itself produce dandruff, the most common of the scalp diseases, and often the forerunner of those of more serious nature. In cases where the dandruff is excessive, and of a dry, scaly nature, the scalp should often be washed, and always carefully. But even in such instances the hair itself requires occasional washings to cleanse it from dust. In such instances it is necessary to apply some safe and reliable wash, which should be free from oil. After the dandruff is removed, proper care and attention will promote luxuriant growth, and where there is not actual baldness, will restore natural vigor.

In order to keep the hair healthy it is essential that it should be trimmed about once a month. Merely chopping off the ends does not answer this purpose. The hair should be examined under a microscope and every end that is split—all hair splits after a time—should be trimmed off. These split ends are dead hair, and no matter how scanty the hair is the sooner one is rid of this much of it the better. The first time it is trimmed in this way, from a quarter to half an inch should be removed; after that only the extreme ends need be cut.

In regard to dressing the hair, the crown of the head should be kept free. The practice of parting it at the sides, just above the ears, and pulling it toward the top, is very injurious, making the crown soft and tender and the hair diseased. Crimping the hair may be done without much injury if great care is used. Instead of braiding in 10 or 12 small, tight braids, there should be but two. The tuckons at the back of children's dresses, or aprons, often ruins the hair by snarling and breaking it, and luxuriant curls or flowing tresses have sometimes to be shorn close just for this reason. The prevailing notion is that children's hair should always be cut. But, if the child is perfectly healthful and the hair good, it is only necessary that the ends should be carefully trimmed every month. For delicate children, the hair should be kept cut close till they are 12 or 14 years of age. The most sensible and healthful style for girls for school and ordinary wear is to braid it firmly and leave it hanging down the back.—Food and Health.

WHY WE COMMENCE DINNER WITH SOUP.—The rationale of the initial soup has often been discussed. Some regard it as calculated to diminish digestive power on the theory that so much fluid taken at first dilutes the gastric juices. But there appears to be no foundation for this belief. A clear soup disappears almost immediately after entering the stomach, and in no way interferes with the gastric juice, which is stored in its appropriate cells ready for action. The habit of commencing dinner with soup has, without doubt, its origin in the fact that aliment in this fluid form—in fact, ready digested—soon enters the blood and rapidly refreshes the hungry man, who, after a considerable fast and much activity, sits down with a sense of exhaustion to commence his principal meal. In two or three minutes after he has taken a plate of good warm soup the feeling of exhaustion disappears, and irritability gives way to the gradual rising sense of good fellowship with the circle. Some persons have the custom of allaying exhaustion with a glass of sherry before food—a gastronomic no less than a physiological blunder, injuring the stomach and depraving the palate. The soup introduces at once into the system a small installment of ready digested food, and saves the short period

of time which must be spent by the stomach in deriving some nutriment from solid aliment, as well as indirectly strengthening the organ of digestion itself for its forthcoming duties.

## DOMESTIC ECONOMY.

## Edible Algæ.

Some of our coast readers will be interested in some statements concerning edible algæ, and the way to prepare them for the table. Mrs. R. F. Bingham recently made this the subject of a communication to the Santa Barbara Press, from which we quote as follows: There is a genus of plants on this coast, of which many species grow upon the rocks near low tide, and which are frequently washed upon the beach in large quantities, all along our channel.

The fronds are thick, and have usually papilous or tuberculous processes upon the surface or edges, from which the name of the genus is derived, "Gigartina" signifying a grape stone. They are of various forms, some long and narrow, others quite broad in proportion to the length, sometimes irregular in outline, evidently having been torn and formed new growths. The structure of these plants is the same as the *Chondrus*, the commercial plant of the Atlantic coast, and we see no reason why we may not have in this plant a valuable article of food, cheap, nutritious and easily obtained.

We are making a series of experiments with them, and find that all the species found here can be appropriated for the same purpose as corn starch, maizera, farine, gelatine and sea moss farina. Those who have tested the preparations pronounce them excellent, and some persons consider them superior to those prepared from the Irish moss.

For making blanc mange from the crude article, wash the frond in fresh water, see that it is free from sand or other algæ which frequently grows upon it, lay it in a shallow dish containing water, and place it in the sun. In a day or two it will bleach a pure white. It can then be dried and preserved in a dry place for a long time. When wanted for use, select a piece of about one ft. in length and about one inch wide, or that proportion in other shapes. Pour upon it one pint of warm water and keep it at a boiling heat until it becomes soft, or the water is quite mucilaginous. Strain and add one pint of milk, and sugar to make it sufficiently sweet (about four tablespoonfuls). Let it come again to the boiling point, add your flavoring and turn it into a mold to cool, having previously wet your mold in cold water. When cold it is ready for use.

PAN-DOWDY.—Core, pare and quarter enough tart, juicy apples to fill a deep earthen baking-pan. Make a crust. Butter your baking-pan well. For a three-quarter pan take a teaspoonful of brown sugar, mix with it two teaspoonfuls of cinnamon, half a teaspoonful of clove, and a saltspoonful of allspice, with a pinch of mace. Mix all with a teaspoonful of molasses. Put the apples into the pan, scattering in a few hits of butter, and stir in the molasses and sugar. Roll your crust out into a thick round that will cover the pan, fit it over closely, put into a quite moderate oven, and keep a moderate, steady fire. Bake as long as you can without spoiling the crust. When done, take off the crust, break it up in small pieces, and mix it with the hot baked apple. Set all away to grow quite cold.

TROUT COOKING.—The trout is a peculiar fish; it requires great nicety in cooking or its flavor is lost. The flavor of the brook trout is exceedingly delicate and must be dealt with in a gentle manner. Brook trout should never be placed in boiling water, but over steam; boiling it in water soddens it and takes away its flavor. When steaming it put into the water some peppercorns and a very little salt. A second way of cooking trout is to melt a piece of fresh butter, stir into it some water, and place the trout in it, adding peppercorns and a little salt. Place round several slices of lemon and cover up very close. Stew like this 20 minutes. Take out and strain the gravy over the trout.—Food and Health.

FIG CAKE.—Here is a recipe for a fig cake which is nice enough for a wedding: Take two cups of white sugar, rolled very fine, one cup of butter; heat the butter and sugar to a cream; one-half cup of sweet milk and the whites of seven eggs beaten to a stiff froth; then add three and a half cups of flour prepared with baking powder; stir the cake well and bake in layers. For the filling, take one pound of figs, chop them fine, and cook until soft and smooth with a teaspoonful of water and half a cup of sugar. This filling should be prepared before the cake is baked and spread between the layers. Then cover the whole cake with icing.

COFFEE SYRUP.—Take half a pound of the best ground coffee, put it into a saucpan containing three pints of water, and boil it down to one pint; boil the liquor, put it into another saucpan, well scoured, and boil it again. As it boils add white sugar enough to give it the consistency of syrup; take it from the fire, and when it is cool, put into a bottle and seal. When traveling, if you wish for a cup of good coffee, put two teaspoonfuls of the syrup in an ordinary cup and pour boiling water upon it, and it is ready for use.—Caterer.





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G. H. STRONG

SAN FRANCISCO:

Saturday, September 24, 1881.

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## The Week

The death of the President is naturally the all-absorbing topic of the week. On Tuesday, the banks and exchanges were closed, and they will close again on the day fixed for the obsequies, in accordance with the recommendation of the Governor in his proclamation, which we print in another column. True business is interrupted and the minds of all turn to the sad theme of the assassination, the lingering illness and the death. Sorrow is widespread and genuine. Rancor, partisanship, sectional feeling, in short, all narrow thoughts have been laid aside, and for the last two months the popular atmosphere has been purer and clearer than usual. The nation has apparently been living a higher life, and the suffering of the President, though grievous to be borne, has not wholly been in vain. It is to be hoped that the influence of the event will linger long in the hearts of the people.

The new President is in his office. Chester A. Arthur, chosen Vice-President, took the presidential oath at the hands of the Supreme Court judges in New York city, early on Tuesday morning, and entered at once upon the discharge of his duties. May he be wise and prudent. The people will expect much and it will be happy indeed if the expectations shall be realized.

The State Fair began on Monday at Sacramento, under good auspices and prospects favorable for an unusually good display of products, and a full complement of speed contests. The attendance has been good. The directors have decided that the fair shall continue according to the original programme, as it is impossible to arrange otherwise.

THE RURAL PRESS IN MISSOURI.—A reader of the Rural in St. Joseph, Mo., in a letter renewing his subscription says: "Of all the agricultural publications for which I subscribe, none is looked for and perused with such interest as the RURAL PRESS."

## Winter Killing of Plants.

Many of our plant and tree growers have found their plants drooping and dying, and tender fruit trees losing their fruit, and other unpleasant manifestations of meteorological influence during the winter season. They have already well learned that the destruction is not always greatest when the mercury is lowest. Many of our readers have mentioned losses last year greater than they ever experienced before, and yet it was not nearly so cold as it was two years ago. They wonder that this is so, and appeal to us for an explanation of the phenomenon.

We find in the *Gardeners Monthly* for September an article in which the editor, Prof. Meehan, brings forward considerations which are worthy of general examination and the weighing of individual experiences. He says that discoveries of late years have put a new interpretation of what is called hardiness in plants. He shows that plants, woody plants particularly, die during winter from the evaporation of their juices, and not because their cells have burst by liquid expansion; hence we have to take evaporating influences into consideration quite as much as the state of the thermometer. Indeed, the thermometrical degrees are of no account, only so far as they influence evaporation. All other things being equal, there would be more evaporation at 20° than at 30°, and more at 10° than at 20°. But dry wind has an influence, and, as clearly shown by Deherain, Andere and others, light has an influence. Two trees of the same species may not be 50 yards apart; one may be in the eddy of a wind current, and the other protected by a single bush from both wind and bright light—the former get killed and the latter escape. The next year it might be reversed. The dry, cold current coming from another quarter, the favored one last year would be the one to suffer next. Besides this, the ability of the roots to supply an excessive drain on the liquid reservoir has much to do with hardiness, and the plant which has been lucky enough to send down a good tap root, has a great advantage in the war with the elements. But even the past has an influence. At the time the leaves begin to fade in the fall—that is to say in the early autumn season—there is less moisture in wood structure than at any other time, but from the time the leaves begin to fade the wood begins to lay up a store of moisture against the drafts of winter. If the cells have been injured by excessive drouths, by fungus attacks, or by any other weakening influences, they cannot store up as much as they would otherwise, and such a plant will die before another which has had a better chance, though every other circumstance is equal. We thus see that though the condition of the thermometer has much to do with hardiness, it is only so far as it influences evaporation; and there are numberless other conditions which influence evaporation besides.

These are the points made by Prof. Meehan and they certainly seem to accord well with some observations of our own in this State and some experience which has been reported to us by our readers. For example: During the heavy weather of January, 1879, when there was a large destruction of young orange trees and other plants, it was observed in several places that trees which were near a water ditch were unharmed, while those near by, in a drier situation, were injured. If this be a true deduction, the question will arise as to what point water can be applied without inducing an overgrowth of tender wood which will be liable to frost injury. How can the tree be given water enough to fortify itself against suffering from a lack of moisture during the cold winds of December and January, which often precede the rains, and yet not be forced into unreasonable growth? We commend the matter to the attention of our horticulturists.

SILK.—At the last meeting of the California Silk Society there were several points of interest brought out. It is proposed to test the sending of California eggs to Italy, an effort which ended in failure some years ago. After some discussion one of the members offered to sell 50 oz. of eggs and Mr. Rossi took 20 oz. at \$5 per oz. He thought the price high, but was willing to pay it for the purpose of sending the eggs to Italy for experiment. The reeling machine which has been on exhibition at the Mechanics' fair, was purchased for \$25. Some opposition was made to the purchase by Mrs. Felton, who changed her opinions when it was explained that the Society intended to instruct girls in reeling, so that they might in turn become instructors. Mrs. Felton was delighted to visit the Deaf and Dumb Asylum, to see whether the help of the institution could not be utilized in the manufacture of silk. Mrs. Felton was also requested to prepare an address to the Regents of the University, setting forth the advisability of adding books on silk culture to the library of the University, and taking other steps to advance the industry. Messdames McLennan, Hittell and Raymond were appointed to draw up a report on the fair.

THE yield of a Bartlett pear tree at Mrs. Michael's ranch, two and a half miles northwest of Healdsburg, was this year, by actual weight, 500 lbs. They were sold in Healdsburg at 2½ cts. per pound.

## The Raisin Market.

Our raisin producers are certainly enjoying a quick market this year, for the curing is only well under way, and yet about nine-tenths of the crop is already sold. One of our city firms, which has always had a good appetite for raisins, this year has manifested unusual eagerness, and the result is, as we have said, according to local reports, nearly all the raisins to be made at Riverside, Orange, Davisville, Winters, Rocklin and a part of the Fresno crop have been corraled. It has been reported that Mr. Blowers had sold, but we have it from his own mouth on Tuesday that he had not.

There is every prospect now for a good full crop, but it seems to us there is a disposition to overestimate the aggregate yield, even if the season should continue as auspiciously as it has opened. For the raisin curing is a long operation, and it requires a full, clear October to enable the grower to secure all his grapes. As a rule, there is no provision to finish up the curing artificially if the sun should fail, and therefore there remains danger of loss and reduction of the aggregate yield. We have it on authority of Mr. Blowers, from the information he has secured from the different raisin districts, that there is a probability of a production of 100,000 boxes, providing the weather is favorable throughout. Other estimates have gone considerably higher, and, as the local consumption of raisins is set at from 50,000 to 60,000 boxes, it is unfortunate to overestimate the production, for it leaves the impression that a great surplus must be exported and has a tendency to depress prices to the advantage of speculative buyers. With fair weather there will be a good surplus for export this year, and the California raisins will make earnest approaches to the Eastern producers. There will be a high quality sent to them this year, which will, we trust, soon overcome the ill-impression produced at the East by the shipment of some in former years which could not find sale here because of their faulty curing. We have full confidence in our best raisins commanding a favor, and, as the Malaga crop is short, it will be a good opportunity for the Californians to gain a general introduction. It is announced that the railway managers are disposed to concede somewhat from usual rates in carrying raisins East. J. C. Stubbs, general freight agent of the Central Pacific, in a letter to a gentleman at Riverside, announces that raisins will be taken from Colton to New York, Boston or Chicago at \$1.82 per 100 lbs. by the car-load. Less than a car-load at \$2.84 to New York or Boston, and \$2.59 to Chicago. This is at the rate of 36½ cents per box, and is a rate applicable only to raisins, with a view to developing that growing industry.

## In Memory.

Our readers will find in our Home Circle this week a portrait and sketch of the life of our lamented contributor Mary Mountain. We are pleased to bear this slight testimony to the good deeds which she has done for the true and noble in life which we endeavor to uphold in the RURAL PRESS. Her longings and aspirations were pure and high and they were the inspiration of her writings. She had long suffered severely from bodily infirmity, and her pen was in fact almost stricken from her hand three or four years ago. Those who knew her work from 1871 to 1876 can form the best judgment of its worth. Her death is a severe blow to her faithful husband and loving children, and to the large circle of relatives who gathered at her burial in Lone Mountain cemetery on Sunday, Sept. 4th. She will live long in memory.

MORE TESTIMONY CONCERNING EARLY CUT GRAIN.—It is rather out of season now to speak about grain cutting, but we have some recent experiments to record, and they may be stored up for next summer's use. At the late meeting of promoters of agricultural science in Cincinnati, Prof. C. R. Kedzie, of the Michigan Agricultural College, gave in detail, illustrating with diagrams, the result of a long series of observations upon the changes which transpire in the ripening of wheat. Observations were simultaneously made on two varieties—the Shoemaker and Clawson—beginning at the first formation of grain, and following on with daily tests, till the samples were overripe. The exact facts could not be taken in passing, but the result showed that gluten, the most valuable constituent of wheat, and cellulose (woody fiber) began to form rapidly in the early stages of the kernel's growth, but continued at unequal rates. The gluten reached its highest point in quality, and greatest absolute quantity, at the time the kernel was just hardening so as to require some effort to mash it between the thumb and finger. From this point it gradually depreciated, but the cellulose continued to increase till the grain was dead ripe, increasing faster in hot than in cold days, and at the very last stage of observation, when the grain was overripe and apparently dry, two or three hot days sent up the per cent of cellulose at a deleterious pace. The two varieties differed a little in the development of their corresponding elements, but followed closely in the same general course. The inference to be drawn from the facts noted is that there is a very general loss to farmers, both in respect to total yield and quality of grain, by leaving it too long in the field before cutting.

## QUERIES AND REPLIES.

## Treatment for Gumming Cherry Trees.

EDITORS PRESS:—Can anything be done to prevent cherry trees from gumming? We have some which were set four years ago last spring, made rapid growth every year and have been pruned heavily each year. They have borne fruit three years. This summer before the fruit was ripe some of them began to gum; the body of the tree was covered with gum an inch or two thick, and in a short time the leaves began to wilt and now the tree looks dead.—M. L., Fisherman's Bay, Sonoma county, Cal.

EDITORS PRESS:—You're received, with enclosed queries from "M. L.," concerning gumming of cherry trees. Not knowing the nature of the soil the trees are planted in, and other points, it is difficult to reply in a few words. To prevent cherry trees from gumming, it is necessary that soil, location, and culture should be carefully considered before planting; also, that they be on the Mazzard stock, especially those of the "Heart" varieties. The soil should be deep, with a good proportion of sand in it, and well drained, either naturally or artificially; the location should be such as to insure as much as possible an equability of climate—the cherry dislikes sudden climatic changes; the cultivation should be good; the pruning should be regular, and should be done at or soon after mid-summer, and the cutting back, which at no time should be severe, should be lessened in extent each year as the tree comes into bearing. The tree should, also, be trained very low, and it is well to well wrap whatever part of the main trunk is exposed to the sun for the first two or three years.

If "M. L.'s" land is wet or heavy, I would advise that he dig a ditch and drain it between each row of trees, if there is sufficient fall. The bark should be carefully examined in spring and early summer, and every spot of gum cut out, as well as all decayed parts, which should afterward be varnished over with a solution of shellac and alcohol. Then let the trees, where exposed to sun or any sudden changes of weather, be well protected by wrapping sacks around them.

If, however, soil, location, etc., are not right, it would be better to plant something else, as the cherries die—plums, for instance, which generally do well in the coast counties.—LEONARD COATES, Yountville, Cal.

## Danger of Cattle and Hogs Feeding Together

EDITORS PRESS:—Some ten years ago some cattle, mostly cows, died at Santa Cruz, of what was then termed "mad itch." Although not a new disease, the cause was obscure, and only after considerable investigation was the diagnosis fairly made out. It was found to be caused by some animal parasite (entozoa). Cows had been fed cornstalks in the same lot with hogs. The hogs not being so gregarious as the cows, would chew the stems of the green cornstalk, casting the tough fiber from their mouths after sucking the sweet juice. The cows would pick this up and swallow it. Ten years ago not so much was known of entozoa as to-day. The hog is at times badly infested with trichinae, as pork eaters have often found to their sorrow. This parasite does not kill the hog, or even make it sick, only occasionally. The porker grunts and grows fat; but woe unto some other animals that become infested with trichinids. In case of these cows, the saliva of the hog carries the ova out with the corn fiber, and when in a few days they began to develop in the cow along the digestive canal, and probably conveyed to the membrane of the brain through the eustachian tubes, nervous irritation resulted, and the poor animals became frantic. Some died in 10 to 24 hours after appearance of the first symptoms. We found on post mortem examination but little more than slight inflammatory action. In one case there was an abscess in the brain. In others there were no abnormal appearance in the tissues. A history of these cases was published in the RURAL PRESS at various times, from October, 1871, to March, 1872. The feeding of hogs with other stock was strongly impressed upon many farmers at that time. And yet not many weeks ago, and not far from the farm where seven or eight cows died ten years ago of trichiniasis, I saw cows and hogs feeding together. Fortunately, the ewine may, for the time being, have been free from the ova of the insect; or for some other fortunate reason, the cattle were not infected. It is well, however, to keep the fact before the people, that through ignorance they may not commit the serious error that has too often been committed, of allowing animals that are liable to contagious infection to feed together.—C. L. ANDERSON, Santa Cruz, Cal.

THE MUSSEL SLOUGH SETTLERS.—The Mussel Slough prisoners have received notification from McBride & Highton, their attorneys in San Francisco, that they will be released from jail on Saturday, the 24th inst.; the expiration of their term of eight months' imprisonment, without payment of the fine of \$300. A large delegation of the prisoners' friends will leave Hanford, for San Jose next Thursday afternoon, in private carriages, to bring the men home, arriving in San Jose next Monday, and will be back home on the Saturday following. On Wednesday, Oct. 5th, an ovation will be tendered them at Hanford. A committee of arrangements have the matter in hand, and will leave no stone unturned to make the reception a grand success.



## Baker & Hamilton's Benicia Agricultural Works.

We made a flying trip to Benicia on Friday of last week, to see the new Agricultural Works at that place. These Works are, in fact, an advanced and extended form of the old Sweepstake Plow factory at San Leandro, the machinery, etc., of the latter having been moved to Benicia to serve as a nucleus of a much larger establishment. The location at Benicia was chosen with much care, and it is doubtful if there is a better in this State. It is on the main line of the Central Pacific, the tracks passing through the property. It also touches deep water, and has its wharves and warehouses on Carquinez strait. Thus, either by rail or water, the factory is accessible; in fact, it is upon the highways of each method of travel and transportation.

The area covered by the works is large. Including both land and water lots there are about 15 acres. The floor room in the different departments of the establishment is also large, as there are about 10,500 square ft. of workshop floor and nearly 2½ acres of workshops and warehouses together. The present building will give room for 300 workmen when the factory is run full handed.

The property now owned by the Benicia Agricultural Works is the site formerly occupied by the Pacific Mail Steamship Company. There were several good brick buildings on the place which have made over splendidly into shops. In addition to these there have been several fine new buildings erected. In order to give our readers a distance some rough idea of the extent and character of the establishment we ask them to go with us on a fast walk through the buildings.

If one goes to the works from the village of Benicia, he will probably stroll out H street. The north line of the property rests on this street. Enter one of the large doors and you are in a large shop, 40 ft. wide and 285 ft. long, which is devoted to the heavy forging for plow work, etc., and here will be found powerful steam hammers, large forges, shears, punches and the like; also annealing furnaces. Near by are the large grit and emery stons for polishing plow points, moldboards, etc. All these machines have plenty of room, and it is plain to see that rapid and effective work can be done with them.

Passing through this building, the visitor crosses the yard to a large two-story brick building, inclosing three sides of an open court or quadrangle. The sides of the building are 140 ft. long, and the width of the rooms 40 ft. Beginning at the northeast end, first is the plow shop (40x125) in which the lighter forging is done and the plows set up. One end of this shop is devoted to iron work for the spring wagons which are one of the specialties of the concern. Turning to the right and crossing a hallway, one comes to the offices which are spacious and well arranged. Next is the store-room (40x70 ft.), in which the shelf hardware, etc., used in the establishment is stored. Next is the machine shop (40x140), with a fine array of iron planers, lathes, boring machines, etc., many of them new and of the latest patterns. One end of the machine shop is set apart for iron, farm and freight wagons and iron harrow work. The Sweepstake iron wagon our readers will remember as having been fully described and illustrated in our columns last year. The second story of this building is chiefly occupied by three departments, a pattern shop, a fire department furnished with the latest fire-fighting appliances and men ready to answer the ring of the watchmen from any part of the works. There are also a large wood shop for spring wagon work, and a large shop for wood-working machinery.

West of the building just described, is the foundry, a high, light and airy building, 75x130 ft. The sand floor is one of the best we have seen, and the two new cupolas, with the elevator for lifting coal and iron, the new pressure blower, and other appliances, are fit to delight a molder's heart. Adjacent to the foundry is an excellent apartment for cleaning castings, and a pattern ware room.

Crossing the yard southward, one comes to the engine house of brick, containing a new Corliss engine (100-horse power), made by Goss & Adams of San Francisco. There are two large boilers and good arrangements for firing with chips and shavings. Adjacent to the engine house is a new frame building, 60x265 ft., which is the main shop for wood-working machinery, and the large planers and circular saws (machines which are always greedy of room) have here abundant space. Under the main floor there is an apartment the whole size of the building (60x265), which makes a splendid storehouse for hardwood lumber and the like, and gives space for the barley crusher, a new feed mill made by the firm, which does good work, and is being introduced in different parts of the State.

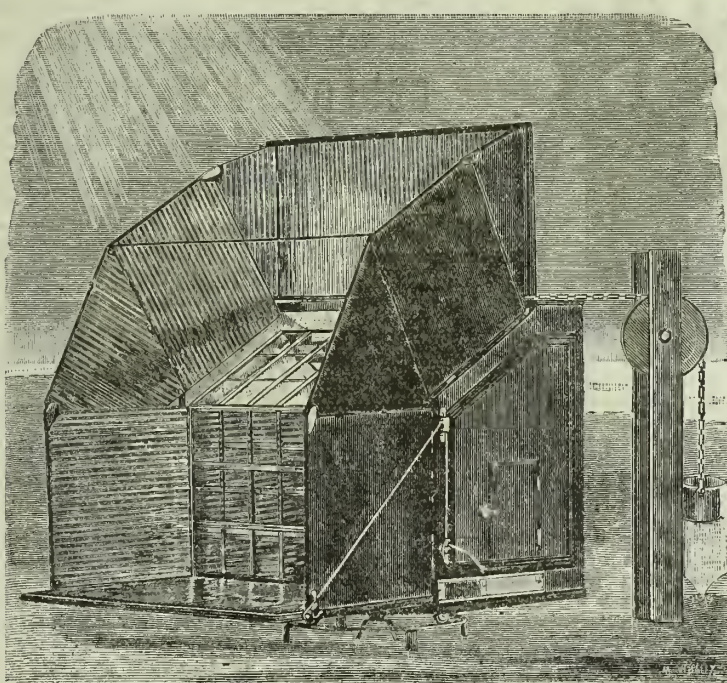
Southward across the tracks of the overland railway are the wharves. First a square wharf 76x87 ft., now used for coal, and beyond is the main wharf, 65x600 ft., on which is a new warehouse, 50x468 ft. This is very convenient for storing and shipping machines, etc., for on one side is deep water, and on the other is a side track of the railway, bringing cars up to the doors.

We have thus sketched a run over the Benicia Agricultural Works. Our notes may give

the reader some idea of the extent and admirable arrangements for manufacturing, but the details can only be learned from a personal visit, which is worth the cost and time to anyone interested in the mechanical progress of the State. We regard the Works as an exponent of our advancement in agricultural manufacturing, and a credit to California. The works are owned by the well-known firm of Baker & Hamilton, but have been incorporated. The superintendent is F. A. Hill, an experienced manufacturer and inventor of the famous Sweepstake implements, and the Secretary E. P. Palmer, who also had long experience in the old Sweepstake company. The Benicia Agricultural Works will manufacture the wide range of implements and machines which were made by the old concern at San Leandro, and will extend its manufactures as the needs of our agriculturists demand.

In this connection it is but proper to add that the pioneer firm of Baker & Hamilton are entitled to much credit for the building up of the home manufacturing enterprise which we have described. They liberally supplied capital to bring the early establishment at San Leandro up to a paying basis, and they have freely invested the means necessary to build up the Benicia Works. They have been generous patrons of worthy inventors, and have thus brought out many valuable implements especially adapted to California use. They have stood among the earliest to demonstrate the possibility of home manufacturing, and, as to pathfinders generally, the course has not always been smooth. That they have succeeded, is all the more credit to their effort and enterprise, and the future of the new Works at Benicia will be their reward.

### THE ADVANTAGES OF AN ARID REGION.—



ELY'S PATENT SOLAR HEAT FRUIT DRIER.

There are advantages in an "arid" region after all, for we do not remember any worse water famine here as that described in the Cincinnati *Price Current* of the 1st inst. In alluding to the prevailing drouth and its effects upon the crops, it says: The fearful effects of a prolonged drouth can scarcely be realized by those who have no experience of the kind. There are large areas of the country in which vegetation is literally burned up. Even in Kentucky, within a few miles of Cincinnati, some of the farmers have hauled water 8 or 10 miles for themselves and their live stock. Some of the railroads have put on water trains to supply people with water. In some places further west the drouth has been more prolonged. Within the last few days, however, rain has fallen.

**THE ROOT OF THE COTTON PLANT.**—Mr. W. C. Staehle, an American chemist, has discovered a curious new product in the bark of the root of the cotton plant (*Gossypium herb acium*). When the bark of this root is exhausted by alcohol of the specific gravity of 0.84, a dark reddish-brown liquid is obtained, which when distilled to recover the spirit, leaves a resinous matter which amounts to 8% of the original weight of the bark. The new product thus obtained appears black and shining, but when pulverized takes the color of cochineal. It dissolves in 14 parts of alcohol, 15 parts of chloroform, and 122 parts of benzol. It dissolves also in caustic alkalies, and is precipitated from these solutions by acids. Hydrate of potash colors green. Sulphuric acid dissolves it with a red-brown color. Its other properties have not yet been examined.

The Mechanics' fair receipts this year reached \$43,398.74, divided as follows: Sales of privileges, \$3,977.75; catalogues, \$204.20; excursions, \$41; gas, \$21.04; season tickets, \$3,142; single admissions, \$36,012.75.

## Solar Heat Fruit Drier.

The engraving on this page shows a new and interesting arrangement for fruit and vegetable drying by solar heat. The principle is to concentrate the sun heat by means of reflectors upon the fruit which is spread upon trays in a chamber with a glass front. The manner in which this is done is quite apparent from the engraving. The fruit is introduced upon the trays through the back of the cabinet. The door shown on the side in the picture is to permit the operator to enter in case the glass should need polishing on the inside, or something of that kind.

The machine is mounted upon a center pivot, about which it rotates so as to face the sun, and thus obtain the full benefit of the sun's heat. The device for rotating is quite simple and inexpensive. A harrel is filled with sand or fine dirt. A cord coming from one corner of the machine passes over a pulley, and a weight on its opposite end rests upon the sand or dirt in this harrel. A spigot allows the sand or dirt to run out of the barrel slowly, and as fast as the level of the sand lowers, the weight descends and turns the machine. This is so simple it can be understood by anybody. It is to be used when the machine is filled with fruit and left to operate itself. In ordinary use, when someone is at work near at hand, all that is necessary to do is to move it a little toward the sun with the hand. As it rests upon a pivot and turns on friction wheels, it moves with very little force. The philosophy of the drier is set forth by the inventor as follows: Sun heat is powerful and costs nothing and is

## Bamboo Groves.

The bamboos are still growing, although so far as our observation goes, they are not partial to a California summer. However the plants are still young and may do better when they get a firmer hold on the soil. Meantime bamboo literature accumulates and makes us all the more anxious that the plants should prove well adapted to our conditions. In a paper recently read before the Horticultural Society of Victoria, Mr. F. C. Christy, describing a specimen of the Japanese gigantic bamboo, now growing in the society's garden in Melbourne, says: It is cultivated in groves on the hillside or valley, in deep volcanic chocolate soil—not in wet situations, but where there is a moderate amount of moisture. In early spring the bamboo throws up large offsets, or suckers, around the parent plant; these are about three inches or four inches in diameter, and are removed when about 12 inches above the ground, leaving three or four to mature, which apparently mature during the summer, or in about six months, and attain a height in one summer of from 40 ft. to 80 ft., according to soil and situation. The groves consist of several hundred bamboos, planted about 12 ft. apart, kept free from weeds and undergrowth of every kind. The bamboos produce dense shade; a bamboo grove is one of the coolest retreats in summer; the shade and shelter produced contribute in a great measure to their luxuriance. This bamboo rarely seeds, and the few seeds produced are said to be most difficult to germinate; its propagation is by the removal of one-year-old matured stems with roots; the young offset taken in spring invariably withers and dies. The young offsets removed to strengthen the growth of those required for commerce when matured are edible; sliced and boiled they are tender and crisp and of a very delicate flavor, and are served at tables as an ordinary vegetable; the offsets at the same tender age (when about 6 inches or 12 inches through the ground) are also sliced and preserved with ginger, and form the commercial preserve 'chow-chow.' When the bamboos are matured, they are cut near to the ground, and used for scaffold poles, fences, guttering for houses, down pipes, underground drains, garden seats, ladders, and a thousand other purposes. This bamboo will grow on Australian mountain sides, and in valleys where ordinary shelter and rich, deep soil can be procured, and will stand 14° of frost.

## An Anti-Malarial Plant.

In lectures on medicine by Dr. Thomas Watson, delivered in 1847, speaking of malaria, he says: Dr. St. Cartwright, of Natchez, asserts that the *Jussiaea grandiflora*, or floating plant of the bayous and lakes of lower Louisiana, has the power of preventing the development of malaria in regions particularly adapted to its generation. He affirms that it purifies all stagnant water in which it grows; that the lakes and bayous inhabited by it, being as pure to sight, taste and smell as if it had just fallen from the clouds. He ascribes the presence of and peculiar hygienic or health-preserving properties of this plant the remarkable exemption of the inhabitants of lower Louisiana from malarious or miasmatic diseases. The fact, he remarks, that the region of country in which this aquatic plant abounds is exceedingly healthy, can be established beyond cavil or doubt; it nevertheless contains more stagnant water and swamps than any other part of the United States.

One of our readers who has land in the malarial district of the San Joaquin valley asks us what is now known concerning this plant which was put forth as a malaria killer in 1847, and whether the observation given above is sustained by facts. The best we can do is to appeal to those acquainted with the botany and health of Louisiana to inform us. If there be such a sovereign remedy for malarial country, it should be generally known. Who will tell us about the *Jussiaea grandiflora*?

**AMBER.**—Much of the amber, as it is found, is in small pieces. In order to give additional value to them, a large number of smaller pieces are ingeniously joined together so as to form one of larger size. This is accomplished by moistening two surfaces of amber with potash, warming them to the proper degree and pressing them together. Still smaller pieces are joined by exposing them, covered with sand in an iron pot, to the action of heat for 40 hours, or boiling it for 20 hours in rape oil, when the material will become transparent and the pieces will fuse together. As vessels and other objects of great size made of amber have come down to us from remote times, the fact suggests the probability that the art of molding and working amber in some such manner was known and practiced by the ancients.

**HENRY VILLARD**, President of the Northern Pacific railroad and Oregon railway and navigation company, left New York on Monday night for a tour of inspection on the Pacific coast with a numerous party of friends. They will go direct to San Francisco.

**REDDING** proposes to have one of the best schools in Northern California, and has hopes of a future high school.

A ROAD locomotive has been in operation at Orland this season. It can draw 40 tons of wheat in wagons attached to it, and has been making daily trips to McIntosh landing. The charge of hauling it is \$1 a ton. The locomotive draws loads of wood on the return trips from the landing at a charge of 50 cents per cord.

The Puyallup valley, W. T., adjacent to Tacoma, will produce 1,000,000 lbs. of hops this season. About 1,000 Indians are now engaged picking the crop.



## Shall We Bluestone?

[CONTINUED FROM PAGE 195.]

and Danish wheat, and believe these grains to be less apt to become smutty; others advise the bluestone or declare carbolic acid to be the panacea; yet others propose lime, on a sounder principle, I think, as it is a fertilizer. It may be worth trying.

If it may safely be stated then, that all hazardous applications will prove a failure, we may find some consolation in the fact that we do not find ourselves with it in an exceptional condition. Every science, in its infancy, collects experiments in the same roundabout manner. There is no harm done if we do not adhere too long to this way of investigation.

In medicine—and the science of agriculture may in some respects be regarded as the application of the principles of this art to plants—the same condition existed, and exists to some degree in some schools yet.

Some man of prominence for instance has recommended a remedy against a certain disease. It is at once adopted and highly praised, but soon it is cast aside and another one extolled, soon to be forgotten in its turn. Truly, this also is a way to truth, but a long and tedious one. But find the principle which underlies all such vague and various experiences, and you cut a straight, short way clear across the brush and gulches, and all mysteries are cleared up at once.

Agriculture begins to become a science. Steel must take the place of iron, and the plow of investigation will soon turn up and out many a stone which lay hidden for centuries, sleepy and immovable.

If I should have erred in the object of this letter, there is, I believe, not much damage done. People are conservative in such matters, almost too much so. Let the spirits freely burst upon each other. The mind needs exercise to enjoy health as well as the body.

RICH. SCHULZ, M. D.

Pinkney, Shasta Co.

[The subject is worth discussion, and the relation of experience with and without bluestone under similar conditions of soil and season will be in order. Our own opinions are in some respects not in accord with Dr. Schulz, but we await the discussion by others. The allusion to Odessa, etc., as resisting smut needs the remark that these new varieties are becoming popular, chiefly because of their resistance to rust.—EDS. PRESS]

## Interesting Statistics.

The production of agricultural implements in this country gave employment in 1850 to 5,361 hands; in 1860, to 12,867; and in 1870, to 23,251. Now the number of hands engaged in this industry is 40,680. Maine now has 282; New Hampshire, 245; Vermont, 495; Massachusetts, 646; Rhode Island, 108; Connecticut, 790; New York, 7,237; Pennsylvania, 3,097; Delaware, 71; Ohio, 10,248; Michigan, 1,938; Indiana, 2,526; Illinois, 7,870; Wisconsin, 2,700; Minnesota, 330; Iowa, 1,104; Missouri, 1,074; Kansas, 261; Nebraska, 81. Ohio has made notable advancement in this industry. In 1860 she had 165 persons employed in it and to-day has 10,248.

Alabama is as large as England, and yet has only 1,000,000 of people to England's 21,000,000. California, with less than 1,000,000 of people, is very little smaller than France with 36,000,000. We do not think Massachusetts overcrowded with 1,500,000, nor Ohio with less than 3,000,000, nor New York with 4,500,000; and yet, if Texas were settled as thickly as New York, its 1,000,000 would grow to 22,000,000; if like Ohio, it would have 21,000,000; if like Massachusetts, it would hold 52,000,000, or more than the whole present population of the Union. There are only 15 States out of the 38 which have each more than 1,000,000 of people, while there are 14 States which have a larger area than England with her 21,000,000. Settled like England, these States would have more than 300,000,000. The States toward which emigration is now mainly setting are Minnesota, Nebraska, Kansas, Texas and Colorado. These about equal Missouri in population, while their area is ten times hers. So, to be evenly populated like Missouri, sparsely populated as that State is, these five should have 29,000,000; and to be settled like Massachusetts, being ninety times as large, they must have 135,000,000, or three times our country's present population. If the whole territory of the Union was settled like New York, it would contain 270,000,000; if like Massachusetts, 560,000,000; and if it reached England's ratio of inhabitants to the square mile, its population would almost equal the present population of the globe.—Exchange.

A NEW SOURCE FOR CITRIC ACID.—At present, lime juice, from which citric acid is made, has to be imported into the United States, but the New York Commercial Advertiser says it could easily be produced from the fruits growing in Florida, if only sufficient energy were put into the work. Efforts are now being made to induce the lime and lemon growers of the south to prepare the lime-juice, and if this should prove successful, there being no reason why it should not, the entire production and manufacture of citric acid will be kept in the country, saving hundreds of thousands of dollars annually, and developing another great industry.

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Also, all sizes of FARM WAGONS, made by Mitchell, Lewis & Co., of Racine, Wis., who make the best Farm Wagons in the world. All our Wagons are fully warranted.

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A NEW TREATMENT for Consumption, Asthma, Croup, Bronchitis, Catarrh, Dyspepsia, Headache, Debility, Neuralgia, Rheumatism, and all Chronic and Nervous Disorders. ACTS DIRECTLY upon the great nervous and organic centres, and cures by a natural process of revitalization. HAS EFFECTED REMARKABLE CURES, which are attracting wide attention.

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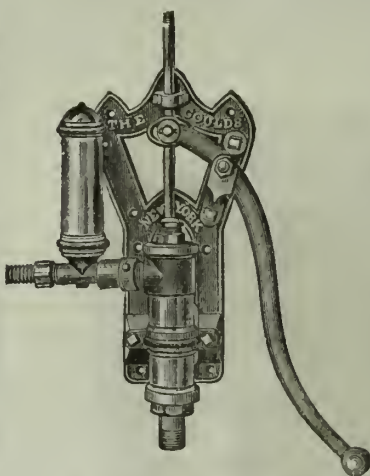
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WE HAVE ESTABLISHED A DEPOSITORY OF OUR COMPOUND OXYGEN HOME TREATMENT at San Francisco, Cal. This will enable patients on the Pacific Coast to obtain it without the heavy express charges which accrue on packages sent from Eastern States.

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It will thresh and grind at the same time, all the separator can thresh. For further particulars, Address

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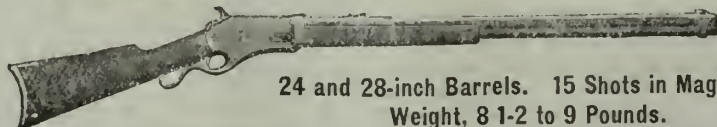
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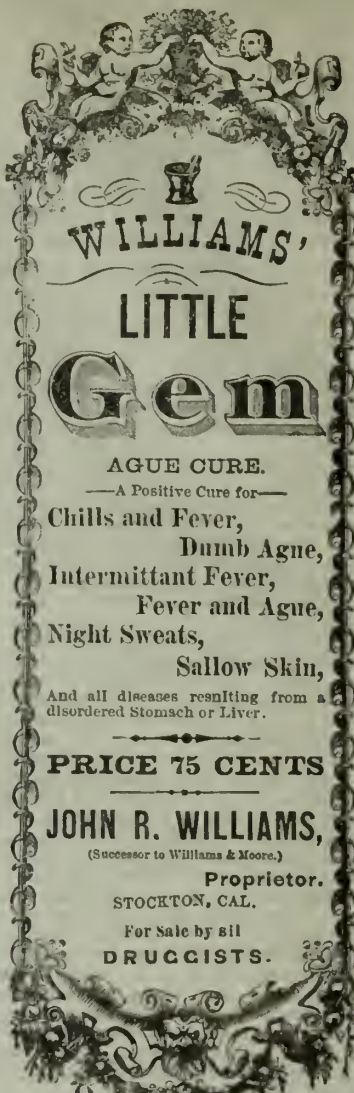
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Best made. Runs with less wind and has more power than any other. Never blows down. Ten ft. Mill \$55. Warranted for 5 years. Full description free. N. P. MIX, Avenue O.



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Chills and Fever,  
Dumb Ague,  
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Night Sweats,  
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And all diseases resulting from a disordered Stomach or Liver.

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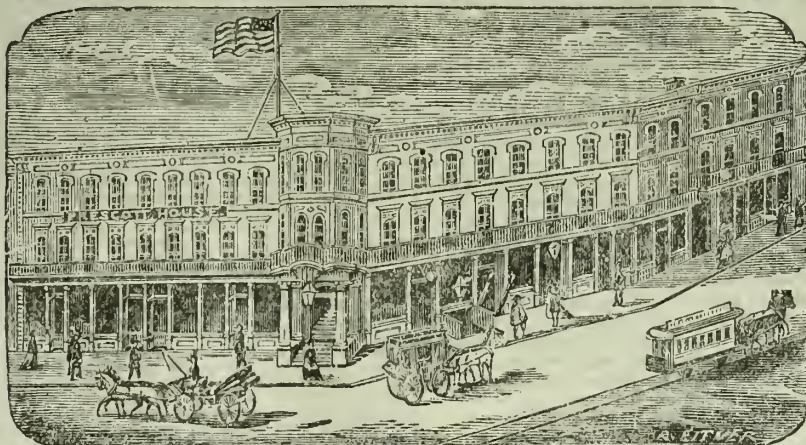
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THE BEST AND CHEAPEST PREPARATION FOR THE CURE OF SCAB.



The General Health and Condition of the Sheep Promoted by its Use. Non-Poisonous.

One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

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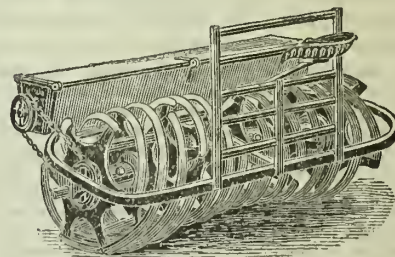
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Thousands of these machines have been put in use in the past four years, with most gratifying results to farmers. For second plowing they do better work than can be done with gang plows for less than half the cost.

Putting in summer fallow and volunteering can be done with a x animal at the rate of 13 acres per day, in the most thorough manner. For working salt-grass and tule sod the Pulverizer has no equal.

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J. C. BOWDEN, Stockton Cal.



# PATENTS AND INVENTIONS.

## List of U. S. Patents for Pacific Coast Inventors.

From Official Reports for the "Mining and Scientific Press," U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING AUGUST 30, 1881.

246,302—DRYDRUM—H. B. Angell, S. F.  
246,397—INSECT PROOF SAFE—C. H. Larrabee, Napa, California.  
246,392—ORE FEEDER—F. A. Huntington, S. F.  
246,500—BROOMS—Geo. Hall, Santa Rosa, Cal.  
246,555—CART—D. W. C. Putnam, Petaluma, Cal.  
246,383—CAR COUPLING—S. J. Ford, Placerville, Cal.  
246,420—TRACTION APPARATUS FOR CABLE R. R.—H. Root, San Francisco.  
246,391—CABLE CURVE—A. L. Anderson, S. F.  
246,372—HYDRAULIC GRAVEL ELEVATOR—G. W. Crais, San Francisco.  
246,386—HOPS COLLAR—Grabel & Staufenbell, Ventura county, Cal.  
246,337—THERAPEUTICAL GALVANIC BELT—fra Gray, S. F.  
246,523—WIRE ROPE RAILWAY—Jocil B. Low, S. F.  
246,424—SOLAR REFLECTOR FOR SURVEYING INSTRUMENTS—Wm. Schmolz, S. F.  
246,506—AX—P. R. Smith, Portland, Oregon.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific Coast Inventors transacted with perfect security and in the shortest possible time.

CAR COUPLING.—S. J. Ford, Placerville, assignor to George E. Williams, same place. Dated August 30, 1881. No. 246,383. This invention relates to certain improvements in drawheads and couplers for railroad cars, by which the inventor is enabled to unite cars of different heights by the use of the ordinary link.

ORE FEEDER FOR CRUSHING MILLS.—Frank A. Huntington, S. F. Dated, Aug. 30, 1881. No. 246,392. This improvement in ore feeders consists in a novel combination of a double feed hopper having two oppositely projecting feeding spouts or troughs with crushing apparatus upon opposite sides of the feeder, each being provided with a means for actuating the spouts and causing them to discharge ore with the crushers as required.

SPRING ATTACHMENT FOR SAWS.—E. Mioburg, Callahan's ranch, Siskiyou county. Dated August 23, 1881. No. 246,033. This invention attaches a stout spring to the end of a cross-cut saw, such as is used for sawing trees. On one side of the tree-trunk some staples are driven, and into these are inserted the end of the spring. The other end of the spring is connected by chain-hinge or link. The saw is partially made to recover itself by the power of the spring, which renders assistance in pulling it back. It holds the saw well against the wood, and thus relieves the sawyer from much of his exertion to press the implement to its work. Its advantage is best seen in cutting upright timber. In such sawing it is inconvenient to press the saw in sidewise; but with this spring attachment this is accomplished. One man can thus use a long and heavy saw, which would otherwise require a man at each end.

## Floor Building.

So few of the floors constructed in new houses are, says the *Building News*, equal to their work, that the attention of architects and builders might be profitably called to the subject. In going over some of the newly-erected houses in the suburbs of London, it is not infrequently that one finds dwelling house floors which have sunken so much in the center as to destroy the comfortable assurance that they are safe. These instances occur chiefly in houses erected by speculative builders, who seem to be under no regulation of any kind in respect of floor timbers. \* \* \* Many practical builders have a conviction that if a timber as a joist has a larger cross section than another it must be stronger. Thus they fancy a piece of timber 8 inches by 3 inches, which equals 24 square inches in sectional area, cannot be so strong as a piece 5 inches by 6 inches which has 30 inches in area. The fact is, the smaller piece is the strongest of the two if both are placed upon edge, as every one knows who has studied the principles on which the strength of beams depends. It is easy to convince the most practical of this seemingly inexplicable fact. If two beams of like size are placed side by side, the two will resist twice the amount of one of the pieces. This is so self-evident that experiment is not needed to establish the fact; in the same way, three beams will resist three times as much as one, and so on of any number. In plain English, when lengths and depths are equal, a beam of six inches in breadth will bear three times as much as one of two inches in breadth. It may be shown by experiment quite as readily that the strength increases more rapidly with the depth. In point of fact, another law of proportion is observed—namely, that having two beams of the same breadth and length but of different depth, the strength increases more rapidly than the depth; thus it is found a beam nine inches deep bears more than three times as much as one only three inches deep. These are very simple statements derived from facts and experiments and no complex conception of the resistance of certain fibers on both sides of a neutral axis, or quotations in algebra, are required to establish them.

In dwellings the load on a floor is chiefly

made up of furniture, though this is generally placed, at least the heavier articles, round the walls of rooms. The space occupied by tables and other objects in the center of a room reduces the available standing area, and thus, for all ordinary floors, 70 lbs. per superficial foot may be calculated for as the full load in extreme cases. Rules founded upon the resistance of beams to rupture are, however, of little use, as the floors may be seriously affected by deflection, and deflection is directly as the cube of the length. In regarding stiffness, the load per foot has been given by one authority as 90 lbs. per foot, including weight of materials. It makes all the difference to place joists an inch nearer, though builders like to give as much interval as they can, for economy's sake. Instead of joists being placed 12 inches apart, it is often found to find them 13 inches or even 14 inches, and the consequence is a scantling which has been found to answer in a well-built house fails when it is introduced with a greater distance or interval. Then the modern speculative builder's floor is seldom properly stiffened by cross bridging. There is only one row instead of two or more. Of course no practical man will deny the advantage of bridging his floor joists. It helps wonderfully to prevent deflection under a concentrated load, for the joist immediately beneath the load is relieved of direct strain, and the joists on each side take a share of the weight. Generally it may be taken that a properly bridged floor is capable of sustaining, without mere deflection, twice as much load as the same floor without bridging, so that the cost of the introduction is amply repaid.

THE "CALIFORNIA" WASHER.—G. M. Purcell made a telling exhibit of his "California" washing machine at the Petaluma fair, making a competitive trial which showed peculiar merit in his apparatus. Mr. Purcell's address in this city is 431 Fourth street.

GRAIN AND MILLSTUFFS.—Deming, Palmer & Co., of the Capital mills, made a fine exhibit at the Petaluma fair of grains, meals and feeds in which they deal and manufacture; the products were of great merit.

CARRIAGES.—The well known carriage factory of R. F. Briggs & Co., 220 and 222 Mission street, exhibited four splendid vehicles at the Petaluma fair.

ALWAYS ALIVE.—The PACIFIC RURAL PRESS, a paper that is always alive to anything that affects the interests of the farmer or dairyman.—*Petaluma Argus*.

## Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.  
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Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct, or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

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## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 21, 1881.

Wholesale trade has been slow on account of the distraction produced by the death of the President. The Produce Exchange met on Tuesday and adopted a fitting expression of regret. Values have held firm, and in some articles an advance has been gained, as may be seen in our notes below.

The latest from abroad is as follows:

LIVERPOOL, Sept. 20.—Good to choice California Wheat. In moderate demand at 11s@11s 1/2. Cargoes are a sixpence lower, at 5s 6d@5s 8d per quarter of 500 lbs. Receipts for the past three days, 209,000 cts, including 222,000 American.

#### Freights and Charters.

According to the latest information there are now in

port 18,003 tons engaged tonnage; 1,955 tons disengaged. There have been eight arrivals since Saturday evening, all being under charter to load Wheat. The list is as follows: Wooden ship Frank Carvill, 1,489 tons, 67s 6d to Liverpool; Havre or Antwerp; wooden bark Josephine, 447 tons, private; wooden bark General Fairchild, 1,428 tons, private; wooden ship Oberon, 1,180 tons, 77s 6d to Cork; iron ship Rockhurst, 1,400 tons, 77a 6d to Cork; wooden bark Admiral Tegethoff, 893 tons, 77s 6d to Liverpool direct; wooden ship Manuel Liaguana, 1,732 tons, 62s 6d to Cork; wooden bark C. A. Belyea, 825 tons, private.

#### The Foreign Review.

LONDON, Sept. 19.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The week's fine weather has greatly benefited agriculture, but it is altogether too late to alter the position of the harvest in its relationship to the Grain trade. Nearly everything offered is unfit to grind without foreign admixtures. Prices of native Wheats have not materially changed since Monday. A larger proportion of sales were made for feeding purposes, on the basis of published rates, which range from 22s@35s per quarter. Trade, both in London and in the provinces, closed decidedly weak for all descriptions. Foreign breadstuffs have not notably changed since Monday, and the condition of the great bulk of native deliveries has created a demand for hard Wheats not anticipated a month ago. These, therefore, have advanced 1s@2s during the past fortnight. The week's supply of foreign Wheat in London is 82,350 quarters, of which 37,764 quarters were American, and of foreign over 12,609 sacks. The greater proportion of American is strong Red Wheat. Oats are now in much request at latest quotations, but were weaker. Flours, such as California and Australian, were rather depressed. The price of Maize was rather against buyers at close of week, being 29s 6d ex ship, which is an advance of 3d@6d. The off-coast market has lost its tone since Wednesday, Saturday's quotations favoring buyers. Arrivals up to Thursday are 17 cargoes, of which 9 were reported as sold or withdrawn. During the current week about 25 Wheat cargoes are due. The bulk of the Wheat and Flour afloat is estimated at 720,000 quarters over that of the corresponding date of last year. On Saturday all buyers' offers of 20s 6d for Maize cargoes were refused. Sales of English Wheat last week were 43,793 quarters at 51s 1d per quarter, against 44,524 quarters at 50s 11d per quarter for the corresponding week of last year.

#### Eastern Grain and Provision Markets.

CHICAGO, Sept. 17.—Copious showers during the week have brightened prospects in the northwest, and business has picked up in consequence of that encouraging feature of the fall work, as well as through the advent of autumn with cool and bracing weather. Some kinds of business are so delayed with orders that the proprietors are refusing further calls on them out of necessity. Seeding will now go rapidly forward, and grains will suffice to feed the stock. Snow storms in northern Iowa and southern Minnesota seem to have had no disastrous effect, as they were accompanied by freezing in a few localities. The reports indicate the drouth has done its worst work, and is now over. The clearings for the week are nearly 41,000,000. Grain was active and firm throughout the week, with most of the sales at better figures than prevailed last week, and with good, strong, steady movement for cash and for futures. There is no corner, and prices keep up on the general boom. Provisions were firmer, with a tendency to increase in value about the middle of the week. At the close prices were rather off. Sales were made of the October option during the week for Wheat, at \$1.25@1.31; Corn, 64¢@69¢; Oats, 39¢@41¢; Pork, \$19.25@20; Lard, \$12.05@12.40.

NEW YORK, Sept. 18.—Wheat is more active, chiefly on speculation, and shippers are doing but little. Provisions are dull, at nominal prices.

CHICAGO, Sept. 19.—The *Tribune* has comprehensive reports of the drouth and its effects. They show that it has almost ruined the pasture in the Northwest and made plowing for winter wheat almost impossible. It has caused a great decrease in the prospect for the acreage of 1882. The potato crop is nearly a total failure everywhere, and all kinds of vegetables will be scarce, and the cost of living will be high this winter. In Minnesota, Dakota and Wisconsin there has been too much rain. The corn crop has been greatly damaged throughout the Northwest. The recent rains, however, have helped the fall seeding.

#### Eastern Wool Markets.

NEW YORK, Sept. 18.—Wool shows considerable activity, and prices are on the upward turn. All descriptions have received attention, but the noticeable increase is on California. Sales include 205,000 lbs spring at 22¢@23¢.

BOSTON, Sept. 17.—This has been another active week in the Wool market, the sales amounting to 5,082,000 lbs of all kinds, making for the past two weeks nearly 11,000,000 lbs that have been disposed of in this market. The demand has been almost exclusively from the manufacturers. Some lots have been taken on Philadelphia account, but otherwise there has been little or no speculation. Prices are quite firm, and have advanced 1¢@1 1/2¢ on fine fleeces. The demand for fine Wools has been quite active, and manufacturers have been free purchasers, sales ranging from 41¢@43¢ for X and XX for Ohio and Pennsylvania, 43¢@45¢ XX and above, including some large lots at the latter rate, and X and XX fleeces are now firm at 43¢@45¢. Michigan X fleeces, which have been sold to some extent at 40¢@42¢, and one lot at 42¢, are now held at 42¢@44¢; medium and Northern Ohio have been sold at 45¢@47¢, and medium and No. 1 Michigan at 43¢@45¢. In unwashed fleeces sales have been quite large, comprising some 1,350,000 lbs, at full prices, as high as 32¢ for fine unwashed, and as high as 34¢@35¢ for medium. Colorado cash Wool has been sold to some extent at 18¢@20¢ lb. California Wool has been in better demand, and sales have been made of 450,000 lbs at full prices. The combing and delaine Wool there is a good business doing. Fine delaine is taken as fast as offered at 45¢@47¢, and fine No. 1 combing at 47¢@49¢. Unwashed combing has been selling at 30¢@32¢, as to quality. Pulled Wools are firm, and have been in demand at full prices, from 30¢ to 35¢ for common; super, 40¢@45¢; good and choice super, 45¢; and 50¢ for very choice super. There have been considerable sales of Cape at 30¢@32¢; Montevideo and Mediterranean carpet at full prices. The market was firm at the close, with considerable inquiry.

#### New York Dried Fruit Markets.

NEW YORK, Sept. 17.—Foreign fruits are in demand. New Malaga raisins are at hand in considerable quantities, jobbing at \$2.00 for layers, \$2.70 for loose and \$2.95 for London layers. Some round lots have been secured at concessions. Valencia, 8¢; prunes easy, 6¢.

BAGS.—The market is unchanged.

BARLEY.—A farther advance has been secured for Barley, and the market is firm. We note sales: 67 tons Standard Chevalier for the East at \$1.47. Choice old Brewing is scarce, and readily brings the top of the market. Standard Chevalier is also in demand for the East at an advance. Coast Chevalier and Feed are both firm at quotations.

BEANS.—There has been another advance for Beans, Bayos, Butters, Red and Pink rising about \$1¢ ctl.

CORN.—Yellow Corn is firm at \$1.50, a notable advance since last week. There is no White Corn in the market.

DAIRY PRODUCE.—Prices are maintained, and fancy Butter is very scarce. Cheese is unchanged.

EGGS.—The high rate has brought in large quantities of Eastern Eggs, which are being used in the place of Californians—the latter declining 2¢ per doz.

FEED.—Bran Middlings and Cornmeal are all advanced from \$3 to \$4 per ton. Hay is unchanged, the range be-

ing: Wheat, \$10@12; oat, \$9@11; volunteer and stable, \$7@10; cow, \$8@9.50 per ton.

FRUIT.—Grapes are selling better to-day, Muscats going up to \$1 per box wholesale. The general price list for Fruit is advanced and supplies becoming less. California Oranges are \$1@5 per box, which ought to bring up some of the fine ones now in Los Angeles orchards. Our list shows an advance in several other Fruits.

FRESH MEAT.—Trade is quiet and values unchanged.

HOPS.—Fresh Hops are doing better, sales being at 17 to 21c per lb. The latest from New York by telegraph says: Hops are quiet; prices firm. Crop reports are conflicting. The authorities of the State estimate the shortage at 10% to 15% from last year. Cable advices indicate a shortage of about 30,000 bales in this year's crop in England.

Emmet Wells, in his New York circular of Sept. 10, says: Picking is still progressing; it will take fully another week to finish—a pretty good indication that it is a big crop. Estimates are still in order. Our exchanges give it as their opinion that the yield will come down 20% to 30% below last year's. Schorale (heretofore considered one of the best and largest Hop counties in the State) will fall nearly 50%; short, according to the *Republican*. Letters to dealers here from their agents in the country tell, in most instances, quite a different story; they make out that the decrease will be from 10 to 15%, that growers invariably omit to make any account of increase in acreage, a very important thing in arriving at the comparative yield of each year. England, according to our cable dispatch, will be nearly 50,000 bales short of her consumption requirements; this is less than her shortage was last year; the deficiency will be largely made up by early shipments from Germany and Belgium, and what are required later in the season will be ordered from us if our prices are right. Brewers will wait and watch the movement of exporters. Exporters will wait for orders from London; in the meantime the market will be dull and prices will not be established.

OATS.—The choicest Oats have advanced to \$1.70, which is obtained for Surprise Oats which are scarce. Sales have not been large but values are firm. We note sales: 200 and 150 sds choice Humboldt, \$1.65; 200 sds do, \$1.62; 130 sds led, \$1.55, and 150 sds do, \$1.50 per ctl.

ONIONS.—Prices are unchanged.

POTATOES.—Potatoes are slightly lower than a week ago owing to larger receipts. We give prices in our table.

PROVISIONS.—Bacon and Hams are still higher.

POULTRY AND GAME.—Poultry is unchanged. Game has arrived freely and is low.

VEGETABLES.—There is but little change. Cucumbers have improved considerably, and the best Green Corn sells a little better. Otherwise there is not much change.

WHEAT.—Prices are unchanged and little has been sold so far this week—1,500 sds No. 1 sold at \$1.70, and 450 sds do, at \$1.67.

WOOL.—There is no change in Wool.

## Domestic Produce.

WHOLESALE.		WEDNESDAY M., September 21, 1881.	
BEANS & PEAS.		Silver Skin.	@ 80
Bayo.	2 25 @ 2 50	Oregon.	@ 80
Butter.	3 00 @ 3 25	POTATOES.	
Castor.	3 50 @ 4 00	Early Rose.	1 00 @ 1 50
Pea.	3 50 @ 3 75	Petaluma, ctd.	1 25 @ 1 30
Red.	2 25 @ 2 50	Fomales.	@ 1 30
Pink.	2 25 @ 2 50	Humboldt.	@ 1 30
Small White.	3 50 @ 3 75	Idem.	@ 1 00
Lima.	5 12 1/2 @ 5 50	" Peachey.	@ 1 00
Field Peas, blk eye.	50 @ 75	Jersey Blue.	@ 1 00
do, green.	1 75 @ 1 90	Cuifey Cove.	1 35 @ 1 37 1/2
BROOM CORN.		River, red.	1 20 @ 1 30
Southern.	3 @ 3 1/2	Chile.	@ 1 00
Northern.	4 @ 4 1/2	Sweet.	87 1/2 @ 1 00
CHEESE.		POULTRY & GAME.	
California.	4 @ 4 1/2	Hens, doz.	4 50 @ 5 00
German.	6 1/2 @ 6 3/4	Roosters.	4 00 @ 5 00
DAIRY PRODUCE, ETC.		Broilers.	2 50 @ 3 75
BUTTER.		Ducks, tame, doz.	4 00 @ 5 00
Cal. Fresh Roll, lb.	35 @ 37 1/2	Mallard.	2 50 @ 3 00
do Fancy Brands.	@ 40	Spring.	25 @ 1 50
Pickle Roll.	@ 32 1/2	Feet.	25 @ 1 50
Flrkin, new.	27 1/2 @ 30	Wildgeon.	@ 1 00
Eastern.	20 @ 25	Geese, pair.	1 25 @ 2 00
New York.	@ 20	Wild Gray, doz.	@ 1 00
CHEESE.		White do.	@ 1 00
Chese, Cal. B.	13 @ 14	Turkeys.	13 @ 17
do.	@ 13	do, dressed.	2 50 @ 3 00
Cal. Fresh, doz.	35 @ 38	Salpa, Eng.	2 50 @ 3 00
Ducks.	@ 25	do, Common.	1 00 @ 2 00
Oregon.	@ 25	Quail, doz.	75 @ 100
Eastern, by expts.	18 @ 25	Rabbits.	75 @ 100
Picked here.	@ 22	Hare.	1 00 @ 1 50
Utah.	22 @ 25	Venison.	6 @ 8
FLOUR.		PROVISIONS.	
Brant, ton.	19 00 @ 19 50	Cal. Bacon, extra	
Corn Meal.	@ 34 00	clear, lb.	14 @ 14 1/2
Hay.	7 00 @ 12 00	Medium.	14 @ 14 1/2
Middlings.	@ 27 50	Light.	@ 15
Oil Cake Meal.	@ 20 00	Lard.	13 @ 16 1/2
Straw, bale.	42 1/2 @ 45	Cal. Smoked Beef.	10 @ 10 1/2
FRESH MEAT.		Shoulders.	8 @ 9
Beef, 1st qual, lb.	5 1/2 @ 6	Hams, Cal.	12 @ 12 1/2
Second.	4 @ 5	Dupee's.	16 1/2 @ 17
Third.	@ 4	Whittaker.	@ 16
Mutton.	3 @ 3 1/2	Royal.	16 1/2 @ 17
Spring Lamb.	4 @ 5	Stew.	7 1/2 @ 8
Pork, un-dressed.	5 1/2 @ 6	Golden Gate.	16 @ 16 1/2
Dressed.	8 @ 8 1/2	Alfalfa.	15 @ 17
Veal.	6 @ 7 1/2	do Chile.	@ 17
Milk Calves.	7 1/2 @ 8	Cornary.	4 @ 5
do, choice.	@ 8 1/2	Clover.	14 @ 15
GRAIN, ETC.		White.	45 @ 50
Barley, feed, ctd.	1 32 @ 1 35	Cotton.	@ 20
do, Brewing.	1 40 @ 1 55	Flaxseed.	25 @ 30
Chevalier.	1 40 @ 1 47 1/2	Hemp.	7 @ 8
do, Coast.	1 39 1/2 @ 1 35	Italian Rye Grass.	25 @ 30
Buckwheat.	@ 61 50	Millot, German.	7 @ 12
Corn, White.	@ 61 50	do, Common.	7 @ 10
do, Yellow.	@ 61 50	Mustard, White.	3 @ 4
Small Round.	@ 61 50	Brown.	1 1/2 @ 2
Oats.	1 30 @ 1 35	Rape.	3 @ 8
Milling.	1 65 @ 1 70	Ky Blue Grass.	20 @ 25
Rye.	@ 61 50	2d quality.	18 @ 18
Wheat, No. 1.	1 67 1/2 @ 1 70	Sweet V Grass.	@ 25
do, No. 2.	1 62 1/2 @ 1 65	Orchard.	20 @ 25
do, No. 3.	1 40 @ 1 50	Red Top.	@ 15
Choice Milling.	@ 1 70	Hungarian.	8 @ 10
HIDES.		Lawn.	30 @ 40
Hides, dry.	19 @ 19 1/2	Almond.	10 @ 11
Wet salted.	10 @ 11	Timothy.	10 @ 11
HONEY, ETC.		TALLOW.	
Beeswax, lb.	23 @ 25	Crude, lb.	62 @ 7
Honey in comb.	14 @ 20	Refined.	9 @ 10
Extracted, light.	10 @ 11	WOOL, ETC.	
do, dark.	8 @ 8 1/2	Oregon, Eastern.	24 @ 26
HOPS.		do fine, heavy.	21 @ 23
Oregon.	@ 17	do Valley.	27 @ 30
California, new.	@ 17	SPRING—1881.	
Waah, Ter.	@ 17	San Joaquin, choice	17 @ 18
Old Hops.	@ 17	Southern Coast	17 @ 18
NUTS—Jobbing.		Silky Berry.	15 @ 16
Walnuts, Cal.	8 @ 9	Berry and Seedy.	15 @ 16
do, Chile.	7 1/2 @ 8	Northern choice.	25 @ 26
Almonds, sd shell.	8 @ 10	Berry or Seedy.	20 @ 22
Soft shell.	12 @ 14	Sotoma, Mendoc.	15 @ 18
Brazil.	10 @ 12	cino, Humboldt.	29 @ 30
Pecans.	16 @ 17	do fancy.	29 @ 30
Peanuts.	4 @ 5	FALL—1881.	
Fibers.	14 @ 15	San Joaquin.	17 @ 18
ONIONS.		do fair.	14 @ 15
Red.	@ 75	do Lamb.	13 @ 15
		Southern.	17 @ 18
		Northern, free.	17 @ 20
		do, defective.	14 @ 16



General Merchandise.

WHOLESALE.

WEDNESDAY M., September 21, 1881.

<b>CANDLES.</b>	Cement, Rosen-
Crystal Wax.....16 @18	dale.....1 75 @ 2 00
Paraffine.....20 @	Portland.....3 75 @ 4 00
Patent Sperm.....25 @	
<b>CANNED GOODS.</b>	<b>PAINTS.</b>
Assorted Figs.....2 25	Assorted sizes, keg, 3 75 @ 4 00
2 lb cans.....2 25	
Table do.....3 50 @	Pacific Glue Co's
Jams and Jellies.....3 75 @	Neatsfoot, No. 1 00 @ 1 00
Pickles, hf gal.....3 25 @	Castor, No. 1.....@ 05
Sardines, qr box.....1 67 @	do, No. 2.....@ 05
Hf Boxes.....2 50 @ 1 90	Baker's A.....@ 1 30
Merry, Paul & Co's	Olive, Plaguoil.....5 25 @ 5 75
Preserved Beef	Pascal.....9 @
2 lb, doz.....3 25 @ 3	Palm, lb.....@ 60
do 4 lb doz.....6 50 @ 6	Linseed, Raw, bbl.....@ 65
Preserved Mutton	Boiled.....@ 60
2 lb, doz.....3 25 @ 3 50	Cocoanut.....60 @
Beef Tongue.....5 75 @ 6 00	China nut, cs.....68 @ 69
Preserved Ham	Sperm.....40 @
2 lb, doz.....5 50 @ 5 60	Coast Whales.....35 @
Deviled Ham, 1 lb,	Polar.....@ 1 00
doz.....3 00 @ 3 50	Lard.....18 @ 22
do Ham 1 lb doz 2 50 @	Petroleum (110°).....28 @ 35
Boneless Pigs Feet	
3 lbs.....3 50 @ 3 75	Pure White Lead.....7 75 @ 8
2 lbs.....2 75 @	Whiting.....1 1/2 @ 5
Spiced Fillets 2 lbs 50 @	Putty.....4 @ 5
Head Cheese 3 lbs 50 @	Chalk.....1 1/2 @
<b>COAL-Jobbing.</b>	Paris White.....2 1/2 @
Australian, ton.....@ 8 50	Ochre.....3 1/2 @
Coos Bay.....6 50 @ 7 50	Venetian Red.....3 1/2 @
Bellingham Bay	Averil mixed Paint
Seattle.....7 00 @	gal
Cumberland.....@ 13 00	White & Tints.....2 00 @ 2 00
Mt Diablo.....@	Green, Blue and
Lehigh.....@	Yellow.....3 00 @ 3 50
Liverpool.....@	Light Red.....3 00 @ 3 50
West Hartley.....@ 9 00	Metallic Roof.....1 30 @ 1 60
Scotch.....@ 8 50	
Scranton.....@	<b>SOAP.</b>
Vancouver Id.....@	China Mixed, lb.....4 1/2 @ 5
Wellington.....@ 9 00	Hawaiian.....4 1/2 @ 5
Charcoal, sack.....@	<b>SALT.</b>
Coke, bush.....@	Cal. Bay, ton.....14 00 @ 22 00
	Common.....6 50 @ 14 00
	Carmen Id.....14 00 @ 22 00
	Liverpool fine.....14 00 @ 20 00
	<b>TEA.</b>
<b>COFFEE.</b>	Young Hyson.....40 @ 65
Sandwich Id lb.....@	Moyuna, etc.....@ 40
Costa Rica.....12 @ 14	Country pkd Gun-
Guatemala.....12 @ 14	powder & Im-
Java.....18 @ 20	perial.....35 @ 75
Manilla.....15 @	Hyson.....30 @ 35
Ground, in cs.....@ 22 1/2	Foo-Chow O.....27 @ 32
<b>FISH.</b>	Japan, medium.....35 @ 37 1/2
Sac'to Dry Cod.....@ 5	
do in cases.....@ 5 1/2	
Eastern Cod.....7 @ 7 1/2	
Salmon, bbls.....7 00 @ 7 50	
Hf bbls.....3 50 @ 4 00	
1 lb cans.....1 12 1/2 @ 1 22 1/2	
Pick Cod, bbls.....@	
Hf bbls.....@	
Mackerel, No. 1	
Hf bbls.....9 50 @ 10 00	
In Kits.....1 75 @ 1 85	
Ex Mess.....3 50 @ 4 00	
Pickled Herring,	
box.....3 00 @ 3 50	
Boston Smoked	
Herring.....65 @ 70	
<b>LIME, etc.</b>	
Gate Mills.....3 00 @ 3 25	
Land Plaster,	
ton.....10 00 @ 12 50	
Lime, Santa Cruz	
bbl.....1 25 @ 1 50	

Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., September 21, 1881.

<b>FRUIT MARKET.</b>	Pears, sliced.....8 @ 9
Apples, bx.....30 @ 1 00	do wbole.....7 @ 8
Bananas, bnch.....2 50 @ 4 00	Plums.....3 @ 6
Cocoanuts, cr.....1 00 @ 1 50	Pitted Cod.....11 @ 12 1/2
Cran Apples.....50 @ 75	Prunes.....9 @ 10
Crab Apples.....50 @ 75	Raisins, Cal, bx.....@ 2 25
Fig, bx.....75 @ 90	do, Halves.....@ 2 50
Grapes.....65 @ 90	do, Quarters.....@ 2 75
Limes, Mex.....@ 17 50	Eighths.....@ 3 00
do, Cal, bx.....@ 17 50	Zante Currants.....8 @ 10
do, Cal, bx 2 50 @ 4 00	<b>VEGETABLES.</b>
Sicily, box.....10 00 @ 12 00	Asparagus, bx.....@
Australian.....@	Artichokes, doz.....10 @ 12 1/2
Nectarines.....@	Beets, chl.....@ 65
Oranges, Cal, bx 4 00 @ 5 00	Beaus, Lima, lb.....@ 5
do, Tahiti M 20 00 @ 25 00	do, String.....1 @ 1 1/2
do, Mexican.....@	do, Wax.....1 @ 2
do, Loreto.....@	do, Fount.....1 @ 2
Peaches, bsk.....60 @ 1 50	Cabbage, 100 lbs.....75 @ 1 00
do, Mount'n, bx 1 00 @ 1 50	Carrots, sk.....40 @ 50
Pears, bx.....50 @ 1 00	Caulliflower, doz.....60 @ 65
do, Bartlett, bx 2 00 @ 2 50	Cucumbers, bx.....@ 40
Pineapples, doz 7 00 @ 8 00	Egg Plant, bx.....1 1/2 @ 2
Plums, bx.....50 @ 1 00	Garlic, lb.....10 @ 17
Prunes, German.....75 @ 90	Green Peas, lb.....@ 2 1/2
Quinces, bx.....@	do Sweet.....2 1/2 @ 2 1/2
Blackberry, cbt, 5 00 @ 6 00	Gr'n Pepp'rs, bx.....@ 50
Raspberries, ch't.....@	do, Chile, bx.....50 @ 75
Strawberry, ch't, 5 00 @ 7 00	Lettuce, doz.....10 @
Sugar Cane, hdl.....@ 10 00	Mushrooms, lb.....@ 3
Watermelon, 100.....5 00 @ 10 00	Okra, lb.....@ 2
<b>DRIED FRUIT.</b>	Parsnips, lb.....@
Apples, sliced, lb.....5 @ 5 1/2	Horseradish.....@
do, quartered.....4 @ 5	Rhubarb, box.....50 @ 75
Apricots.....14 @ 16	do, chest.....@
Blackberries.....10 @ 11	Squash, Marrow
Citron.....23 @ 30	fat, ton.....8 00 @ 10 00
Dates.....9 @ 10	do Summer, bx.....@ 50
Figs, pressed.....5 @ 7	Sprouts, lb.....@
do, loose.....4 @ 5	Tomatoes.....35 @ 40
Nectarines.....14 @ 15	Turnips, chl.....@ 50
Peaches.....12 1/2 @ 14	
do pared.....16 @ 18	

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending September 20, 1881.									
HIGHEST AND LOWEST BAROMETER.									
Sept. 14	Sept. 15	Sept. 16	Sept. 17	Sept. 18	Sept. 19	Sept. 20			
30.063	30.040	29.916	29.916	29.979	30.000	30.023			
29.967	29.916	29.781	29.813	29.856	29.947	29.953			
MAXIMUM AND MINIMUM THERMOMETER.									
80	71	67	67	65	67	60			
58	58	54	55	54	53	52			
MEAN DAILY HUMIDITY.									
60	63	70.3	65.7	69.7	69.7	87.7			
PREVAILING WIND.									
W	SW	W	W	W	W	W			
WIND—MILES TRAVELED.									
102	235	242	285	201	183	325			
STATE OF WEATHER.									
Clear.	Clear.	Clear.	Clear.	Clear.	Clear.	Fair.			
RAINFALL IN TWENTY-FOUR HOURS.									
Total rain during the season, from July 1, 1881, — inches.									

Bags and Bagging.

[JOBBER PRICES.]

WEDNESDAY M., September 21, 1881.

Eng Standrd Wheat.....8 1/2 @ 8 1/2	45 inch.....9 1/2 @ 9 1/2
Cal Manufacture.....8 1/2 @ 8 1/2	40 inch.....8 1/2 @ 8 1/2
Hand Sewed, 22x36.....8 1/2 @ 8 1/2	Wool Sks Hand Swd
20x36.....@ 9	3 1/2 lb.....@ 47
23x40.....@ 12	4 lb doz.....52 1/2 @ 55
24x40.....@ 12 1/2	Machine Sewed.....@ 49
Machine Swd 22x36.....8 1/2 @ 9	Standard Gunnies.....14 @ 15
Flour Sks, bales.....9 @ 10	Bean Bags.....6 1/2 @ 7
Quarters.....5 1/2 @ 6	Twine, Detrick's A.....32 @ 35
Eighths.....3 1/2 @ 4	AA.....35 @ 37
Hessian, 60 inch.....@ 12	

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, September 21, 3 P. M.

SILVER, 1. GOLD BARS, 890@910. SILVER BARS, 10@18 3/4 cent. discount. EXCHANGE on New York, 5@10 premium; London, 49 1/2 @ 49 1/2; Paris, 5.20 francs @ dollar; Mexican dollars, 90@91. NEW YORK (4 per cent), 117 1/2.

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MILLER & CO.  
J. P. HULME.

Wool and Grain  
Commission Merchants.

10 Davis Street, near Market,  
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Liberal advances made on all consignments, and prompt personal attention given to all sales.

J. H. CONGDON & CO.,

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General Commission Merchants,

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WOOL and GRAIN

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TOBACCO AND CIGARS.

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COSTIGAN, COHEN & CO.

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Grain and Wool Brokers.

OFFICE:—28 California St., San Francisco.

REFERENCE—LAZARD FRERES, BANKERS.

EUGENE AVY,

Wholesale Dealer in Sheep and

Wool Commission Merchant,

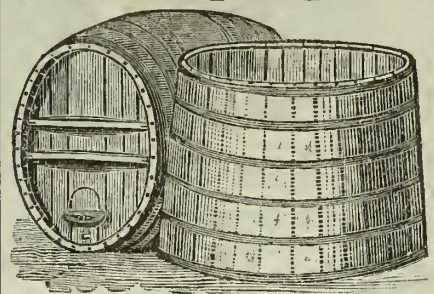
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Weight carried to the extremities of the Axles. Long, soft, double sweep springs. No side sway or pitching motion. It is jointed, relieving all strain.

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We, the undersigned, hereby certify that we compose the partnership transacting business under the firm name of Robinson & Hallidie.

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HYDRAULIC RAM!

The only Horizontal Ram made. Will do good work on light fall. Send for Circular H. F. MORROW, Chester, Pa.



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Location—San Leandro, Cal.

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Gang Plows,

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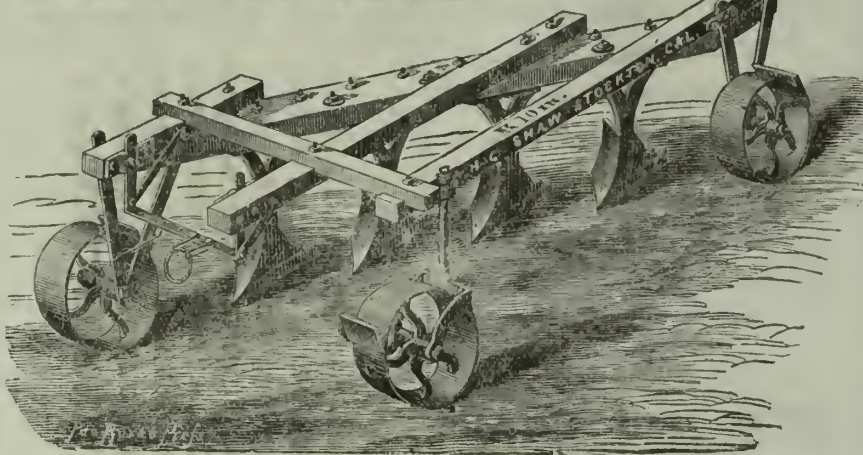


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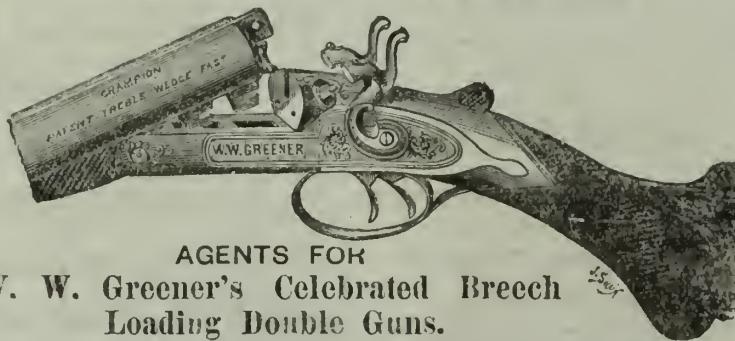
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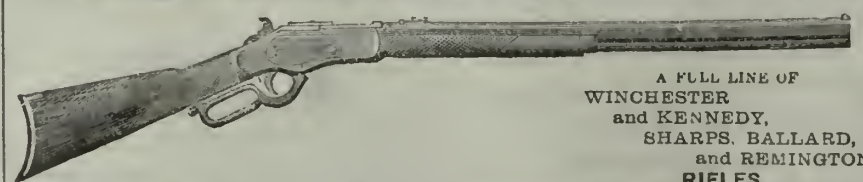
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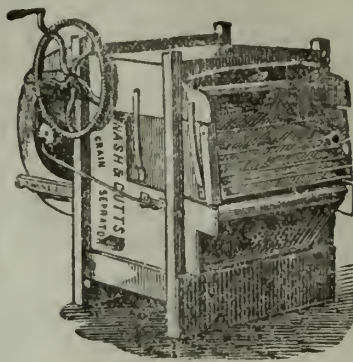
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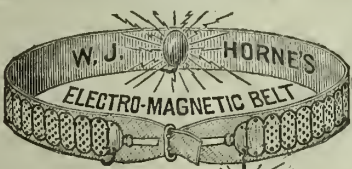
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Patent, Nov. 9, 1880.

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## THE CELEBRATED

**H. H. H.**

## Horse Liniment.

THE  
MOST EFFECTUAL!

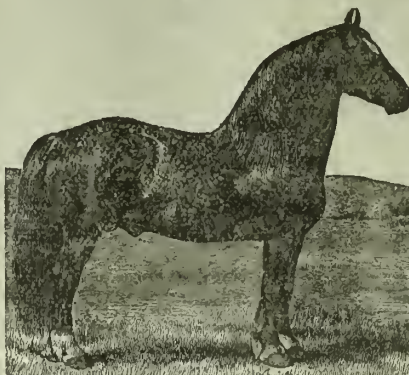
## As a Horse Medicine

It is Superior to any Liniment ever invented. For RINGBONE, SPAVIN, SWEENEY,

CALLOUS LUMPS, And OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days if not cured repeat as at first.

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SADDLE SORES, CUTS, and all other sores where the skin is broken, mix the Liniment half and half with any kind of oil and apply in moderation.



THE BEST!

AS A

## FAMILY REMEDY.

We are safe in making the bold assertion that no Liniment exists that will compare with the H. H. H., in curing the following diseases:

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Apply freely to the parts affected, and take internally from 10 to 20 drops in from 2 to 3 tablespoonfuls of water

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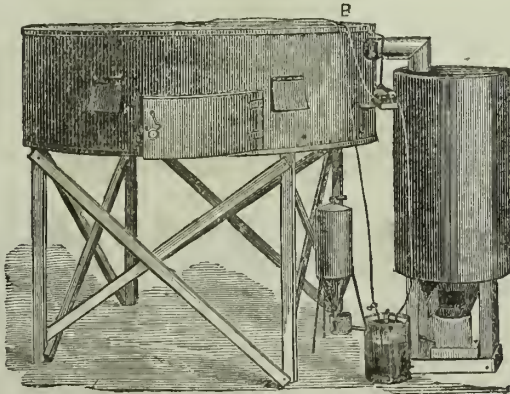
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**AMOS ADAMS, Business Manager.**

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I am prepared to sell lands in various counties of Texas and at prices ranging

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I have a solid body of 9,200 acres in Zavalla County, fronting Leona River.

Plenty of Grass, Timber and Water,

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MANUFACTURED EXPRESSLY FOR  
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It combines every essential to make it a First-class  
WIND MILL.

Being Perfect in Self-Regulation,

**STRONG,  
DURABLE  
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During the past two years there has been many im-  
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We keep constantly on hand a full stock of 10, 12, 14  
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VANELESS WIND MILLS

AND MAKE TO ORDER

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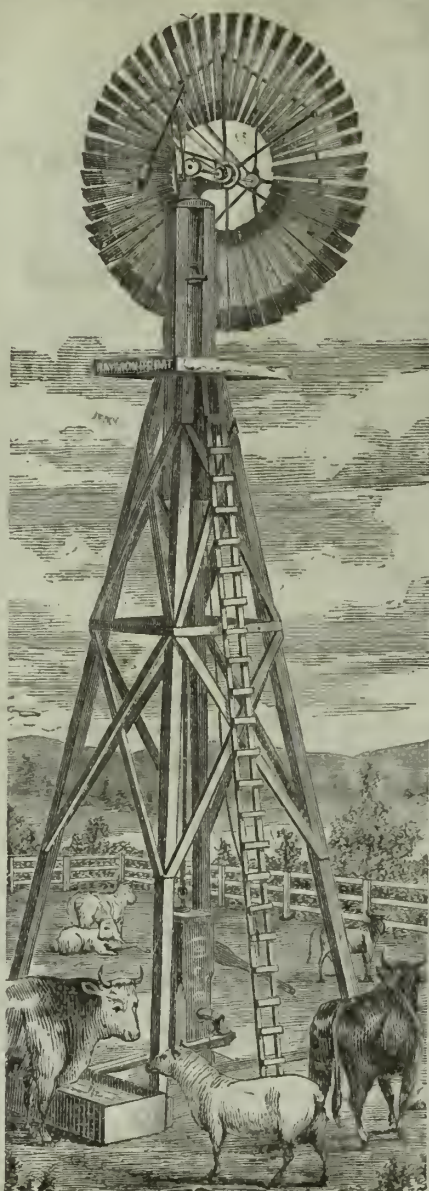
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Anderson, Shasta County, Cal.

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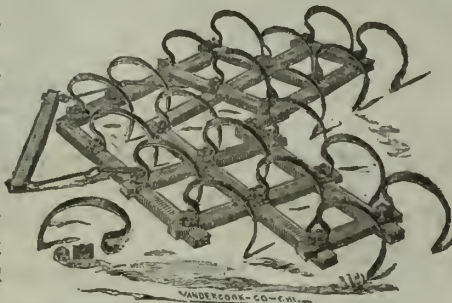
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The accompanying cut represents our

Improved Adjustable

Spring-Tooth Harrow

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It does not Clog. The Teeth are Made of the Best of Spring Steel and Tempered in Oil. The Draft is Lighter than any other Spring-Tooth Harrow.

The Spring-Tooth Harrow Pulverizes and works up the ground in a wonderful manner, and prepares the soil admirably for a crop, better than any other tool.

We also furnish, at small cost, an adjustable Steel Shoe, which can be readily attached, without any extra bolts, by using two or more of which the Harrow will be prevented from imbedding itself into the softest, dry, or wet land.

Send for Circulars and Price List.

J. A. MILLER & CO., Agents for Pacific Coast,  
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A Large and elegant stud of imported  
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Personal inspection invited. Separate catalogues of each  
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All inquiries promptly answered. State that you saw  
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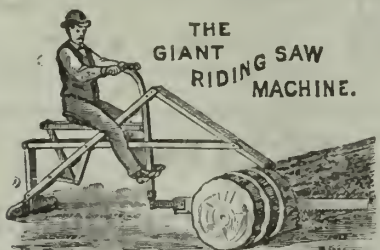
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For Warming and Ventilating Private  
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Every Farmer and Lumberman needs one.  
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60,000 HALF-YEARLING TREES,

For sale coming season, from one to three feet high, con-  
sisting of leading varieties of Apricots, Peaches, Nectarines.  
These trees if cut back in spring and treated as dormant  
buds will make first-class trees by the next season. Buds  
taken from bearing trees, also general nursery stock.  
My buds are taken from bearing trees and true to name.  
Prices on application to DAVE TURNER, or to R. F.  
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LOS ANGELES, CAL.

20,000 Pear trees, mostly Bartlett. 15,000 June hudd'd  
Apricot trees, 1 to 2 1/2 feet high. Also other fruit trees  
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Parties wanting trees would do well to suggest them  
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## DAIRY COWS WANTED.

Wanted, from TWENTY to FORTY GOOD DAIRY  
COWS that will come in between August and October.  
Address, with particulars, B. MARKS,  
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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, OCTOBER 1, 1881.

Number 14

## Clydesdale Horses.

Our illustration shows a fine specimen of the Clydesdale breed of draft horses. It is the stallion, Young Wellington, owned by Powell Bros., of Springboro, Pennsylvania, who have a splendid breeding farm, and are importers. They have already made 11 importations during the present year, and have more coming. There are already good Clydesdales in this State, and the interest in the breed is growing. It is claimed that the Clydesdales have notable excellence in all points essential to the formation of a perfect draft horse. It is held that they possess the best feet and limbs of any draft horse in the world, and being the only horses which can stand up under the immense loads hauled by them year after year in European cities. They have also good points in the eye and shoulder, best style, action and nerve, combined with a kind and tractable disposition. The Clydesdale is also the only draft horse in the world whose breeding can be traced through an unbroken line of ancestry for nearly a century, and being thus strongly and carefully bred, will transmit his characteristics with greater uniformity than any other. Although having been bred in this country a very short time, the demand for them, their services and progeny, is large, and constantly increasing.

A correspondent of the New York *Spirit of the Times* was recently at the Powell breeding farm and writes glowingly of the horses he saw. We quote but a paragraph as follows: "I had never seen any of the real Clydesdale horses before, and what I had seen of the English and French kind of large horses had prejudiced me against all the continents and mountains of flesh. Noticing a shoe from one of these great horses lying about loose, I turned it over with a crowbar and proceeded to measure it. You can judge what kind of a horse must have worn it when I inform you that its transverse diameter was eight inches, and its length from heel to toe eight and half inches; weight, four and three-fourths pounds. The horse from which this shoe was taken weighs 2,400 lbs. The large horses that I had previously seen were ungainly fellows, and often with poor limbs and feet, but when I came to see the Clydesdales I was surprised to see their clean, flat, strong limbs and excellent feet, which I am told is a characteristic of the breed. In weight they range all the way from 1,500 to 2,000 pounds, and now and then one tips the beam at 2,400 lbs. They are fine looking, more active and better travelers than I expected to find them. As a breed they seem remarkably free from unsoundness, such as splints, ringbones, spavins, etc. For heavy draft for the farm, and for the general work-horse they are destined to supersede all others. For the farmer it

seems as though it were far better to dispense with a team that can only turn a narrow furrow and draw a load of a ton, when he can get a team that can turn four good furrows at a time, and draw from 3 to 4 tons at a load. When the horses are once bred that can handle large things lively and well the wagons and machinery for their use will be supplied. On the farm there are over 200 horses, consisting mainly of Clydesdales and Hambletonians."

**SALMON IN AUSTRALIA.**—One of the ships which carried frozen meat from Australia to England carried back frozen fish which were sold at Sydney and Melbourne. The Melbourne

**AUGUST WHEAT ADVANCE IN ENGLAND.**—August was an august month for the English wheat owners. The London *Farmer* of Sept. 1, tells us that the English wheat average was higher than it has been since May, 1878, and the prices quoted at certain country markets very materially exceeded the imperial average. Good samples of new wheat reached to 64s, and as much as 60s was obtainable for good old wheat. Of foreign sorts, Saxonska advanced on the month from 50s to 57s; red winter from 50s to 59s, and No. 2 spring wheat from 48s to 56s per qr. California wheat worth 49s on the 1st of August was worth 57s on the 1st of Sep-

## Sheep on Alfalfa.

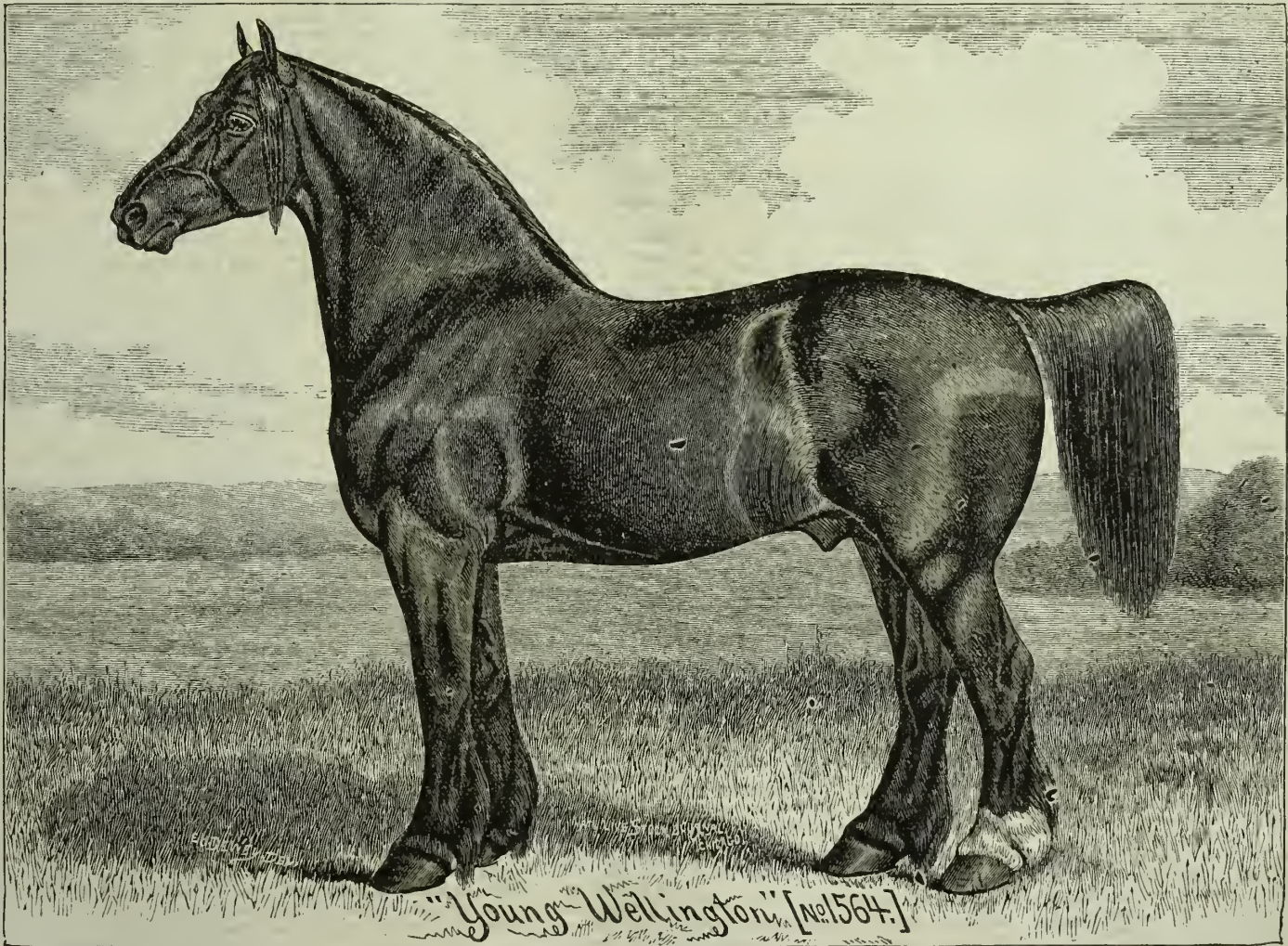
Alfalfa is constantly growing in popular esteem as feed for sheep, not only in this State but elsewhere. Our alfalfa growers from as far north as Russian river to the famous alfalfa lands of Kern county and even to the moist lowlands of Los Angeles and San Bernardino counties, have found that the 'great amount of alfalfa which can be grown to the acre and the high price which can be had for the clean bright wool which comes from alfalfa pasturage are great inducements to the tame style of wool growing on lands which are suitable. The same course of conduct is spreading in the newer States of the Rocky mountain district. We find an account of this tendency and its results in an Eastern exchange, from which we gain the following statement:

Alfalfa has proven to the Colorado ranchman that more sheep can be kept on a given area of land than was ever dreamed of by the most enthusiastic ranchman of the plains. This plan may be considered by some as visionary and impracticable. It is the only way to meet the continual emergencies now arising in Texas, Colorado, and many other sections now suffering from lack of sufficient feed and shelter; these two are the only lacking essentials of the Texas-Missouri country, and they have to be met somehow. Thousands of sheep will be driven next fall to cheap corn in Kansas and Missouri for wintering, and back again to summer pasturage in other States. Large capitalists are preparing cattle ranches upon a more secure method for future handling.

With sheep it is more imperative, practical, and cheaply done. This will necessitate the owning of the lands and establishing of homes, where comforts and culture may surround the owners or attendants of the flocks. It is the right way, and the sooner adopted by the wool-growers of the south and west the better. It has been evident to observers that flocks and herds have had to go further out, year by year, to find pasturage. Some ranges are left as untenable, but subdued and ready for fencing and tame grasses, that, with another system of handling, would support more and better improved flocks than the wild grasses ever did.

**GREEN AND RED LIGHTS IN VEGETATION.**—Why will grass not grow under our trees? M. Paul Bert has shown that green light hinders the development of plants. Plants inclosed in a green glass frame wither and die as though they were in darkness. M. Regnard finds that plants specially require the red rays. If sunlight is deprived of the red rays the plants soon cease to thrive.

BRUSH fires are still burning at San Geronimo, San Bernardino.



IMPORTED CLYDESDALE STALLION, "YOUNG WELLINGTON," OWNED BY POWELL BROS., SPRINGBORO, PA.

portion, according to the *Argus*, was sold at auction. It consisted of 6,200 lbs. of salmon, 5,000 lbs. of sole, 2,500 lbs. of turbot, and 1,600 lbs. of cod. The fish were packed in baskets of convenient size to suit all classes of purchasers, and arrangements were made for parcels to be kept frozen at the Australian ice works for any reasonable time. The attendance at the sale was unusually large, numbering nearly 1,000 persons, and the competition was keen. The salmon were all disposed of at prices ranging from \$1 to \$1.37½, the sole at 78c, the turbot at 62½c, and the cod at 40c per lb. The total proceeds of the sale amounted to \$14,500. At Sydney the sale was not so successful. How much of the Melbourne demand was excited by the longing for "fresh fish" from the "old country" we do not know, but anything like \$1 per lb. for salmon, which sometimes sold at 25c to 50c each in our market, would be a bonanza for the man who would arrange to ship frozen salmon from this port. Possibly "Sacramento salmon" would not have the charm to loosen the purse strings of those who used to have the London cry: "Salmon! Newcastle salmon!" ringing in their ears.

The top price of flour advanced in the same period from 43s to 50s, and country marts make 40s where 32s was formerly quoted. Indian corn has advanced from 26s to 31s per qr., and new malting barley so held for quite fancy prices. Oats, beans and peas were all dearer from a month ago. It is interesting to note that the same course of market values prevailed here even in grains which are not shipped to England. "Malting barley" has enjoyed fancy prices here; oats have improved and beans are beginning to show decent values again; all of which is to be rejoiced at.

**HALF YEARLINGS.**—We have seen a sample of "half yearling" apricot, peach and nectarine trees grown by Dave Turner of San Bernardino. The buds have made a growth of 1½ to 2 ft., well branched and vigorous. They are the best baby trees we ever saw.

**LONG TIMOTHY.**—A friend brings us heads of timothy from Roy Bros. dairy ranch in Marin county, which are 13½ inches in length. This goes a fraction over the heads from Washington Territory, which a correspondent sent us some weeks ago.



## THE APIARY.

### Beekkeeping in Santa Barbara.

J. J. Perkins, of Santa Barbara, sends us a copy of a pamphlet he has just published, entitled "A Business Man's Estimate of Santa Barbara County." We find Mr. Perkins' pamphlet a very well prepared and, so far as we are able to judge, a very moderate statement of the resources and adaptations of the country. It will no doubt be widely read, and will be of much service in making better know the fair county described.

We take from the pamphlet an interesting letter on "Beekkeeping in Santa Barbara County," written by Geo. A. Temple of the Queen City Apiary, as follows:

Bees were first introduced into this county as early as 1860 or '61 by Mr. — Miner, who imported some 8 or 10 swarms, which he readily disposed of for the modest sum of \$50 per swarm. Mr. Miner is also credited with having built the first frame house in Santa Barbara, corner of Montecito and State streets. To Mr. Jefferson Archer, however, belongs the credit of being the pioneer beekeeper of Santa Barbara county. Coming here in December, 1873, and bringing with him about 45 stands of bees, he was the first to engage exclusively, and on an extensive scale, in apiculture in this county. Since Mr. Archer demonstrated that this county was eminently adapted to honey raising for profit, many have followed in his footsteps more or less extensively, and with varying success, and this interesting and profitable industry has been gradually extended until, with the close of the season of 1880, there were about 3,300 stands of bees in the county, which had yielded a product of rather more than 128 tons (256,000 lbs.) of extracted honey.

That portion of Santa Barbara county adapted to profitable honey raising, compared with the extent of territory devoted to this industry in some other counties is limited, but the quality of its honey is unsurpassed, and while great advancement both as to the amount of product and methods employed in the apiary have been made since apiculture became a recognized industry in the county, there is yet ample scope for much greater extension. From the easternmost border of the county to its extreme western limit, honey-producing plants abound in profusion, upon the scarred and rugged face of every mountain and throughout the length and breadth of nearly every canyon, while upon every plain and in every valley, the glad humming of "the busy little bee," eagerly searching for nectar in the myriads of flowers there in bloom, makes glad the heart of the apiarist. The mountain redwood, the black ball sage, sumac, grease wood, coffee berry, etc., each in its proper time, furnish abundant honey during the "building up" or brood-rearing period in the spring, but it is chiefly from the bloom of the sage family—the *A. nivea* (button sage) and the *A. polytchya* (white sage) that the bulk of the honey crop is secured. These bloom profusely and yield large quantities of honey from about May 1st until August 1st, during which time the entire honey product of the county is harvested. To persons with limited capital, who are not averse to dwelling amid the solitude of the mountains, and who can bring energy, perseverance, and good judgment to their assistance in the undertaking, apiculture offers large inducements. The possibilities in apiculture are immense, while the average profit on the capital invested, considering the amount of labor and time necessary to be applied in securing a crop, is greater than in many of the more pretentious industries of the county. A profit of 400% on the investment has been realized from an entire apiary, while even a larger interest from individual swarms is by no means uncommon. I have no desire, however, to give the impression that apiculture is one of the greatest bonanzas in the land, but wish it to be well understood that a very fair profit may reasonably be expected by any one applying intelligently the latest improved methods of manipulation. Bees may be purchased in the winter and spring at prices ranging from \$2.50 to \$6 or \$8 per swarm, and material for hives may be purchased at the planing mill in Santa Barbara cut and ready to nail together for 50 cents each. With a fair to ordinary season a good swarm will yield from 150 to 250 pounds of extracted honey, worth last season 6 cents per pound net in Santa Barbara. Besides the yield of honey, a good swarm of bees will increase one or two swarms in a season, while instances are not rare of a swarm—with its earliest increase—producing as many as five and even ten swarms in a season, to the infinite delight of the amateur apiarist. The following statement will give a better idea of what may be accomplished in this business with a very small outlay of capital:

Apiary debtor to one swarm bees.....	\$5 00
To one hive (all made).....	1 00
	<hr/> \$ 6 00
Credit—	
By 150 lbs. of honey at 6 cents net.....	\$9 00
One swarm bees.....	5 00
	<hr/> \$14 00

Net profit at a very reasonable estimate, of, .. \$8 00

Or 133 1/3% on capital invested—a very fair profit. But like all other California industries dependent upon the rains for success, apiculture is subject to occasional drawbacks. An insuffi-

cient rainfall, though perhaps stimulating plants to put forth the usual amount of bloom, lessens the quantity of honey or entails it altogether, while a general drouth affects bees as disastrously as it does sheep, cattle, or any other stock. The latter, however, is fortunately of rather infrequent occurrence, thereby enabling an apiary to recuperate from its destructive influence.

## METEOROLOGICAL.

### The Study of Thunder Storms.

Studies of special phenomena have become very popular since it has been found that valuable results are often obtained in this way. Recently, a French gentleman—M. Lespault by name—has been studying the subject of thunder storms in the Gironde, and comes to the curious conclusion that valleys are more struck by hail than hills or table land. It seems that a certain depth below the clouds is necessary for the formation or the fall of hail to occur without obstacle. Further, the direction of the valleys traversed have a marked influence on the direction of the clouds, though they only cause a momentary deflection, and the clouds, after following them a certain time, are carried on in the general direction of the vortical movement. For example, if a valley be in the axis of the zone of hail, or a little inclined to that axis, the hail clouds seem to be carried along that valley as dead leaves are carried along by the wind in a trench. If the valley be subdivided by a mountain spur into two others, the hail cloud also divides and the two secondary valleys are ravaged in their turn, at least to the extent in which they are within the zone of hail. Valleys lying across this zone have also an influence, though less marked. When the clouds pass over them they show a tendency to descend and to spread out on the two sides of the zone, so that the zone is broader over valleys than over plateaux, and the ravages are often greater. It might have been added that this was to be expected, since storms and air currents of all kinds generally follow the depressions of the earth, being guided by the hills to a very great extent.

TRACKING STORMS ACROSS THE ATLANTIC.—The *Nautical Magazine*, of London has been tracking American storms across the Atlantic, and finds that 63% of those starting in this country reach Great Britain. As it takes them several days to make the voyage across the ocean, the proposed international exchange of meteorological reports by cable ought to enable the inhabitants of England to know very nearly what sort of weather they are going to have. As storms seldom cross from Europe to this country, we are not as much benefited by this interchange. It will be, however, of great advantage to us, as well as the whole world. Meteorology is a science developed but slightly. In time, the guesses of "Old Probabilities" will be reduced almost to certainties, and our farmers be enabled to know exactly what kind of weather we are going to have a week ahead.

## THE VINEYARD.

### Points Against the Bisulphide.

The efficacy of bisulphide of carbon is a mooted question in France and is also becoming a bone of contention here. On Monday evening last, at a regular meeting of the Academy of Sciences, J. P. Moore in the chair, Dr. Hermann Behr read a paper on the use of bisulphide of carbon for the destruction of phylloxera on the grapevine. Dr. Behr has experimented extensively with it, and represents that its use is not only dangerous to the vine, killing the roots with which it comes in contact, but in some cases he found that the phylloxera treated with it were killed only after a very long exposure, while in other cases the pestiferous insect survived the root to which it was attached. He consequently considered bisulphide of carbon as an insecticide worse than worthless, inasmuch as it destroyed the vine, whether it did the insect or not. He found, also, that when placed deeper than the green roots of the vine, the bisulphide ceased to evaporate, and consequently could not have any effect upon phylloxera that depth in the soil.

Vice President Moore read the following letter to the same subject from Prof. Max Cornu, a member of the Viticultural Commission of France: I have just visited several of the vineyards of the Aude, of the Hérault of the Eastern Pyrenees. You have been justly troubled at the accidents happening on the employment of the sulphide of carbon—the effect seems to have been considerable, and has not as yet been understated. The vine which, whether affected by phylloxera or not, but have been treated with the sulphide, present very often a yellowish appearance of the leaves; the vegetation is irregular and tardy; in some places it has not put forth. An eye but little trained would think that it recognized a severe invasion of the phylloxera, but the spots thus characterized are not arranged as are the spots ordinarily affected

by the phylloxera. The sickly appearance quickly ceases at the very limit where the sulphide treatment ceased. There can be no doubt in this case of the cause of the evil. The roots of the vines, too closely approached by the holes in which the sulphide of carbon has been placed, are already completely or partially dead. In the latter case, the more frequent that portion of the plant is doomed to perish.

The water which the soil imbibes prevents the immediate evaporation of the sulphide of carbon, and this agent, if it touches the bark of the roots, strikes them dead. But it is not alone in the liquid state that the sulphide of carbon maintains itself in the soil; when it is in contact with the water it can dissolve about one one-hundredth. We are then brought face to face with an entirely new agent, the effect of which ought to be taken into serious consideration. I express the opinion that in the case of the accidents happening after the falling of a heavy rain, the dissolving of the sulphide of carbon in the water could produce an injurious effect, and I insist on this point. In the course of the ordinary applications the sulphide spreads round in the soil above all in the condition of a vapor. The insect is killed by these vapors, even in a very weak proportion. The plant absorbs only the liquids, which touch the youngest tissues. The vapors on the contrary only act after being fixed on the tissues and dissolved in the organic liquids. This indirect and relatively slow absorption permits the employment of considerable doses. When the soil is not soaked in the water, there remains between the particles of earth a sufficiently large proportion of spaces filled with the air. The water touches the roots only in a limited number of points. It is at these points only that the absorption of the solution can take place on the young rootlets; but if the water is in excess, the surface of contact with the roots increases in an enormous proportion, and may produce deadly effects, even on the organs protected by a sufficiently thick bark. We should remark still further that the presence of water in the soil in excess, modifies considerably the condensing power of the soil. The vapors are retained physically, and are in part oxidized, besides diminishing by just so much the effect of the carbon. In the ordinary condition of the soil, everything concurs to diminish the action of the vapors on the roots, while in the presence of excessive humidity the action of dissolution will be found augmented. The conditions which the sulphide of carbon encounters vary of course with the nature of the soils, but the objections raised by those who use it have never been so grave as now. Never have the accidents resulting from its use been so serious. We owe it as a duty, therefore, to inquire why such effects have been manifest—why confidence in its employment has become so suddenly shaken?

### Staking Vines.

The question of staking vines was discussed at a recent meeting of the St. Helena Viticultural club and reported by the *Star* as follows:

Mr. Ewer asked what length of stakes should be used for the several varieties of grapes. Lumber dealers propose to furnish bolts to split shakes from, and want to know how long the bolts should be sawed. Thought stakes were necessary.

Mr. Lewelling thought stakes were a benefit, but not enough so to compensate for their cost and trouble.

Mr. Ewer's objection to not staking was that the vines lop over and let the fruit on the ground.

Mr. Lewelling said it did not hurt the fruit to lie on the ground—he considered that the best feature about it.

Mr. Norton's experience was that the necessity for stakes depended much on the soil; if light they were not so necessary, as the vine did not grow so rapidly. Thirty to 36 inches long was what he got out. Reissings should be at least six ft. long—14 inches in the ground. Twenty inches above ground would do for Zinfandel and Malvoise; Reissings should be five ft. out.

Mr. Pellet was glad the subject had been broached. We cannot get the wood here, and we want to find out the proper length to send for. For young vineyards, 30 inches is sufficient; for Riesling and vine trained up, 6 ft. is not too much. They must be one ft. in the ground; they will have a heavy load to support.

Mr. Norton said his land was low and wet, and soil heavy. He had noticed that the vines frosted and mildewed worse when not well up; when trained up they keep clear of frost and mildew. Chasselas Fontainebleau will stand low vines; Malvoise and Zinfandel will not; they will not ripen when low.

Mr. Wheeler said five-ft. stakes were right. He staked everything high. There was more than double the yield, and they were freer from frost and mildew.

Mr. Wade said he had bought 400 railroad ties; they make a 5 1/2 ft. stake and a 30-inch one. What size should the short ones be?

Mr. Pellet said 1 1/2 x 1 1/2.

Mr. Wheeler said he had vines with over 100 lbs. of grapes. The Chasselas had been staked 6 to 7 years and they are increasing in yield every year. Vines are as large as his arm, and instances have existed where the load has broken them off, with their stakes.

Mr. Morel thought vines required stakes.

The length should depend upon the variety of grapes. He had trained 100 or 200 vines in the middle of each block, and the result was three times as many grapes as the others. The stakes were 6 ft. long, 14 inches in the ground, 2 inches square. He had tried Golden Chasselas, Zinfandel and others.

Mr. Ewer had seen the vines mentioned by Mr. Morel; they certainly had twice as many grapes as those not staked. May be Mr. M.'s estimate of three times the yield nearer correct.

Mr. Schram had seen Golden Chasselas raised on high stakes. They bore twice as much the first and second years, but gave out afterwards. Stakes could be had at the Pocket mill in Sonoma county, for \$3 per 1,000—30-inch stakes. All his were 2-ft. stakes.

Mr. Lewelling would not stake high for his land; thought they would give out on light soil; on heavy soil they would stand it longer.

Mr. Schram thought that staking Golden Chasselas high might do on heavy ground, but not on light—it would kill the vine.

Mr. Krug agreed with both parties. Heavy and light soils, mildew and frost, entered into the calculation, and should all be considered. For himself he would buy no stakes less than five ft. Then when they rotted off, there would still be a good stake left. Spoke also of raising the heads of vines when too low. It can be done and the vines improved by it though they will not look so well afterwards.

Mr. Lewelling last year latted-staked some vines and they bore so heavily they could not color or ripen, but soured. This year there was hardly half a crop.

## FORESTRY.

### Timber on the Truckee and Its Tributaries.

The *Reuo Gazette* has taken pains to secure information concerning the visible supply of timber still remaining in the basin of the Truckee river and its tributaries to meet statements made now and then that the timber of that region is approaching exhaustion. It says that a study of the country will convince the most careless observer that the ocean of timber bounded on the west by the Summit, on the east by the sage brush valleys of Washoe lake and the Carson, on the north by Sierra valley, and on the south by Lake Tahoe, has hardly been tapped. It is true that many hillsides have been denuded by wood choppers, and large patches cleaned out by sawmills. It is true that the Comstock has absorbed a thousand million ft. of timber and lumber, and the vast desert between here and Salt Lake has probably taken as much more in the last 20 years, yet there are fields larger than those drawn upon, that remain untouched, and it is within the truth that the great canyon of the Truckee and its tributaries would stand a similar draft for 50 years to come. Timber experts, who have been consulted by the writer, estimate that there remains standing in locations that make it available to market with very little additions to the present facilities over 5,000,000,000, ft. of timber and over 10,000,000 cords of wood. Allowing a daily product of 40,000 ft. of lumber to the mill, for 200 days in the year—which is a very high estimate of a season's run,—this would last the mills now running 62 1/2 years. Around Lake Tahoe there has been an immense body of timber, and although it has been cut into very largely, it is still believed that there is about a thousand million ft. still standing. Hope valley has a large quantity of timber that is untouched. At the north end of the lake there is a very nice lot of timber that is falling before the axes of Folsom & Marlette's men. Between Tahoe and the town of Truckee there are nearly 500,000,000 ft. that can be reached by the Truckee Lumber company's works, which are very complete, and comprise dams on the river for floating logs, and chutes in the mountains for transporting them down. On Squaw creek and other branches there are large patches that will come in. On the east side of the Truckee river a number of branches come in. The first is Martis creek. The mills of Richardson Bros. and McFarland stand in a basin that will turn out over 100,000,000 ft. George Schaeffer has a very fine lot of timber that will keep his mill running for years. He will soon move further up the creek. Juniper creek, where Burckhalter built his railroad, will turn out over 75,000,000 and the road can carry more from an immense flat on the head of Martis creek, and from the Tahoe divide. Wicke's country, east of Bronco, is very steep and high, but it has a fine growth. It will likely all be cut for wood and flumed out. It is very well watered and small flumes could be swung around over every part of it. It will furnish 200,000 cords of four-foot wood. Between Juniper and Wicke's creek lies a very rough canyon, on Gray's creek that has nearly 50,000,000 ft. of timber. Between Wicke's and Verdi, on the east side, there is probably another 50,000,000 ft. On the west side of the Truckee lies the main supply. The east side is a narrow ridge, but the west side rises into the grand range of the Sierra Nevada itself. Coming down the river from



Tahoe, the first break after leaving the Truckee lumber company's territory is Donner creek, which heads in Donner lake. The timber around the lake is pretty well cut out, and there is probably less than 10,000,000 ft. in the whole basin up to where the road crosses the summit. On Trout creek, which comes in through the town of Truckee, there are 20,000,000 ft., Alden creek has 60,000,000, Prosser creek 150,000,000, Sage Hen, a tributary of Little Truckee, 200,000,000.

On the Little Truckee and branches there will be found the vast quantity of 1,000,000,000 ft., besides 4,000,000 cords of wood. About half of this quantity lies in a red fir country from Webster lake around the high level country that crosses the summits west of there, and it will come this way rather than seek a market across the rough country between there and Sacramento valley. In Truckee valley and the divide between the Little Truckee and Sierra and Sardinia valleys, another thousand million can be cut and run out at Boca. From Camp Twenty to Verdi there must be 100,000,000, but it will be more apt to come out as wood than lumber, as it is in a very rough and dry country, and rather scattered. Dog valley lies back of Crystal Peak and has excellent facilities for reaching the track. It will afford between 50,000,000 and 75,000,000. Such vast figures as are given above afford but little significance to the ordinary reader. A city like San Francisco could be built out of such a body of timber and it would never be noticed.

## HORTICULTURE.

### The Entomological Exhibit at the State Fair.

The insect exhibit at the State fair by Matthew Cooke, State Horticultural officer, was one of the most valuable educational features of the fair and was duly appreciated by the public. Unfortunately it was placed in a dark corner, when it should have been in the lightest part of the building. The *Record-Union* gives a review of the exhibit which will interest those who could not attend the fair:

There is no more attractive exhibit in the entire list, either at the park or pavilion, and none more suggestive or of more vital importance to the people, than that made by Matthew Cooke, chief executive officer of the State Horticultural Commission. It is a complete and exhaustive exhibit, in all the various stages of their existence and depredations, of the various insect pests which prey upon the fruits, trees and vines of this State. The exhibit is presented through the aid of a score or more of microscopes, powerful magnifying glasses, etc. These are ranged at convenient distances from each other and beneath them are such specimens of the codling moth, phylloxera and a host of similar pests, as can be only examined by microscopic aid. In addition is an almost endless array of the "pest" specimens in vials and jars, with examples of their destructive work in wood, leaf, fruit, berry, etc., and showing every one of the stages of their existence. These specimens are from all parts of the State, and have been gathered by Mr. Cooke with great patience, to enable him to gain a full knowledge of this branch of entomology, with a view to applying the best remedies possible to the extermination of the pests, which have already caused such great loss to fruit and grape growers. Some time ago a number of grammar school boys here organized a junior Agassiz association, for the study of entomology and the collection of specimens. It proved quite successful. Mr. Cooke was invited by the boys to instruct them concerning insect pests, and he readily undertook to do so. He has now utilized this society by selecting from its membership a number of the young masters, who, wearing the neat badge of their association, stand behind the counters, on which are arranged the microscopes and specimens in the exhibit referred to, and, having been instructed by Mr. Cooke, explain to inquirers all needed details of the exhibit. The three days' experience already had, Mr. Cooke certifies, proves that the youths' association is a most desirable aid in furthering the purposes of the exhibit, and the public has been greatly inconvenienced by the politeness and attentions of the boys. The exhibit is in the lower east hall, in the southeast corner. (This exhibit should have the best light and location in the building, and be on the upper floor.) The space, 30 ft. by 14 ft., is railed in. In the center is placed tables, in the form of a hollow parallelogram, 23 ft. by 7 ft., giving a surface of 104 square ft. On the tables are arranged 24 microscopes, some of them valuable instruments, which have been given by their owners for use in this exhibit. There are also 36 magnifying glasses of various kinds. To the tables are fastened by chains 12 reading glasses, for use by those examining specimens. The visitors enter at one end of the table and pass to the right, so that there is no trouble in the passage around the table. In the microscope and magnifying glasses are placed specimens of the various insects, and on the table are various bottles, etc., containing specimens, as follows:

First—The codling moth (*Carpocapsa pomonella*), which has done so much damage in this State and elsewhere. Specimens of the egg, larva, pupa, and perfect insect (moth). Also

pieces of scantling taken from fruit-packing rooms, bark of trees, paper, etc., showing how this pest hibernates.

Second—Scale insects (*Aspidiotus perniciosus*), or San Jose scale, which has done so much damage to orchard property in Santa Clara county, and is now found in Solano, Yolo and San Joaquin. *Aspidiotus rapax*, found in apples, pears, etc., in Santa Cruz and some of the southern counties. *Aspidiotus conchiformis*, or common apple scale, found in various sections of the State on deciduous fruit trees and citrus trees. *Aspidiotus aurantii*, or red scale, found on citrus trees and fruits in Los Angeles county, and also found as far north as Marysville. *Aspidiotus convezus*, found on the fruit in various counties, but especially on citrus fruit. *Leconium oleae*, or black scale, found throughout the State on citrus and nearly all kinds of deciduous fruit trees. Accompanying this species are specimens of *Fumago salicina*, or smut, which accompanies the black scale and discolors the foliage and fruit. *Leconium hesperidum*, or soft orange scale, found in every portion of the State on citrus trees. *Leconium acericoles*, or maple scale, found on grapes in Santa Barbara and some other counties. *Icerya purchasi*, or cotton cushion scale, an Australian importation; found in Santa Barbara and Los Angeles; its food plants are citrus and deciduous trees, shrubs, etc.; this appears to be a very undesirable visitor, by the specimens shown. *Ulleria araucarie*, or scale of Norfolk island pine; said to be spreading very fast. *Diaspis roseae*, or rose scale, with specimens showing its serious spread on the raspberry and blackberry vines. In all, 22 species of scale insects are exhibited.

*Tretranychus telarium*, or red spider, in all its changes or metamorphosis. Specimens from several counties.

Caterpillars—*Clisio campy constricta* and *Clisio campy americana* *orgyie leucostigma* in all forms—eggs, larvae, pupae, moths, etc.

*Selandria cerasi*, or pear slug, with specimens showing its destructive habits.

*Nematus similis*, or saw-fly, destructive to foliage of pear trees early in each season.

*Ageria tipuleforme* and *Chrysobothris femorata*, currant-bush borers; also, specimens of apple-tree borers, etc.

Orange, lemon, apple, pear, etc., infested by scale insects and set under glass.

Olive branches infested by three distinct species of scale insects. Lemons, from a recent shipment received from Australia, infested by *A. aurantii*, or red scale, and *Leconium citricola*.

Collection of various insects more or less injurious to trees and fruit, including several species of *Diabrotica*.

The collection of vine pests, etc., is taken charge of by J. H. Wheeler, Secretary of the State Board of Viticultural Commissioners. This includes phylloxera, vine caterpillars, and a full display of remedies for their extermination, fully described by Mr. Wheeler.

Friends of the fruit growers—This collection of insects is classified as "lady birds," *coccinella*, *chrysepas*, or lace-winged flies, etc. In this division is exhibited a fine collection of parasites of the *coccida* or scale insects, kindly loaned by Alex. Crow, of Los Angeles, of which Mr. Cooke speaks highly. It consists of syrphus flies, destroyers of plant lice, lace-wing flies and various parasites of the black scale, soft orange scale, lady bugs, etc. There is also exhibited pump-nozzles, etc., for washing trees, scrapers, etc., for cleaning trees. Volumes exhibited of natural history of insects, etc.

## THE FIELD.

### California Agriculture and its Encouragement.

At the State fair last week, the annual address was delivered by Hon. John Bidwell, of Butte county. It was a comprehensive review of the industrial situation in this State, and will be always valuable for the important data which it contained. It will be available in the proceedings of the State society. At this time we give a few points of the address as taken down by a reporter for one of the daily papers: The signs of the times are unmistakable. The car of progress is rolling onward with ever-increasing speed. This once most out-of-the-way land of ours is soon to become, with our whole common country, and at no distant period, one almost measureless network of rails, wires and locomotives. And as these checker the continent, so are steam and sail and cable to streak the ocean. Truly this is an age of locomotion. When younger than now, in western New York, I remember that it was something remarkable to see a man who had traveled round the world. Modern agriculture, as we see it on this coast to-day, was born of the necessity of our early days. The fabulous prices paid for agricultural products gave to agriculture its first encouragements. The success attending the first attempts at farming and horticulture was as almost remarkable as the gold mines, and not unfrequently more profitable. Vessels coming laden with merchandise began, at length, to carry away the products of our infant agriculture. From this point, Gen. Bidwell graphically sketched the progress made between that time and the present, saying: "It can be truly said that in the great markets of Europe, as well as in all other markets wherein

our vast surplus of products find sale, we are in sharp competition not only with our sister States, but with all the world, meeting as we do with wheat from Russia, France, Germany, Spain, Italy and Hungary, and all others where are produced that which California grows." Referring to hydraulic mining, he said: "I have not an adverse thought against any rightful industry of the State. I have not an unkind emotion against mining, even hydraulic mining. On the contrary, all useful industries have my warmest sympathies. I wish hydraulic mining could continue and the whole country prosper. At the same time I admit that it is not to me a pleasing sight to see havoc made of hills and mountains and stately forests, and a once lovely prospect changed to desolation." Returning to the former theme, he said: "There can be no question but that agriculture is the only enduring interest. The great want of a California farmer is a fair price and an adequate market, there being no question in his mind about his being able to produce the greatest abundance. No market can be deemed available unless products can be transported to it with, at least, a small margin of profit." After giving the statistics of the grain crops of the State, he refers to China as a market: "We have a treaty with China, and, as I understand, we have ample control of Mongolian immigration. All is satisfactory. Why may we not lay hold of China and convert that vast empire of more than 400,000,000 people into a boundless and never-failing market for all our surplus flour? I do not mean to compel the Chinese to swallow our bread at the cannon's mouth. But lay hold of China by the stronger and more enduring ties of friendship. I can see no reason why we should perpetuate the senseless abuse and prejudices for which politicians and demagogues have in the past been so largely responsible. We on this coast are too needy, and our country is too powerful and too magnanimous to give any uncertain sound on a question of such vital moment to her Pacific border. The shipments of flour to China began with 96,000 barrels in 1865. For the present year they have been at the rate of nearly 300,000 barrels. But China takes more than flour from California. During the last month, August, the exports of merchandise for San Francisco were larger to China than to any other foreign country, England excepted."

Gen. Bidwell then referred to transportation as an indispensable element to success in agriculture. "By a wise and liberal policy of our Government, American ship building should be encouraged. We on the Pacific coast cannot hold what is legitimately ours—the Pacific ocean by occupation—unless we build and own the ships and sail them under the American flag. Nor can we reach as profitably as we ought the markets awaiting our enterprise. Hence we—Californians—of all people, should, as far as possible, look oceanward with our heavy products. There is no encouragement to multiply productions, unless markets can be reached by the producer. But we are not always permitted to go to the ocean, for the perils of which I speak may lie between us and the seashore, and sometimes the only market may be in the opposite direction. It is, consequently, in my judgment, a necessity that the channels of internal transportation be made cheap, held and controlled in the interest of agriculture and all other industrial pursuits. These ways must either be owned and controlled by the Government, or they will own and control the Government; its agricultural and its manifold industries. Do not understand me to mean any attack on railroads, but I am in favor of the Government obtaining control over them, because no other power can grapple with the mighty question. It has passed beyond the stage of State or local issues. It must be a national question, because trade and commerce are questions of national regulation under the Federal Constitution. Assuming it to be a fact known to all, that the so-called owners of a certain kind of public highways in our country have in the aggregate acquired a dangerous degree of power in the form of moneyed influence, that such power will be ever used as it has been in the past, to resist all attempts to regulate charges; that agriculture and all other industries are virtually at the mercy of such power; that men have never been known willingly, to relinquish such power, it becomes the bounden duty of the Government in the early and wise exercise of its sovereign authority to rescue agriculture and other industries of the nation from the thralldom which no other power can reach, while respecting and sacredly guarding the rights of all. The people have some rights in these great public highways. They are indispensable to them. They alone can protect and prosper them. If I may, without irreverence, allude by way of comparison to a certain unprofitable undertaking of Aaron in the absence of his brother Moses, I would say that our people had as much to do in these profitable undertakings as the children of Israel had in making the golden calf, where it is written: And the Lord plagued the people because they made the calf which Aaron made. In our case we ought to be able to paraphrase and say the people were not plagued because they made the highways which the builders made. Even had it been a right and profitable undertaking, Aaron had no right to claim the calf." He then proceeded to show the desirability and necessity of State fairs as being in the interest of the commonwealth. As a better means toward this, he advised in the strongest terms one thing he conceived eminently necessary: "Erase from your premium list and from that of every district fair receiving State aid the speed programme." Continuing, he said:

"I admit that good and honorable men are fond of horse racing, but, in my opinion, race horses have no place in agriculture. Horse racing is not an innocent or desirable recreation unless gambling is admitted as such. At these races they sell pools and bet money. This is the programme, and the daily unblinking practice. Yet notwithstanding this, the State fair and cognate District fairs are wholly under State control. The public money has and is being used for purposes of gambling. Banish the speed programme and \$100,000 for a suitable hall would be a cheap investment. Not a hall like this, covering part of a block, but a grand temple of industry which, with its museum of natural history and its machinery hall, would cover an entire block, making it, with its dependencies, the most useful and attractive institution in the State." In conclusion he stated: "We require a State society to direct, harmonize, mold and Americanize; to so aggregate and unify the elements that make up the sum of public life and character that we may be indeed one people—one in prosperity, one in patriotism, and one in the glory of a common country."

## POULTRY YARD.

TREATMENT FOR ROUP.—We find the following in an Eastern exchange: Towards the last of December, 1879, I found one hen sick out of 48 or 49. What was the matter with her? For information I consulted Solon Robinson's "Facts for Farmers and the Family Circle," and found it to be roup. I took her from the nest and held her head over smoking sulphur; soon after, I gave her nearly one teaspoonful of kerosene oil, and, later, the same amount of rum in a tablespoonful of warm water. Next day I found a second one sick and followed the same treatment with her. In two days afterward the rest of the flock were all sick. I could not dose all in the same manner, so after they went to roost I took an old-fashioned iron baking kettle, put in it some live, red-hot coals, and put it into the hen-house in a box two ft. from the door. Then I threw on the coals three single handfuls of sulphur, closed the door and left them to their fate. Nearly an hour later I went to see how they fared, and found their feathers wet from what they had thrown out of their mouths, but their breathing was quite free from any rattle. I smoked them every night for three weeks and every one lived, and we had all the eggs we needed to use. One of my neighbors, who had about 70 fowls affected in the same way, killed and gave away all he had, though they were not any worse than mine were. After they had got over the first attack, I watched them closely and whenever any signs of its reappearance were noted I smoked them again, keeping it up until May, 1880.

FIGURES ON EGGS.—The egg traffic in the United States is large, and the business is increasing. In New York the aggregate transactions amount to the value of \$8,000,000. In Cincinnati, Chicago, Boston, and other cities the trade is proportionally large, and the total sales of eggs in the States are estimated at \$60,000,000 annually. It is reported that 6,000,000 doz. are imported annually from Canada. Upwards of 20,000 car loads of live and dressed poultry are sent to New York annually, and 25,500,000 doz. of eggs (306,000,000) to the same market. According to what are deemed the best estimates, there are produced annually 9,000,000,000 eggs, or 750,000,000 doz.—a nice little item for the consideration of those who call the egg, chicken, and poultry business a small affair, fit only for women and children to engage in. The egg producers of the United States have learned this fact, that there is more money in the egg business than in raising poultry for the market. In Minnesota, where fowls are sold for \$1.50 per doz., eggs sold for 10 cts. per doz.; in Kentucky, where fowls sold for 15 cts. a piece, eggs sold at 24 cts. per doz. and never below 8 cts. per doz.—*Mass. Ploughman*.

THE PETALUMA INCUBATOR.—In the notice of the Sonoma and Marin district fair which appeared on page 184 of *RURAL* of September 17th, it is stated that the Petaluma incubator was shown, but no names of exhibitors were given. The following sentence speaks of Mr. Byce, and the inference might be that he had the Petaluma machine. This is an error, as the Petaluma incubator is the invention of Jacobs & Dais, and was shown by them. The first prize was awarded to the Petaluma, in competition with the National. We are informed, that of 260 eggs in the Petaluma during the fair, 235 were hatched out—equal to 93%. In our issue of September 10th we had a short description of the Petaluma machine, taken from the *Argus*. One of our Petaluma correspondents promises to write us more concerning its operations hereafter.

KILLING POULTRY.—This is how the French kill their poultry: They open the beak of the fowl, and with a sharp-pointed, narrow-bladed knife, make an incision at the back of the roof of the mouth, which divides the vertebrae and cause instant death, after which the fowls are hung up by the legs. They will bleed perfectly, with no disfigurement; picked while warm, and if desired scalded. In this way the skin presents a more natural appearance than when scalded.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### The Anti-Monopoly Meeting.

A meeting of supporters of the new anti-monopoly movement was held at Sacramento on Friday evening and Saturday morning of last week. We have not space in this issue for a review of the proceedings, but we publish the greater part of the address of Dr. G. Hewston, Chairman of the Executive Committee of the "Anti-Monopoly League of California," that our readers may see what are some of the claims of the new movement:

GENTLEMEN:—You have been called together, after due deliberation and recommendation of a number of your fellow citizens, to organize a State Central Committee of the Anti-Monopoly League of California, and not as a State Convention. Our purpose is to give the people the opportunity of becoming acquainted with each other, comparing their views on the all-absorbing and vitally important question of monopolies, now so arrogant, and prospectively reaching forth a hand which will crush the interest of the people, and rob the producer of the just returns for his toil and labor. As the views of all the people on this question have been sounded far and wide, and which many, if not all present have had to experience. "How much will the traffic bear?" without reference to the "costs of risk and service."

Before we proceed let us inquire the significance of the term "monopoly." If we start out with a correct idea of this term, we can readily answer many of the inquiries made from day to day by those who are conscious of the great wrongs which they are suffering, yet cannot define the cause or propose a remedy.

The term monopoly is derived from two Greek words (*monos*, alone, and *politeia*, to sell), and is defined by Webster as "the sole power of dealing in any species of goods, or dealing with a market, obtained either by exclusive rights from government; sole permission and power to deal; exclusive command or possession."

Now this exclusive control is the pith of our opposition. It differs materially, as you will perceive, from the term "corporation." A corporation is a body politic, created by law, and authorized by law to act as a single person, and endowed by law with the capacity of perpetual succession; a society having the capacity of transacting business as an individual.

None will deny that corporations and combinations of capital are necessary. All great enterprises, associations and public charities require an aggregation of capital and corporate privileges, in order that their objects may be carried out.

We would, therefore, at the outset, clearly state that it is not against corporations as corporations, or capital as associated, that we are determined to wage war, but against monopolies whether they are in the shape of individual or corporate monopolies, where wealth has been combined against the interest of the people, and is used to crush out individual enterprise and override the equitable and just laws established by our forefathers. Equality to all, justice and right to everyone, and no privileged or exclusive favors to the few.

An individual may become a monopoly, as is exemplified by the sugar interests of this coast and the Sandwich Islands. Corporations may and have become monopolies, as you all know, and many to your sorrow can testify that the hand of the monopoly has throttled you in your financial infancy, or brought your venerable financial and business interests into a ruined mass of chaotic destruction. How many of you present to-day have felt the force of the poet Bryant's expression, "The wretch that scoffs at mercy's laws, And trode his brethren down and felt no awe Of Him who will avenge them?"

Have we not had this fully exemplified in the Mussel Slough operation? Men driven without mercy from their land and orchards, houses and home. Men who have made the wilderness to blossom with the rose and sun-parched plains to yield the golden harvest and richly laden fruits of the semi-tropics; driven from the fruits of their labor and the toil of years, by the unscrupulous hand of a monopoly. Corporations and creatures of the State, created by the State and granted the privileges to act, as individuals, not as masters, kings, potentates and rulers of the earth—what right have they assumed. The distinguished Hazlett appears to have had the correct view of monopolies in his day, and it will serve to define them at the present time. He says, "Corporations are not corrupt and profligate than individuals, because they have more power to do mischief and are less amenable to disgrace or punishment. They feel neither remorse, gratitude or good-will. The principles of private or natural conscience is extinguished in each individual, and nothing is considered but how united efforts of the whole may be best directed to the obtaining of political advantage or privilege for the benefit of the individual. Each member rears the benefit and lays the blame, if there is any, upon the rest."

It is not my intention to detain you at this time or interest you by a lengthy speech, but to proceed to facts and state you the manner of origin of this movement and the progress which it has made. The people are ripe for just such a movement, and it is for the purpose of placing the responsibility upon your shoulders that you have been requested to assemble here to-day.

### Early Organization.

Last February, a few gentlemen were invited to meet at my residence, to discuss the questions which were agitating the minds of many, and among the rest ourselves. We have witnessed the growing arrogance and injustice of corporations, the concentration of power in the hands of a few unscrupulous men, and believing that some action was necessary, we determined to form a nucleus, around which all good and truly loyal citizens could rally and try what could be done to stay the evil, and avert the ruin which is in store for all should we fail. Some of us knew the power, craft and guile of the enemy; we knew that nothing would be left undone to crush the movement in its infancy, and, therefore, we were compelled to be very careful, to use the best judgment we were possessed of, to avoid being captured and destroyed, and thus far we have been successful. Our work has been a labor of love, and has been arduous. A large amount of correspondence has been necessary, which has been most faithfully performed by our efficient Secretary. An Executive Committee was formed, composed of two organizations, having the same object ostensibly in view, but the great amount of labor has fallen to the Secretary. All the printing has been paid for, so that there are no debts to settle, and we are now about to launch our bark upon the ocean of the popular will. Shall we succeed? It is for you, gentlemen, to say. If we all feel the interest that the importance of the movement demands, we cannot fail to succeed, and crush out all opposition, and heat down every foe. But it must be done by a united effort. No half-hearted work will accomplish this object. The Executive Committee will this day, turn over the work to you, and place in your hands all the material which they possess, and if you lend your hearty co-operation to the cause, from this room, on this evening will emanate a light which will enlighten the minds of all men, and relegate to darkness the evil powers that now are striving through every corrupt means to control the destinies of the nation. Numerous clubs have been formed throughout the State. Club rolls are in the hands of some of the best men of the State, who are only waiting the action of this Committee to start in and work with a will-force that shall know no defeat. The encouragement which we have received, and the hearty co-operation, has greatly aided us in our work, and I trust now gentlemen, that you will fall in and start this work in full earnest.

I have frequently been asked, Do you intend this to be a separate and distinct party, or do you merely mean to control the old organizations, and aid or defeat the candidates they present for the suffrages of the people? I know not what are the views of most of the gentlemen present on this question, but would take the liberty of suggesting a few thoughts in this connection.

Valiant and true men have endeavored to lead their favorite party into the right path, but have failed; the odds have

always been against them. Both parties have their bosses, who manipulate their conventions and their committees, and these bosses are the emissaries and paid pimps of the railroad corporations and monopolies, both local and general. You have local bosses and general bosses, large farmers and small farmers. These men are well up in all the manipulations of party machine politics, and can make a showing when required, or promise innumerable, if necessary to carry their point and lead the people, who are too much wedded to the parties once pure, now corrupt. The great majority of the thinking people have been already converted to this fact, and are not willing to be stand and duped any longer. They are anxiously waiting for the opportunity to throw off both the old organizations, and try a new one, with new life force, right principles and new men.

The wheels of time have made another revolution, and the odor of the old political parties must be left to be enjoyed by these shrewd bosses and political manipulators of both the factions.

The monopolists care not which party succeeds. As they have them both under strict rule and discipline, neither can move without their dicit. The coin sack governs them every time, and the people know it. That coin will not always win, was clearly shown in the adoption of the new Constitution, when over \$1,000,000 of a corruption fund was raised and used to defeat it. Neither will coin win in this great local and national fight against corporate monopolies, if we are true to our principles and each one feels the sacred truth and the soul-stirring interest of the subject.

### Organization Effected.

After due discussion of the points involved in the movement, permanent organization was secured by electing the following officers:

George Hewston, of San Francisco, President; J. V. Webster, of Alameda, Vice President; Thos. McConnell, of Sacramento, Vice President; Newton Benedict, of Oakland, Treasurer; R. N. Collins and R. A. Ammon, Secretaries; and by appointing the following Executive Committee, to proceed at once to organize Leagues throughout the State: A. D. Nelson, of Butte county; N. Jones, of Contra Costa county; E. J. McIntosh, of San Joaquin; J. H. McKune, of Sacramento county; E. Nason, of San Benito county; W. H. Manlove, of Lake county; Newton Benedict, of Alameda county; J. L. Love, of San Francisco county; Benjamin Greyfus, of Los Angeles; T. J. McQuiddy, of Tulare county; George Hewston, of San Francisco county; Thos. McConnell, of Sacramento county; J. V. Webster, of Alameda county; R. N. Collins, San Francisco county; J. Burkhalter, of Sonoma county; F. M. Warracastle, of Contra Costa county; R. A. Ammon, of San Francisco county.

After adopting a platform, which wages war against all monopolies, a resolution of condolence, sympathizing with the grief-stricken family of our late President was read, adopted, and the convention adjourned, subject to the call of the President.

### Congressman Berry on Hydraulic Mining.

Congressman Berry, of the Third California District, gives his views as follows, through the *Sutter Farmer*, on the subject of hydraulic mining:

1. That it is apparent that if hydraulic mining continues in the future as in the past, the navigation of our rivers and of the bay of San Francisco must ultimately be destroyed, and the greater portion of the Sacramento valley rendered uninhabitable.

2. It is my opinion that no remedial measures will be effectual to prevent this result if that system of mining continues.

3. That all remedial measures that can be applied will be necessary to take care of the material already in the rivers and drainage ways, together with that which will find its way into them from other mining, and the abrasion of the mountains from other causes.

4. Whatever may be the cost of remedial measures rendered necessary by reason of mining in the past, I believe should be paid by the National Government or the State or both.

5. I believe that the law when laid down by the courts will prohibit hydraulic mining, as well as the use of any property by one party or individual when such use results in the destruction of, or injury to, the property of another.

6. Inasmuch as it is evident, and is acknowledged, that hydraulic mining has and is resulting in the destruction of and injury to the property of others, I believe it should be restrained until the right to so mine is determined.

7. As the peace and prosperity of our State will be greatly promoted by the settlement of this question, I believe it is the duty of every citizen to lend his influence to consummate that end.

### The Route to Santa Rosa.

The *Patron* gives some notes of the way to reach Santa Rosa and the arrangements for excursion tickets which may be of interest to our readers: As there has been much inquiry relative to the route and cost of travel, we have taken the matter in hand in order to learn of or make definite arrangements relating thereto. In order to reach Santa Rosa from the Sacramento valley, and all the country east and south thereof, it will be necessary to come by boat, cars or otherwise to this city. After landing at the San Francisco wharf, go to the "North Pacific Coast Railroad" depot (sometimes called Sonoma Valley Railroad depot), situated about 50 yards to the north of the Central Pacific Company's slips. One branch of the road terminates at San Quentin; the boat connecting with it leaves this city at 7:10 A. M. The other branch of the road terminates at Donahue. The boat connecting with it leaves this city at 2:30 o'clock P. M. The two branches connect at Petaluma, thence to Santa Rosa. The time from San Francisco to Santa Rosa is three hours. Special excursion tickets shall be issued to all members of our Order. A ticket for the round trip can be obtained by paying two dollars. Each ticket will be punched on the way up to Santa Rosa, where it will have to be endorsed by the State Grange Secretary before it can be used on the return trip. Call for a Granger excursion ticket.

**HARVEST FEAST.**—The members of Elliott Grange had a harvest feast last Saturday. It was given in honor of Mrs. Lamb, one of its most valuable workers, a charter member, and an old resident of that place, who was about to leave there to make a new home among strangers in far off Tulare city. Invitations were sent to the different Granges in this valley. There was a fine attendance of visitors. From Lodi, J. D. Hoffman, G. M.; Mr. and Mrs. Albert Woods, and Mr. and Mrs. Sabin. From Washington Grange was Dr. Stamfer and daughter, Mr. Waters and wife, Mr. Van Sant and Chas. Bamert. The feast was sumptuous, and everything passed off pleasantly.—*Lodi Review*.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### COLUSA.

**PROFITS IN LARGE FARMING.**—Healdsburg *Flag*, Sept. 23: We learn from Geo. Molligan, that on the Glenn ranch, in Colusa, seeding summer-fallow and threshing are carried on at the same time. That on the 2,000-acre ranch which he is superintending, the seeding of summer-fallow will begin early next month, and that 600 acres will be put in in this manner, leaving 1,400 to be winter sown. His harvest of '81 was from 1,300 acres, averaging 25 bushels. They sold at \$1.37½ cents, leaving a fair profit above 95 cents, which it costs to produce and sack it. He will return in a few weeks to begin seeding.

**EDITORS PRESS:**—Last night (Sept. 21st) we were visited by a heavy rain storm, which continued until late in the morning. The sun has been shadowed nearly all day to-day, and occasionally large drops of rain fell, accompanied with heavy thunder. The ground in this vicinity is thoroughly drenched, and I expect by the next issue of the PRESS to be able to notice summer-fallows already sown, all green and growing. If the present cool weather continues a few days after such a soaking, the grain will germinate, and the warm weather we may expect will bring it to the surface. This may be considered the equinoctial storm, as about this time the sun enters Libra, and the days and nights are equal. There is one thing in this vicinity very favorable to early growth and sure crops. The land is very friable, and whenever we get a shower of rain the ground must be satisfied before any of the water can reach a creek or river, and we get, I believe, about as much rain here as in any part of the State. This may be considered a premature storm, but I remember on the 10th of September, 1878, it rained all day, heavily, in Chico, Butte county. As rain or no rain has much to do with successful farming in California, I would like to know how far this storm extended.—L. D. JENKEN, Willow Dell, Olimpo.

#### CONTRA COSTA.

**PURCHASE OF HORSES.**—*Martinez Gazette*, Sept. 24: From a large number of horses brought into Martinez, and offered for sale last Saturday, some 34 were purchased by Mr. Allen, of San Francisco, who will sell such as can pass inspection to the Government, for cavalry service. The horses were from five to nine years old, some of them unbroken, ranging from 700 to 900 lbs. in weight, and were bought at an average of something over \$70 each.

**DEATH OF A VALUABLE HORSE.**—The thoroughbred stallion, "Orphan Boy," owned by Isaac W. Gann of Brentwood, and valued at \$10,000, died last Thursday from some unknown cause, during the absence of the owner in San Francisco. The horse was considered one of the finest in the State and the owner was intending to exhibit him at the coming county fair.

#### EL DORADO

**DRIED FRUIT, ETC.**—*Republican*, Sept. 22d: The amount of dried fruit already coming into market is really astonishing, and ought to dispel the idea from the mind of any close observer, that mining is the leading industry of the county. It is safe to say, without in the least depreciating the value of our mining interests, that agriculture now supports 10 of our own population where the mines do one, while the substantial improvements being made all over the county are almost wholly due to agriculture. It is true, that without these mines our agricultural interests, aside from fruit, would suffer, as the mines create a home market for all the grain, hay, potatoes, etc., that we have, thus far, been able to produce, thus giving the farmer the benefit of freight charges, in addition to Sacramento and San Francisco quotations. The prices of dried fruit are higher than ever before known here since it became an industry, and it is apparent that much more of it will be marketed than ever before, all of which must greatly stimulate future productions, and increase the value of good orchards and orchard lands. We have not taken the grape interest into account, which already stands next to all other agricultural interests combined, as a factor in building up substantial prosperity. The average prices now paid for dried fruit by L. Landecker, the principal buyer here, are, for plums, 12½c.; peeled peaches, 15 to 20c.; unpeeled peaches, 12c.; pears, 7c.; apples, 5c.; apples will doubtless soon go to 6½ or 7 cts. In one day and a half last week, Mr. Landecker paid out over \$2,700 for dried fruit alone, and expects to purchase \$40,000 worth before Christmas. It must be borne in mind that this is but a small proportion of the entire crop of the county, as there are probably a dozen other dealers purchasing; and a number of producers

ship directly below. When the vast amount of green fruit shipped, and our vast wine and raisin interest is taken into account, it will readily be seen that El Dorado county is certainly on the high road to great prosperity.

#### INYO.

**AGRICULTURAL ASSOCIATION.**—*Independent*: Following are the minutes of the meeting of the "Owens River Agricultural Association," held in Bishop Creek, on the 10th instant. Meeting called to order and J. Bourland was elected Chairman pro-tem, and John H. Stoutenborough, Secretary pro-tem. The Chairman stated that the object of the meeting was for the purpose of improving our stock, obtaining a fair ground, and to promote the general interests of this district. Moved and carried, that the name of the Association be known as the "Owens River Agricultural Association." Moved and carried that the chairman appoint the committees. The Chairman thereupon appointed the following committees: On By Laws—Messrs. S. G. Sneden, L. Case and W. W. Yandell. On Ways and Means—A. K. Briggs, Robert Love and B. Peeler. On Grounds—John Clarke, A. McCloy and James Shaw. On Invitation—Olancho—W. Walker. Lone Pine—John A. Rittgers. A. H. Johnson, John Lucas, J. G. Dodge. George's Creek—J. Shepherd, J. Kispert, C. M. Joslyn. Independence—E. Robinson, J. A. Lank, J. Vagt, A. R. Conklin, O. I. Mairs. Fish Springs—J. Jones, W. Tibbets, G. Shedd. Big Pine—J. W. McMurray, T. G. Beasley, A. Baker, S. G. Gregg. Owens River—A. Dill, W. McCown, G. Collins. Bishop Creek—R. H. Ford, J. M. Horton, T. K. Hutchinson, W. O. Harrell, S. C. Munson, R. Russell. Pleasant Valley—J. S. McGee, J. W. Dickinson. Round Valley—D. Olds, C. H. Parsons, J. G. Birchm, T. E. Jones. Moved and carried, that the meeting be called for permanent organization on the 5th day of October, 1881, at 2 o'clock P. M., at Bishop Creek, in the Town hall. At our meeting October 5th we hope to have a good attendance from every neighborhood of Inyo county. It is the desire to have all the different localities of our county duly represented in our organization, thus making it a permanent and lasting one.—J. H. STOUTENBOROUGH, Secretary pro-tem.

#### KERN.

**AFTER CATTLE.**—*Californian*: A. M. Dodson and Geo. Hinds, butchers of Los Angeles, arrived here Wednesday morning. They furnish a great deal of beef to places along the line of the Southern Pacific railroad, both in this State and Arizona and their business here is to purchase fat cattle. Mr. Dodson was here about a week previously and purchased 240 head of cattle of Messrs. Haggin & Carr, which they say were superior to any they have yet killed, and they now desire to engage cattle of the firm at the rate of 100 head per month, taking them away as they require them, as the feed is cheaper and better here. In fact, they wish to rent a farm to use as a depot for the cattle they purchase. They say our cattle are much superior to those they are able to obtain in the more southern parts of the State.

**UNCERTAINTY OF WHITE LABOR.**—Many complaints come to our ears about the uncertainty of white labor, especially among the farmers. It is a common thing for a man to come along, obtain employment, work two or three days, demand his pay and leave, without notice, at a critical time, perhaps, for the employer. It is this class who are loudest in their complaints about the Chinese. Let them do right themselves and that evil would speedily abate. It has been suggested that employers adopt a printed form of contract, and give work to none unless those who signed it engaging, under the penalty of forfeiture of pay due, to give at least 10 days' notice of intention to quit.

#### LASSEN.

**THE EAGLE LAKE ENTERPRISE.**—*Reuo Gazette*: P. N. Marker has returned from the Eagle Lake country, the scene of Markor & Merrill's operations in lake tapping. He informs the *Gazette* that work is progressing slowly but surely. There are now 10 men at work running the tunnel, which is to be over 7,000 ft. long. The formation is exceedingly favorable, consisting of sand and gravel. The progress now made is at the rate of five ft. per day per shift, or 10 ft. per day. Four hundred ft. of the tunnel has already been completed. The tunnel will be 6 by 8 ft. in the clear and a flume will be constructed throughout its entire length. When the lake is reached it will be necessary to construct a heavy bulkhead before the final connection is made. There will also be shafts sunk at intervals along the line with ladders leading up into them which can be used to escape the flow of water in case of accident. Capt. Merrill, who has developed the most remarkable staying qualities of any man on the Pacific coast, is happy and contented at the prospect. He may well be satisfied, for the tapping of Eagle lake will bring a scope of country into market which amounts to a principality.

#### LOS ANGELES.

**HUMBLE BEES WANTED.**—*Express*, Sept. 24: Judge Levering informs us that he has received a curious order from New Zealand. It is for one or two colonies of bumble bees. The farmers of New Zealand are very anxious to raise clover, and it seems they have come to the conclusion that they cannot succeed in doing so without the aid of the humble bee to distribute the bloom. Judge Levering says the difficulty about filling the order is to find the nests of a



couple of bumble bee colonies. They generally build them on the ground at the foot of a tree. They are made out of lint and other fibrous substances, and are generally about six inches in diameter. After finishing their nests, they excavate cellars in the ground beneath, into which they store their honey. He will go out to-day in search of a nest at a point where he thinks there is a colony of these bees.

#### MARIN.

**BUTTER.**—San Rafael Journal, Sept. 24: Butter is indeed gilt-edged. Pickled is retailing here at 70 cents a roll, and we hear that a Point Reyes dairyman is getting 50 cents a pound for all his fresh butter at the ranch. The year has been a very favorable one for butter makers, and this happy termination of the season will leave them all in good spirits.

#### NAPA.

**BRINGING GRAPES FROM SACRAMENTO.**—Star: John Thomann's wine cellar at Vineland, is receiving now a very large amount of grapes from Sacramento. Mr. Thomann has bought in that vicinity 300 tons certain, and probably 300 more. These are coming now at the rate of two carloads a day. They are Missions, and will be made into brandy. Mr. Thomann's brandy product will in consequence be very large this year, amounting, probably, to 30,000 gallons. He buys up there at \$20, and gets them here at an added cost of about \$4. His wine manufacture, on the other hand, will be small, he choosing not to buy many vine grapes at the prices ruling this year, and informs us that his wine product will probably not exceed 20,000 to 30,000 gallons, where he made last year 150,000. His switch, leading right to the cellar, gives him great facilities for bringing grapes from abroad. He has serious thoughts of building next year a winery in the vicinity of Sacramento, where parties are urging him to do so, and where they are anxious, not only to contract grapes at low prices for a long term of years, but to put out new vineyards, when a market can be assured.

#### PLACER.

**THE FOREST FIRES.**—Truckee Republican, Sept. 24: There have been heavy forest fires raging during the last month near Prosser creek, Lake Tahoe, and in the Washoe mountains. On Tuesday evening the great fire in the Washoe range lit the whole heavens up with a ruddy glow, and the clouds above were draped in fiery red. It is said that sometimes in calm weather during the last few weeks, a hazy, cloudy mist of smoke has hung over the lake, it having been produced by the continuous fires in the woods.

The storm of Wednesday and Thursday has served to check these fires, and in some cases they are completely extinguished for the season. It is to be hoped we shall have no more of them for the present, at any rate. These annual fires in the Truckee basin are very destructive to vast amounts of valuable property. In all cases they destroy good timber land. This timber land is not in all cases land which is now accessible to market, but it will be so in the not far distant future. This fact makes it none the less an evil. It is waste—the timber lost this way does nobody any good, and these fires do nearly as much to denude our rich wooded mountains as the axe of the woodman, or saw of the millman. These latter will denude our mountains soon enough, without the wanton, worthless and useless destruction of our forests of the Sierra Nevada by these fires.

They are the general results of carelessness. It is seldom that parties are found who are wicked and wanton enough to create these fires purposely. At this season of the year there are large numbers of Indians in the woods, from the sage brush country, who come to the mountains to gather pine nuts for the winter. Then there are often campers who are negligent and inadvertent by leaving camp fires behind them. There are very stringent laws on the statutes of this State against actions of this kind, and against aiding or abetting in creating these fires. What is needed, is a little enforcement of these laws. A kind of forest constabulary, such as is in vogue in some of the older countries of Continental Europe, would be a great benefit in some portions of the Sierra. It would preserve the property not only for the present, but save millions of dollars worth for the enjoyment of posterity.

#### SANTA CRUZ.

**FRUIT FARM.**—Pajaronian, Sept. 24: One day last week, in company with J. A. Blackburn, we visited his large orchard, situated in the eastern part of town. His orchard is principally composed of apple trees, though he has a large quantity of cherry, peach, prune and other trees, and has also a large strawberry tract. The apple orchard occupies eight acres of ground, and contains about 600 trees, all of which are standard varieties, the larger portion being what is known as winter apples. The apple crop is sold to Marco Robassi, of San Jose, who has a force of men in the orchard picking, boxing and shipping the apples. From here the apples are shipped to San Francisco, then either sold in that market or shipped to Mexico, Arizona, or the Pacific islands. For his apple crop (and it is only an average crop) on the trees Mr. Blackburn received \$100 per acre, and is to no expense for picking, boxing or shipping. All he had to do was to cultivate the ground in the orchard and attend to necessary trimming. Counting 600 trees in the orchard, and \$800 for the crop, yield per tree is \$1.25, and all this with no expense to speak of. The price paid for the crop is good interest on the land even if we place a value on the land of \$1,000 per acre.

#### SOLANO.

**GRAPES.**—Republican: John Marshall brought into our office, on Wednesday last, a bunch of grapes, of the variety known as White Malvasia, that weighed nine lbs.—even weight. The grapes are large and sweet, and are grown on a hillside on Mr. Marshall's ranch. Beat this, somebody.

#### YOLO.

**IRRIGATION.**—Mail, Sept. 24: Mr. R. B. Blowers, of this vicinity, has so far perfected his irrigating machinery, that from a single load of straw used as fuel, he can raise and send out over his land over 1,000,000 gallons of water. From a single well tapping of one of the blind or ancient channels of Cache creek he can flood 300 acres of land at any time in the summer season. With this machinery and water he keeps the phylloxera from his vineyard and secures the best raisins made in the State, and simply illustrates what can be done by enterprise, intelligence and perseverance. Mr. Blowers' land is not different from the ordinary lands in the wheat-growing section of Yolo and other wheat-producing localities, and yet from 25 acres in vineyard he has sold in a single season over \$14,000 worth of produce. His seedless Sultana vines this year will average 100 lbs. of grapes to the vine.

**FLOODINGS.**—Phylloxera has appeared in G. G. Briggs' large vineyard at Davisville, but he does not appear to be alarmed for the consequences. With his extensive pumping works, it would not be a great task to levee the parts of the vineyard affected and flood the vines, thus exterminating the pest.

#### Mendocino County Fair Awards.

The following are the awards for farm products and stock at the Mendocino county fair:

**Thoroughbred Horses.**—Best mare 4 yrs, Bell Plant, Willis & Johnson; best suckling mare colt, J. H. Felton.

**Graded Horses.**—Best mare 3 yrs, L. D. Jones; best horse 2 yrs, Harrison Standley; best brood mare 4 yrs, A. O. Carpenter; best suckling horse colt, A. O. Carpenter; best horse colt 3 yrs, A. O. Carpenter.

**Horses of all Work.**—Best stallion 4 yrs, H. A. Eldred; second best, James Hopkins; best stallion and family of six colts, James Hopkins; best mare 4 yrs, Upp & Whitehorn; best horse colt 2 yrs, H. A. Eldred; best yearling mare colt, John Eastwood; best suckling horse colt, Upp & Whitehorn.

**Draft Horses.**—Best horse 4 yrs, J. W. Redwine; best horse 2 yrs, Mrs. B. G. Mast; best mare 2 yrs, J. Haehl; best yearling mare colt, John Eastwood.

**Roadsters.**—Best mare 3 yrs, J. H. Felton.

**Saddle Horse.**—Best saddle horse, Frank Asbill.

**Graded Cattle.**—Best cow 4 yrs, W. J. Vaughn; second best, A. Gordon; best bull calf, W. J. Vaughn; best 2 steers, A. Gordon; best 2 heifers, A. Gordon; best 2 beefers, 1 yr, A. Gordon. All of the above were graded Durhams.

**Thoroughbred Sheep.**—Best yearling Spanish merino buck, E. K. Shimmings; second best, J. C. Thompson; best 5 Spanish merino ewes, Upp & Whitehorn.

**Goats.**—Best Angora buck, 3 Angora does, 4 Angora kids, A. E. Sherwood.

**Thoroughbred Swine.**—Best Poland China boar, Willis & Johnson.

**Graded Hogs.**—Best Chester white sow, Willis & Johnson; best pig, Charley Cook.

**Poultry.**—Best 2 pairs geese, J. C. Thompson; best bronze turkeys, brown Leghorn chickens, E. W. Wheeler.

**Cereals, Wines and Dairy Products.**  
Best Club wheat, best of other varieties, best barley, best oats, O. Simonson; best exhibit wheat, 35 bushels per acre, O. Simonson; best exhibit barley, 54 bushels per acre, O. Simonson; best beans, W. W. Powell; best squashes, peas, O. Simonson; best sugar beets, G. W. Plank; best mangel wurtzels, carrots, D. Tuttle; best cornmeal, J. A. Morgan; best Propo wheat, sack wheat, W. J. Mosier; second best Peerless potatoes, Beauty of Hebron potatoes, Upp & Whitehorn.

**Fruits, Grapes, Nuts, Etc.**—Best single variety apples, J. C. Thompson; best 6 varieties of apples, H. D. White; best exhibit apples, H. D. White; largest and best collection of fruits raised in one orchard, N. Wageseller; second best, J. Haehl; best collection pears, single variety pears, 6 varieties pears, plums, N. Wageseller.

#### Premiums at Los Angeles Horticultural Fair.

The following is a partial list of the premiums awarded at the recent fair of the Southern California Horticultural Society:

**Pasadena Horticultural Society.** best display of fruits by one locality, \$25; P. Potts, Tustin, best 6 ears of corn; Mrs. Jeanne C. Carr, Pasadena, sample of hops; D. F. Webb, Santa Ana, best bushel of yellow corn; also, white corn. The committee makes special mention of 10 stalks, bearing 65 ears, grown by J. C. Hill & Sons, Anaheim; also, 7 ears from one stalk, grown by E. Gussard; G. H. Hinde, Placentia, best bushel of early corn; Lankershim & Van Nuy, city, best flour; also, best cornmeal; W. F. Halsell, Santa Ana, best and greatest variety of potatoes; A. Lawton, Orange, best sweet potatoes; J. F. Berry, Santa Ana, sweet potatoes; E. M. Hamilton, best watermelons and green flesh muskmelons; G. R. Hinde, Placentia, field peas; Hill Bros, Centralia, best and largest pumpkins; McPherson Bros, Orange, best display of grapes; also, best and largest cluster of grapes; also, best and largest cluster of grapes, special premium by E. F. Spence; also, best exhibit of California raisins; R. J. Bee, Santa Ana, best 12 varieties table grapes; G. R. Hinde, Placentia, best one variety table grapes; A. S. White, Riverside, meritorious display of 41 varieties of grapes, silver medal; also, 13 varieties white grapes; Halesworth Bros, Santa Ana, best one variety white grapes; A. S. Hamilton, Orange, best comb honey; C. N. Wilson, San Fernando, second best comb honey; also, best hive of Holy Land bees; also, best extracted honey; also, best hive of native bees; also, second best exhibit of fruit preserved in honey; J. E. Pleasants, second best extracted honey; W. W. Bliss, best vinegar made from honey; also, best hive of bees; also, second best Italian bees; also, second best comb foundation; Chas. Bridgers, San Fernando, second best honey vinegar; also, display of beeswax; also, display of apary implements; Wm. Palmer, Canada, best comb foundation; Capt. J. T. Gordon, Azusa, second best beeswax; J. H. Dunsmoor, best fruit preserved in glass; J. E. Pleasants, best display of honey; Robt. Hall, Carbondale, best hive of Italian bees; Mrs. G. W. Dye, La Dow, best display of jellies; Mrs. M. Rosenbaum, Pasadena, best guava jelly; also, brandied peaches.

**Chas. Beach, Orange,** best budded orange tree; also, best budded orange tree on orange stock; also, best budded lemon tree on any stock; Wright Bros, Orange, best budded orange tree on any stock except orange. Silver medal awarded to E. M. Hamilton for system of sub-irrigation; Beach Bros, Orange, exhibit citrus trees.

Elwood Cooper, Santa Barbara, twelve bottles olive oil; Southern California Packing Co., display of canned fruits; also, display of dried fruits; J. B. Clapp, Pasadena, dried apples; O. N. Cadwell, dried pears; J. B. Clapp, dried peaches; also, dried apricots; C. Galloway, Riverside, dried figs; W. W. Hollister, Glen Annie, English walnuts; also, soft shelled almonds; G. R. Hinde, Placentia, best peanuts; Dimmick, Sheffield & Knight, Santa Barbara, best quality of factory canned fruits; L. J. Stengel, Los Angeles, best and largest collection of flowering, ornamental and foliage plants; also new and rare plants; also, fuchsias in bloom; also, cut flowers; Mrs. M. Rosenbaum, Pasadena, display of cut flowers; L. J. Stengel, bouquets, silver cup; L. J. Stengel, collection of plants suitable for greenhouse; also hanging baskets; Stewart Bros, architects, San Diego, best design for farmhouse; S. B. Smith, California windmill, diploma; J. B. Niles, fruit drier; Wm. Niles, incubator; G. R. Hinde, Diamond Schuffer hoe; Henry Giese, general display of agricultural implements, diploma; T. M. Lash, Sacramento, fruit gatherer; L. Lichtenberger, buggies, phaetons and sulkeys; S. B. Adams & Sons, Acme harrow, clod crusher and leveler; E. N. Hamilton, East Los Angeles, asbestos drain tile, water pipe and stoneware; Alexander Crow, exhibit of insects injurious to farmers; A. J. Sanderson, Orange, California woods and articles made from same. The premium of \$25 for the best essay on "20 acres of land, for family support and profit," was awarded to Chas. Coleman Jr., of the Semi-Tropic.

#### Live Stock Awards at the State Fair.

The following are the awards at the State fair for the various classes of live-stock named: **Horses.**

**Thoroughbred.**—Stallions.—Best 4 yrs old and over, Joe Daniels, owned by H. S. Sargent, Stockton; best 3 yrs old, Duke of Norfolk, Theodore Winters, Sacramento; best 2 yrs old, St. Arthur, William Imre, Napa; best 1 yr old, yearling stallion by California, Theodore Winters, Sacramento; best colt under 1 yr, Billy Poots, W. A. J. Gift, Martinez. **Mares.**—Best 4 yrs old and over, with colt, Glendew, owned by Gov. Stanford; best 4 yrs old and over, Nova Zembla, Gov. Stanford; best 3 yrs old, Rosemary, J. B. Chase, of San Francisco; best 2 yrs old, Amariyas, J. B. Haggins, S. F.; best one-year-old, Miss Gift, W. A. J. Gift, Martinez; best mare colt under one year, filly by Norfolk, Gov. Stanford.

**Draft Horses.**—Stallions.—Best 4 yrs old and over, J. B. Haggins' Black Prince; best 3 yrs old, D. Stewart's (Sonoma) Prince Charles; best 2 yrs old, R. J. Merkle's (Sacramento) Normandy Second; best under 1 yr old, T. Skillman's (Petaluma) Model; Mares.—Best 4 yrs old and over, with colt, A. J. Ogden's (Woodland) Dollie and colt, best 4 yrs old and over, R. J. Merkle's (Sacramento) Nellie; best 3 yrs old, J. B. Haggins' (San Francisco) Lady Montgomery; best 2 yrs old, C. Thodt's (Dixon) Lucy; best 1 yr old, J. B. Haggins' (San Francisco) Vienna.

**Saddle Horses.**—Best saddle horse, Capt. Ben E. Harrie's (San Francisco) Vanity; second best, W. S. Enos's (Davisville) Pinto.

**Jacks and Jennies.**—Best 4-yr-old and over jack, W. A. Munton's (Dixon) John Henry; best 2-yr-old jack, J. B. Haggins' Lucksall; best 4-yr-old and over jenny, Levi Carter's (Stanislaus county) Jane.

#### Cattle.

**Durham.**—Best 4 yrs old and over, C. Younger, Red Thorndale; best 3 yrs old, C. Younger, Second Duke of Alameda; best 2 yrs old, R. J. Merkle, Sixth Red Thorndale; best 1 yr old, C. Younger, Maynard's Duke; best bull calf, C. Younger, Twenty-second Thorndale. **Cows.**—Best 4 yrs old and over, C. Younger, Red Dollie Fifth; best 3 yrs old, C. Younger, Red Dollie Fifth; best 2 yrs old, C. Younger, Sixth Rose of Forest; best 1 yr old, C. Younger, May Queen Third; best heifer calf, C. Younger, Ninth Rose of Forest Home.

**Alderney and Jersey.**—Bulls.—Best 4 yrs and over, Robert Beck, Oakland, Buffalo Bill; best 3 yrs old, R. Noell, Grass Valley, Gray Jersey; best 2 yrs old, John Askew, El Dorado, Solid Grand Grant; best 1 yr old, Robert Beck's fuguomar; best bull calf, James Askew, El Dorado, First Duke of El Dorado. **Cows.**—Best 4 yrs old and over, R. Noell's Katie; best 3 yrs old, Robert Beck's Miss Bassett; best 2 yrs old, James Askew's Jersey Belle; best 1 yr old, Robert Beck's Ida Sixth; best heifer calf, Robert Beck's by Buffalo Bill.

**Devon and Ayrshires.**—Bulls.—Best 4 yrs old and over, George Bement's Melancon; best 3 yrs old, George Bement's Ben Butler; best 2 yrs old, George Bement's Archie; best 1 yr old, George Bement's Newton; best bull calf, George Bement's Leander. **Cows.**—Best 4 yrs old and over, George Bement's Lady Chapman; best 3 yrs old, R. McEnespy's Mayflower; best 2 yrs old, R. McEnespy's Nancy; best 1 yr old, George Bement's Marietta; best heifer calf, George Bement's Helen Mar. **Herds, etc.**—Best herd of thoroughbred Durham cattle over 2 yrs old, C. W. Younger; best herd of thoroughbred Durham cattle under 2 yrs old, C. W. Younger; best herd of thoroughbred cattle, other than Durham, over 2 yrs old, R. McEnespy, (Devons); best herd of cattle, other than Durhams, under 2 yrs, Robert Beck (Jerseys).

**Graded Cattle.**—Cows.—Best 4 yrs old and over, E. Comstock's Bettie; best 3 yrs old, Robert Beck's Miss Munger; best 2 yrs old, E. Comstock's Rosie; best 1 yr old, W. Z. Stone, Contra Costa county, Chromo; best heifer calf, E. Comstock's Cherry.

**Sweepstakes.**—Best bull of any age or breed, C. Younger's Red Thorndale; best cow of any age or breed, C. Younger's Red Dollie 2d; best bull and three of his calves, under 1 yr, C. Younger's Red Thorndale and calves.

#### Sheep.

We have not received a full list of the sheep premiums, but will give it hereafter. The sweepstakes for best ram of any breed and 5 of his lambs, was given to J. Roberts, Washington Corners, Alameda county, Darian and 5 lambs.

#### Goats.

All premiums for Angora goats were carried off by J. S. Harris, of Hollister.

#### Swine.

**Polands and Chesters.**—Best boar 2 yrs old and over, E. Gallup's Captain Jini's; best boar under 2 yrs old, E. Gallup's Comie; best boar 6 mths old and under 1 yr, E. Gallup's Wild Eye; best sow 6 mths old and under 1 yr, E. Gallup's Cantilana; best pair of pigs under 10 mths old, E. Gallup. For the latter the committee also recommend a special premium to L. M. Scott.

**Berkshire.**—Best boar 2 yrs old and over, John Rider's Commodore; best boar under 2 yrs old, Thomas Walte's Taggart; best boar 6 mths old and under 1 yr, E. D. Lake's Governor AL; best breeding sow, John Rider's Princess of Wooddale; best sow 6 mths old and under 1 yr, E. Comstock's Bettie; best pair of pigs under 10 mths old, John Rider's Comet and Peerless.

**Sweepstakes.**—Best boar of any age or breed, John Rider's Commodore; best sow of any age or breed, John Rider's Princess of Wooddale; best pen of 6 pigs, of any age or breed, John Rider; best family, all of the same breed, consisting of 1 boar, 2 sows and 6 pigs of any age, John Rider.

**A BRILLIANT BLACK** is produced on iron and steel by applying, with a fine hair brush, a mixture of turpentine and sulphur boiled together. When the turpentine evaporates there remains on the metal a thin layer of sulphur, which unites closely with the iron when heated for a time over a spirit or gas flame. This varnish protects the metal perfectly, and is quite durable.

The receipts at the Los Angeles pavilion during the fair week amounted to \$3,300.

#### News in Brief.

THERE is now no smallpox in The Dalles. The Mrs. Garfield fund amounts to \$317,000. All four saw mills on Coos bay are now at work.

DEER are reported scarce in the mountains of Siskiyou.

GUITEAU's trial is not expected to begin before December.

The new hospital at San Diego will soon be completed.

THE Klamath Indians have raised 20,000 bushels of wheat this year.

THIRTY thousand cords of firewood are piled at Crystal bay, Lake Bigler.

THE arrival of emigrants at Castle Garden since January 1st foot up 323,000.

RIVERSIDE proposes to donate \$100,000 toward building the California Southern railroad.

THE Indian troubles in Arizona have been ended by the surrender of nearly all of the hostiles.

THE upper Salmon creek mill, Mendocino county, shuts down at the end of this month for want of shipping facilities.

THE Sanitary Commission has received a telegram from Djiddah, Arabia, announcing that cholera has broken out among the pilgrims at Mecca.

MESSRS. HALL & COLLINS, of Haywards, have completed clearing 22 acres of 9-year-old blue gum trees. They took out 14,600 trees and obtained 1,200 cords of wood.

D. W. BALCH of San Francisco and S. C. Scoville were fatally shot at a meeting of the Directors of the Nevada and Oregon railroad company, in Reno, Nev., Monday.

A SLEEPING-CAR on the Canada Southern railroad was thrown into the Detroit river at Amherstburg, Canada West, Monday. All of the passengers but one were saved.

THE ship *Alice Buck*, loaded with rails for the Northern Pacific railroad, went ashore at Half Moon Bay, south of San Francisco, and became a total wreck. Several lives were lost.

A BEAUTIFULLY cut California granite vase, from the Perryn Placer county Granite Quarries, has been presented to the State Mining Bureau. It stands 25 inches high, and is highly polished.

RUMORS of war between China and Japan are still afloat, and there is some talk of an Embassy being sent to Peking to effect a solution of the difficulty which exists between the two countries.

THE doors of the National Bank of Luxemburg were closed by the Government on Monday. The notes of the bank will no longer be accepted at the public treasuries. The bank is obliged to go into liquidation.

JAS. R. KEENE has purchased for \$75,000 an estate near New Market, England, on which he intends having stables erected solely for the purpose of training his horses himself, going over to see them run and superintending all affairs connected with them.

CHOLERA has again made its appearance in Japan, and, singular to say, it has broken out in Kagoshima, the very same place in which the first cases occurred in 1877, when it made sad havoc throughout the land. The epidemic is said to be spreading rapidly.

KING ALFONZO, in the opening sitting of the Antiquarian Society, expressed the friendly feeling of Spain toward America. This society was founded at Nancy, France, in 1873, for the promotion of investigations into the antiquities and history of America, before and after its discovery by Columbus.

#### Mussel Slough Settlers Reception.

The Visalia Delta gives an outline of the proceedings to be held at the settlers reception of their representatives who have been imprisoned in San Jose jail: On the following Wednesday, Oct. 5th, a grand reception will be tendered them at Hanford. A Committee of Arrangements, consisting of Dr. A. Bradley, W. W. Barnes and F. J. Clark, was appointed to make arrangements for the meeting. They appointed a Finance Committee, consisting of A. J. Pope and John Harris, of Hanford; Joshua Patterson, of Grangeville; Theodore Willard, of Rustic; Thos. Standart, of Lemoore; and Mr. King, of Jones, to raise the necessary funds. A brass band will be employed, and all other necessary steps taken at once to make of this meeting a perfect ovation. Invitations will be sent out to all the press and to many prominent men of the State to be present. Large posters calling attention to the meeting, will be circulated all over the county, and in many other counties. Congressman C. P. Berry, a firm friend of the people, has been invited, and is confidently expected to be present and address the meeting, as will also several local speakers. On the same day the James one-track railroad, now in successful operation at Hanford, will be on exhibition, and it is expected that large delegations from abroad will be present to witness its operations, whilst joining in the congratulations of the people over the return of their neighbors. It is expected that the crowd of people present will be immense. The selected grounds will be well seated, and the canopy of leaves that will shelter the crowd from the sun is so dense as to make a complete shade. In fact, the Committee of Arrangements announces that everything possible will be done to make the attendants comfortable. Those from a distance will be especially cared for.





### The Wheel Goes Round.

Though daily we may plan and plot,  
Each day we are sure to find,  
To our distress, that things are not  
Exactly to our mind;  
And useless 'tis to grieve and fret,  
Or meet our fate with frowns,  
For life was never perfect yet  
Without its ups and downs.  
The wheel goes round and round;  
The wheel goes round and round;  
And those who now are at the top  
Will soon be on the ground;  
And those who at the bottom lie  
Will then be at the top;  
For so the wheel goes round and round,  
And round, and will not stop.

To-day my neighbor soareth high  
On fortune's favoring breeze;  
His wants abundant streams supply,  
His life is one of ease;  
His cup of pleasure and delight  
Seems sparkling to the brim;  
The sun is on his path so bright  
That many envy him.  
And yet the wheel goes round;  
The wheel goes round and round;  
And those who now are at the top  
Will soon be on the ground;  
And those who at the bottom lie  
Will then be on the top;  
For so the wheel goes round and round,  
And round, and will not stop.

Some labor hard from day to day  
To till the stubborn soil,  
While some from morn till evening gray  
Reap rich reward for toil;  
And those who in their early youth  
Escape much grief and care,  
May, when old age creeps on in truth,  
Life's heaviest burdens bear.  
The wheel goes round and round;  
The wheel goes round and round;  
And those who now are at the top  
Will soon be on the ground;  
And those who at the bottom lie  
Will then be at the top;  
For so the wheel goes round and round,  
And round, and will not stop.

—Josephine Pollard.

### Peachy Peay.

The annual check had come from Cousin Winamaker, and Mrs. Caldwell and her daughters were discussing where they should go for the summer. Mrs. Caldwell was a widow with but a small income, and Mr. Winamaker was a millionaire.

Mr. Winamaker himself, though a widower, was still in the prime of life, and eminently handsome; and Mrs. Caldwell, perhaps, would have preferred his hand to his check; but she knew this was a hopeless wish.

"So kind of Cousin George," she said, "And now, girls, where shall we go? I am tired of Saratoga and Long Island. What do you think of a quiet country retreat somewhere?"

To a quiet country retreat, after some discussion, it was resolved to go. The place selected was a farm, up among the hills, belonging to a well-to-do farmer, known as Grandfather Tole. Aunt Phoebe, Grandfather Tole's sister, had rather opposed the taking of boarders, as she opposed everything that was novel; but Chloe, the eldest of the granddaughters, who was the Jupiter, had spoken up promptly. "Why not?" she said. "It will air us up and give Maggie some idea of great folks, for I am told these Caidwells are very fashionable. Let us have them, by all means." Maggie was Chloe's younger sister, and the pet and beauty of the family; and when she, too, pronounced in favor of the scheme, the thing was settled. So the Caidwells came—mother and daughters.

"They're not stuck up a bit, if they did come from below," said Aunt Phoebe, when tea was over. "Appear just like our sort of folks."

The Caidwells were equally pleased. "Let's stay here always," said Mabel, the younger daughter, to her mother; "it is so beautiful in the country. I hate the city."

It really was very pleasant at the old farm house those early summer days. There was a tender green on field and tree, such blossom and scent; such sparkling mountain streams; such wonderful moonlight. The Tole family, too, were so pleasant. Maggie was the life of the house. She was so full of fun and was so obliging. "So cultivated, too," said Mabel, who had fancied that farmers' daughters must be ignorant. "Why, she has read more books than I have, ma!"

But as the summer advanced and the days grew hotter, and things lost their novelty, the fickle Mabel began to be less enthusiastic about the country.

"Always the same milk and fruit, always the same drive," she said. "And Maggie has so much to do now that she can't be with me like she used to. I'd rather a thousand times be in town. It is so dreadfully stupid here, with not so much as a donkey cart going by. The musquitoes are ever so much worse than at home. There we have bars, and there are more people, so they needn't bite just us all the time. And the flies are awful."

In the midst of her grumble there came a smart rap on the door, and was directly pushed open by a little old woman, who dropped a brisk little courtesy on the threshold, and then

stepped in. She was dressed in an old-fashioned "short-gown and petticoat," and wore on her head a huge green silk affair, fashionable 30 years ago under the name of "calash," and bearing close resemblance to a chaise top. Away in under this monstrous bonnet was the wide frill of a white muslin cap; and a pair of colored iron-bowed glasses covering a pair of twinkling black eyes. The old woman carried on her arm a covered basket, and in her hand a great bouquet of field lilies, jewel-weed, golden rod and clematis.

"Miss Peay, Miss Peachy Peay," said she, dropping another courtesy; "I called to fetch you a handful of my soporose apples. My tree is early, and I thought maybe you hadn't had a taste of apples yet this year. And here is a parcel of blows I picked as I was a coming. Moby you will like them, too. They are considerably pretty."

As she spoke, Miss Peay opened her basket and took out a dozen smooth, red apples, fragrant and fair.

"Oh, how nice! Thank you ever and ever so much!" cried the Caidwells, in a heartfelt way. "Do stop and sit with us awhile."

"Yes, I was a meaning to," returned Miss Peay. "I live over to the cross-roads, a good bit from here; but I rode with my brother Philip as far as the turn of the road. He brought his grist to the mill here, for he thinks Cooley grinds better than the mau does at our place. And he had one or two arrants at the store; so I don't need to be back to the turn under half an hour or such a matter."

"And you live with your brother?" asked Mrs. Caldwell.

"Oh, yes! Him and me, we never, ne'er a one of us married, and we've always lived together. We was twins, but we arn't any alike. You would not think we was anything to each other."

"Is it on a farm like this where you live?" asked Mabel, forgetting her discontent at once.

"Something like," returned Miss Peay. "My brother, he carries on the outdoor work and I keep house for him."

"Do you do all the work your own self—every bit?" asked Mabel, in a tone of pity and wonder.

"La, yes, Miss; I hope so; and I have a good bit of time left for my knitting. I knit 25 pairs of white muslin mittens and 25 pairs of feeting last winter. Mr. Call, to the brick store takes them, and pays one-half the money and one-half the goods."

"Feeting! What are feeting?" asked Mabel.

"Feeting! Why, don't you know? Men's socks or stockings, or whatever they call them. I finished off a pair this morning."

"Oh, mother! exclaimed Mabel. Can't I get a pair of Miss Peay's feeting, and send to Mr. Winamaker?"

Mrs. Caldwell smiled; and the quick black eyes under the calash caught the smile and the thought behind it.

"Tisn't likely," said she, "my homespun, blue yarn would be suitable for a city gentleman, but I would send him a taste of my soporives in welcome, if there was a chance."

"Oh, yes!" cried Mabel, "do send him some apples! We are just sending a box of ferns and mosses for his aquarium, and there is plenty of room."

"Send them, to be sure," answered Miss Peay, opening her basket again, and as though it had been the widow's barrel that never lacked its handful, producing another dozen of smooth, red apples, fragrant and fair.

Miss Peachy Peay went away presently with another brisk little courtesy. But the effect of her visit lasted longer. It even outlasted the apples. Mabel's good nature continued all day, and as she occupied herself filling a letter to Mr. Winamaker with a picturesque and enthusiastic account of the visitor.

But that was not the last of the visitor. She came again upon another day, when Mabel was in the midst of another fit of dissatisfaction.

This time Miss Peay brought some early blackberries and a great handful of water-lilies; and she came in a dress still odder and older-fashioned, with the same little dipping courtesy, and the same quaint cheerfulness of manner.

"Mr. Winamaker was ever and ever so much obliged for those apples, Miss Peay," cried Mabel; "and he says if you are as nice as your apples, he wishes we would take you home with us. Will you go, Miss Peay? Now please do."

"Home with you!" exclaimed Miss Peay, her black eyes shining with mirth. "A plain country body like me would make a pretty figure in the city! And I should be worried to death by all the noise and huz. Somebody a-going by in the road pretty much continually, I expect; and a fire likely enough somewhere about, almost every day. But I thank him and you, too, for the invite."

"Oh, Miss Peachy, you must go! Mr. Winamaker wants to see you awfully. He truly does," persisted the inconsiderate child.

Miss Peachy laughed heartily; but before she had time to do more, the village coach drew up before the door, and Mr. Winamaker himself got out.

At that sight Mrs. Caldwell rushed eagerly upon the piazza, followed by all the children; and Miss Peay was left alone in the room, with no way of escape but through the little square entry, where Mr. Winamaker stood paying the driver, and shaking hands with the Caidwells.

She had no idea of meeting him, though, and so she darted across the room to seek an exit

through the window. But her dress caught on an ugly nail that Mabel had driven in the case-ment to hang thistle-down upon.

"I am awfully glad you've come. I do love you so!" she heard Mabel say; then the party began to move toward the room.

Miss Peachy Peay at this made another effort to escape; but the nail held firmly to the stont chintz gown that couldn't tear, for alas! it was not woven on our degenerate looms.

"Miss Peachy Peay is here this minute, Mr. Winamaker, and so you can see her," continued Mabel, with a lip that she put on, like a state dress, upon a state occasion.

Miss Peachy Peay at this struggled still more fiercely, but still the nail and chintz refused to part company. And it was this astonishing tableau that presented itself to Mr. Winamaker's eyes as he entered the room.

"Permit me, madam," said he, coming forward politely.

At that instant the gathers of the gown gave way, and at the same time the green calash and iron-bowed glasses fell off, and down floated a mass of fair hair, and up looked a sweet, girlish face in a pretty flush of girlish shame.

Mr. Winamaker had only an instant look, for as soon as she felt herself released, Miss Peachy Peay disappeared around the corner of the house never to return.

"Oh, mamma! what a trick has been played on us," cried Mabel. "Did you know it was Maggie all the time? I didn't dream it."

Mamma smiled with wise superiority.

"Country life gets dull sometimes, and we have to amuse ourselves with all sorts of travesties," said she, in a side apology to Mr. Winamaker.

As to poor Maggie, she would gladly have hidden her diminished head during Mr. Winamaker's stay; but that was not possible. The servant who was to have been such a family relic never came, and Maggie was both chamber-maid and table-waiter. But when she appeared that night with his cup of tea, Mr. Winamaker gave no sign of recognition. So by degrees the hot color burnt itself out on her cheeks, and she quite recovered her tranquility. Nevertheless, he noted every look and word and gesture, though so quietly that even Mrs. Caldwell's observant eyes did not see it.

So that, for once in her life, she was taken unawares when, at the end of two weeks, Mr. Winamaker led her to the arbor at the foot of the garden for the sake of asking her advice, as she said, and began to ask it by announcing his intention of adopting Maggie Tole as his daughter.

"My advice!" thought Mrs. Caldwell, curling her lip a little. "He is past advice, and a good way past it. I have seen for two days which way the robu was going to fly."

But outwardly she was sweeter than honey and smoother than oil.

"How nice!" she said, heartily, yet, as a woman would have perceived, with an undertone of disapprobation. "A capital idea," she continued, after a reflective pause, "only—I doubt if her grandfather would part with her. And then she is rather old for adoption—22 at least, I fancy."

"Twenty-two!" repeated Mr. Winamaker, aghast.

To be sure! What had he been thinking of. Whatever it was he evidently thought of it no more, for, though he staid another two weeks, he never spoke of adopting a daughter.

Neither did he at Christmas when he came to Cranberry, to see how the country looked in its robes of transfiguration, white and glistening. Nor in the early spring-time, when he came for no reason at all that Aunt Phoebe could discover.

"Unless to see about getting board for next summer; and I should moat thought he'd wrote for that, and not be to the coat of a journey down here," said she. "Look here! I wouldn't go in the parlor—there's folks there—that New York gentleman, Mr. Wagonmaker. Likely he wants to see your pa on some business or other," she added, as Maggie came down the stairs, looking as fair and fresh as a daisy.

She went right on, however, in spite of Aunt Phoebe's warning, and as soon as she opened the parlor door, Mr. Winamaker came forward, and, bless you, kissed her!

"I want to know—" ejaculated Aunt Phoebe, opening her eyes.

She did know, and soon, for though Mr. Winamaker still said nothing about adopting a daughter, Maggie Tole, before the water-lilies were in bloom, went to live with him in his beautiful home in the city.

And when she went, packed away in the choicest corner of her trunks, among white satin and lace and muslin and orange flowers, was a green calash.

"In memory," said the happy bridegroom, "of Miss Peachy Peay, who first introduced me to my wife."

It doesn't pay to be too good natured. An Indianapolis editor got a letter from an unknown correspondent, asking how he contrived to flirt without his wife's being able to catch him. He pitied the ignorance of the inquirer and wrote him an explanation of the whole racket. And when he found that the inquirer was really his wife, he had delirium tremens, without the fun of getting 'em.

THE electric light may be brilliant and all that sort of thing, but there's nothing like a tallow candle for dropping grease all over the carpet.

### Women at Fifty.

It is absolutely untrue that under tolerably fair conditions, a woman is (if we may repeat that crude phrase) "played out" when she has seen 45. If all goes well, or even not very ill, a woman more frequently than not takes a new departure at about 50. It is preposterous to assume that a woman of mature age is likely to be behind her growing daughters or her growing sons, in effectiveness of intellect, in aptitude for "subjects" new or old, in general brightness and susceptibility. In what might be called "quality," in the French sense of the word, she is, upon the suppositions we have just made, so much the superior being, that if the daughters, and the sons, too, do not feel it, there is something wrong with them. It must, indeed, be granted as a preliminary that there is love between the husband and the wife, and that the young people are good in harness, and above all, in themselves; but with these inclusions, little more is needed. And the battle is to be won along the whole line. A gray hair is a gray hair, a crow's-foot a crow's-foot—and these rarely come to the young; but "certainly," as Lord Bacon says, "it is no marvel, though persons in years seem many times more amiable, *pulcherrimum antannus pulcher*, for no youth can be comely but by pardon, and considering the youth as to make up the comeliness. It is the mistake of giddy adolescence, or sand-blind conceit, to suppose that a woman of 50 cannot be exquisitely beautiful, cannot command a man throughout the whole range of his nature; cannot take up all the gladness of life, and beautifully radiate it again, for him and for others. In all this, we are, of course, leaving out, with a sad heart, the miserable life of the very poor. But even with the poor the general rule holds; and amongst them, some of the pleasantest, brightest, handsomest women are women of advanced maturity, but released from the pressure of the cares and toils which young children bring. Such women may even be observed to take a fresh start in mental growth; they read more, and, mixing more with men, pick up general knowledge, and become more agreeable companions than ever. These remarks become more strikingly true, as we carry our eyes upward in the scale of money and culture. Rachel, who was always ill, wrote at 50 years of age that she felt in most particulars just as she did at 14 or 15; that she had, on the whole, the same opinions and inclinations as at 30, only that the background of her life was richer with gathered experience and well connected thought. She laid stress upon the connectedness, meaning, no doubt, that she could take bird's-eye views better than in early life; and she adds, that at her ripe age a joyful yearning or tendency to look forward had sprung up in her, which was a kind of echo of the feeling of early youth.

Of course, every woman is not Rachel, but it was certainly no fault of hers to expect too much of the young. Why, she asks, should they believe the old? "Wrinkles are no testimony." No; but one may add that they can believe "for the work's sake;" and, in spite of prejudice of nearness, apprehend a little of what Rachel meant, and what is exemplified in the lives and letters of numbers of women of ripe age. Not to quote other ladies of great ability and culture, take a very ignorant old country dame, Wm. Godwin's mother. She puts "succagea" for sausages, and had, on the whole, a hide-bound sort of intellect; but what wise, hearty, lively, penetrating letters she writes! The cold Godwin, himself 45, says at her death that he felt as if he had now one to council him and take care of him. But, to go to a type common enough, something between Dame Durden and Rachel, take the mother of Frederick, in Mr. Coventry Patmore's "Faithful Forever." You may meet her any day in ordinary society. Nothing can be more beautifully wise than her letters; and though it is true that a poet writes the felicitous things for her, yet the poet has something of Richardson's truthfulness. Such a lady had no need to ask for toleration from clever young people.—*The Spectator*.

ANTI-WHISKY AND TOBACCO ESSAYS.—We have received circulars from the Women's Christian Temperance Union, announcing that Dr. R. H. McDougal, President of the Pacific bank, has placed at the disposal of this society the sum of \$1,500; \$1,000 to be distributed among the public schools of San Francisco, for prizes awarded for the best essays on the evil effects of intemperance and tobacco; \$500 for prize essays on the same subject (Intemperance and Tobacco), for the public Normal school at San Jose, and the public High schools of the State, outside of San Francisco. The competition for these prizes is governed by many rules and conditions, and those who desire to know the full scheme had better address Mrs. M. E. Congdon, Secretary W. C. T. U., 314 Sutter street, S. F., asking for circulars.

A MAN recently obtained a divorce, and declared, "Once more I stand erect and assume the attitude of freedom and a single man." Then he went home, got into bed, and in an hour awoke with a bad illness, yelling "Where's Maria? Quick! Get a mustard plaster, or I am a goner."

"MR. JONES, you must come to my room soon and see my lovely baby," said a fond mother to a fellow lodger. "Thank you, I heard him all night," was the equivocal reply.



## Chaff.

THOUGH avarice will preserve a man from being necessitously poor, it generally makes him too poor to be wealthy.

It is an established fact that Egyptian mummies are being ground up for paint material. What a prospect for our young ladies.

"If I ever used any unkind words, Hannah," said Mr. Smiley, reflectively, "I take them all back." "Yes; I suppose you want to use them over again," was the not very soothing reply.

"Do you love me still, John?" whispered a sensitive wife to her husband. "Of course I do—the stiller the better," answered the stupid husband.

A SALOON keeper's sign at a station of the Northern Pacific railroad reads, "500 men wanted to unload schooners," and there isn't a man in the place who doesn't drop in there to take a contract several times a day.

AN Albany woman brings suit against a telephone company for trespass in putting its wires on the roof of her building. It isn't the trespass, however, that troubled her so much as the fact that there is gossip going on over her head that she can't get hold of.

OLIVE Logan began one of her lectures recently with the remark, "Whenever I see a pretty girl I want to clasp her in my arms." "So do we," shouted the boys in the gallery. For a moment Olive was nonplussed, but, recovering her self-possession, she replied, "Well, boys, I don't blame you."

A GERMAN newspaper compares the Liberals to a worm under the heels of Bismarck, gnashing its teeth with rage, one fist clinched threateningly, and beckoning for aid with the other arm. That is equal to the English clergyman's description of the Church, "with one foot planted on the rock of ages and the other pointing to the skies."

A MAN who went West to "grow up with the country" has returned. He got there just in time to get acquainted with a tornado which was doing a little visiting in that section. The tornado took him up an exceedingly high distance, and showed him all the possessions of the earth, and then let him drop down again. He says he has grown enough in the last few days to satisfy him for all the rest of his natural life.

## Home Thoughts.

[Written for the RURAL PRESS by E. E. L.]

Love and order are the watchwords of home. Where this little rule is followed you will find a happy, restful home. As for the first it is very easy to love the members of your own household. We take that as a matter of course, but it is not always easy to bear with those we love. For instance, if the good man of the house comes in from the field tired with his long day's work, how grateful to him would be the sight of the neatly spread board. He is almost sure to reward his wife with a pleasant word and smile. If he had not found things ready for his comfort, we can all fancy the different expression his face would wear, for it is not in human nature to be so well pleased.

Dear young wife, cultivate order; have some system in your work, and you will be apt to have a loving husband and happy children, who will look to you as the source of every comfort, and when they have left the home of their childhood to begin a new life in one of their own, pleasant memories of the time when a loving mother looked after their welfare, will always end with the remark, all I am and ever hope to be, I owe to my mother.

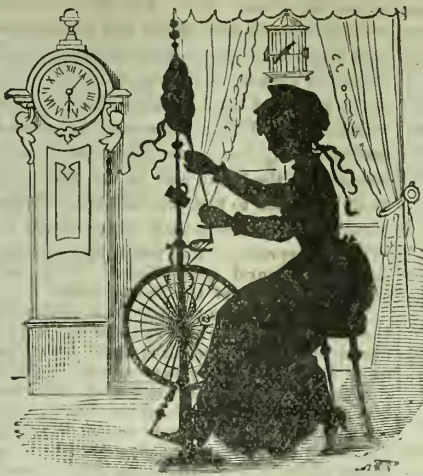
Wife and mother. What nobler title could grace our sex? I can imagine no higher happiness for woman than the place that God has given her. Oh, sisters, let us make home so pleasant, that fathers, husbands and brothers may never go hence, to loiter in the vile haunts of vice and shame.

Meridian, Cal.

AGRICULTURAL EDUCATION.—The pains taken by some of the Swiss cantons to instruct the rural population in theory of agriculture deserves high commendation, and might be imitated with advantage in the farming districts of England. In the canton of Geneva, for instance, every country schoolmaster is required to know something of agriculture and natural history, to the end that he may instruct his pupils therein. Every village has its night school, in which lads and young men who have attended the communal school the required term (until the completion of their 13th year) may obtain further instruction in matters relating to their calling; and during the winter lectures are given in the village schoolrooms (sometimes in the village churches), by professors from the University, on agricultural chemistry and kindred subjects.

READING IN BED.—Never read in bed or in a reclining attitude; it provokes a tension of the optic nerve very fatiguing to the eye-sight. An exchange says: "Bathe your eyes daily in salt water, not salt enough, though, to cause a smarting sensation. Nothing is more strengthening, and we have known several persons who, after using this simple tonic for a few weeks, had put aside the spectacles they had used for years and did not resume them, continuing, of course, the oft-repeated daily use of salt water. Never force your eyesight to read or work in insufficient or too broad light. Reading with the sun upon one's book is mortally injurious to the eyes."

## Young Folks' Column.



An Old-Fashioned Girl.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of sixteen letters.  
My 3, 8, 4 is an instrument for propelling a boat or other small sailing vessel.  
My 5, 11, 16, is an intoxicating beverage.  
My 13, 15, 8, 14, is an animal.  
My 14, 3, 12, is a weight.  
My 9, 10, 2, is a personal pronoun.  
My 10, 15, 1, is a filthy animal.  
My 7, 8, 5, 15, 12, is a vehicle on four wheels.  
My 6, is a vowel.  
My whole was a distinguished American general.

PAUVUS.

## Transpositions.

1. Transpose a band surrounding a cask and form an exclamation.
2. Transpose a small animal and form a pitchy substance.
3. Transpose food and form two or more horses harnessed for drawing.
4. Transpose a European city and form a greater quantity.
5. Transpose to remove the skin and form to harvest.
6. Transpose a boy's nickname and form a conjunction.

JERRY.

## Hidden Authors.

1. The cow performed a wonderful feat this morning.
2. Red Riding-Hood passed this way last night.
3. Who wrote that beautiful poem?
4. Wasn't the master near the building when it fell?

E. H. E.

## Decapitations.

1. Behead a weapon and leave a kind of fruit.
2. Behead a kind of fruit and leave a plant.
3. Behead a part of the body and leave a kind of wood.
4. Behead a tool and leave an illuminator.
5. Behead a part of the body and leave a conjunction.

PARCV.

## Conundrums.

1. What is that whose head and mouth are at opposite extremes?
2. Why is the letter N like the Straits of Gibraltar?

MAGNUS.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—Benjamin Franklin.  
HIDDEN ANIMALS.—1. Bear. 2. Goat. 3. Catamount.  
4. Buffalo. 5. Owl. 6. Gnu. 7. IbeX.  
CROSS-WORD ENIGMA.—Palmetto.  
TOWNS.—1. Sandwich. 2. Wind-ham. 3. Deer-field.  
4. Green-field. 5. Center Harbor.  
CURTAILMENTS.—1. Honest, hones, hore, hon, ho. 2. Lady, lad, la. 3. Hope, hop, ho. 4. Hearth, heart, hear.

## A Remarkable Pony.

A well authenticated and extraordinary case of the sagacity of the Shetland pony has just come under our notice. A year or two ago, Mr. William Sinclair imported one of these little animals from Shetland on which to ride to and from school, his residence being at a considerable distance from the school buildings. Up to that time the animal had been unshod, but some time afterward Mr. Sinclair had it shod by Mr. Pratt, the parish blacksmith. The other day Mr. Pratt, whose smithy is a long distance from Mr. Sinclair's house, saw the pony, without halter or anything upon it, walking up to where he was working. Thinking the animal had strayed from home, he drove it off, throwing stones after the beast to make it run homeward. This had the desired effect for a short time; but Mr. Pratt had only got fairly at work once more in the smithy, when the pony's head again made its appearance at the door.

On proceeding a second time outside, to drive the pony away, Mr. Pratt, with a blacksmith's instinct, took a look at the pony's feet, when he observed that one of its shoes had been lost. Having made a shoe he put it on, and then waited to see what the animal would do. For a moment it looked at the blacksmith as if asking whether he was done, then pawed once or twice to see if the newly shod foot was comfortable, and finally gave a pleased neigh, erected his head, and started home at a brisk trot. The owner was also exceedingly surprised to find the animal at home completely shod the same evening, and it was only on calling at the smithy some days afterward that he learned the full extent of his pony's sagacity.

"Does your sister Annie ever say anything about me?" asked an anxious lover. "Yes," replied the little girl; "she said if you had rookers on your shoes they'd make nice cradles."

## GOOD HEALTH.

## The Hygiene of Old Age.

At no period of life is a careful observance of the laws of health of so imperative importance as in advanced age. The vital machinery is worn and weakened, the vitality at low ebb, and it is of paramount importance that all unnecessary hindrances should be removed, that every removable obstacle to the healthy performance of the bodily functions should be taken out of the way. Thousands of lives are annually sacrificed through the mistaken idea that hygienic rules which are acknowledged to apply to young persons and adults are not to be observed by those in advanced age. For example, many popular writers maintain that while the use of wine as a beverage by youth and adults cannot be condemned too strongly, it is necessary for the aged, as a means of stimulating the declining forces.

Another writer condemns bathing by the aged because, it is claimed, it uses up the animal heat.

The error of the first theory is apparent when the fact is recalled that stimulating lessens, instead of reinforcing, vital strength, thus weakening the hold on life and shortening its duration. The fallacy of the second theory is equally apparent when we take into consideration the fact that in old age the wastes of the body are greatly increased. The discharges from all the outlets of the body are more heavily laden with organic impurities than during youth and adult age. The breath is laden with the poisonous products of disintegration, and the perspiration with effete matter. It is for this reason that a sudden obstruction of any of these outlets is so speedily followed by fatal results. If frequent bathing is neglected, the skin becomes obstructed and the kidneys are overworked. The urine becomes irritating in character, and inflammation or congestion of the bladder is likely to be the result. We have met scores of cases of irritable bladder in elderly men which could be traced, in a great part, at least, to the neglect of the bath.

Old persons should recollect, also, that the bath is for them particularly necessary as a sanitary measure. As the waste of the body preponderates over the repair, the skin, if unwashed, soon becomes covered with a film of the most intensely poisonous and readily decomposable matter. A few days' accumulation is enough to produce a condition not only in the highest degree detrimental to the individual himself, but offensively injurious to all persons of acute olfactory sensibilities who may be closely associated with him.

It is true that cold bathing may be, and generally is, in a high degree injurious to aged persons; but bathing in water at or near the temperature of the body cannot be more productive of harm than putting on a clean suit of clothes. Cleanliness is enforced by one of the first laws in the "code of health," and is binding at all times, and at all ages. The greatest enemy of health is dirt; and the worst of all kinds of dirt is that which arises from the destructive processes at work in the body.—*Good Health.*

## Danger from Dust.

A probably serious source of disease is the dust of cities. When we reflect that this is the dried and pulverized dirt and filth of our streets, derived from all kinds of refuse matter, its dangerous qualities may be suspected if they are not clearly obvious. Conveyed by the winds, it is diffused everywhere, and settles upon or adheres to everything. We inhale it, drink it, and eat it with our food. A speck of mud on our bread excites disgust; but who minds the same thing when it is nothing but a little dust? If our food just brought from the market or the provision store is examined with the microscope, it is found to teem with small particles of dust, consisting of fine sand, bits of hay and straw, filaments of cotton from old paper and rags, wood fibres, hairs and scurf scales of man and beast, starch grains, spores, etc. Recent investigations render it probable that dust contains the germs of decomposition, gangrene, and contagious diseases.

While our view of the dangerous qualities of dust may be exaggerated, there is certainly sufficient reason to regard it with apprehension, and make it desirable to avoid it. Its subtle and all-pervading character renders this, to a great extent, impossible, but it may be much reduced by the removal of its sources of supply—the accumulation of dirt and filth. For this reason the streets should be kept clean, by sweeping and washing; and, to facilitate this, they should be as smoothly paved as will be consistent with safe walking and driving. Especially is this desirable in the vicinity of the depots of our provisions, the market houses, where, unfortunately, we often observe the greatest accumulation of dirt. The streets around our markets should have an asphaltum or other smooth pavement, and it should be swept and washed weekly, or oftener.—*American Journal of Microscopy.*

THE EMOTIONS.—We believe strongly in the emotions as an element of health and disease. Every person should strive to maintain an equable temper. Fretfulness and ill-temper impair both moral and physical beauty. A scold bears that brand upon the countenance as indelible as the mark of Cain. Good emotions improve digestion, while the bad ones impair it.

## DOMESTIC ECONOMY.

POTATO CHEESE.—In Thuringia and other parts of Saxony a delicious cheese is made from potatoes. Our English housewives will find this new confection of a popular vegetable a toothsome addition to their bill of fare. Take a sufficient quantity of the best potatoes, boil them, and when cool either grate or pound them in a mortar until they are reduced to a pulp. To every five pounds of this pulp add a pound of sour milk, and salt to taste; then knead the whole together, cover the mixture, and leave it for three or four days, according to the season. At the end of this time knead it again, then place the cheeses in small baskets, when the superfluous moisture escapes. They should be dried in the shade, and then placed in large layers in vessels, where they must remain thus for 15 days. The older these cheeses are the more they improve in quality. These cheeses have this advantage over other kinds, they do not engender worms, and they keep fresh for a number of years, provided they are placed in a dry situation and in well-closed vessels. Inferior cheeses may be made with four parts potatoes and two parts curdled milk, or, cheaper still, with two parts potatoes and four parts of cow's or ewe's milk.

NORWEGIAN OAT MEAL PORRIDGE.—Take 2 or 3 handfuls of meal, mixed coarse and fine, in proportion of one-third latter to two of the former. Mix in a basin of cold water and pour into a pan containing about a quart of boiling water, adding a small portion of salt. Set on the fire, and keep stirring, adding from time to time small doses of meal until it boils and has acquired a proper consistency; which may be known by its glutinous state, as it drops from the spoon. Let it simmer 10 minutes, then pour into common dinner plates. Spoon out portions and float in new milk, adding sugar to taste.

STUFFED TOMATOES.—Take six large, well-shaped tomatoes; cut a slice off the stem end and take out all the pulp and juice, being careful not to break the skin; then sprinkle them inside with a little salt and pepper; have a pound of cold cooked veal, beef or chicken, a slice of boiled ham or fried bacon, chop very fine, and add the pulp and juice of the tomatoes; chop fine and fry to a light brown half an onion, and mix with the meat a teaspoonful of fine bread-crumbs, two eggs, a teaspoonful of salt, a salt-spoonful of white pepper and a pinch of cayenne; fill the tomatoes with the force-meat, piling it quite high, and bake for an hour.

SPANISH STEW.—Spanish stew is a Baltimore dish, and is considered one of the nicest that a Maryland dame can set before a guest. To make it, first boil a pound and a half of sirloin, save the liquor, and wait until the next day. Then cut the beef into small pieces and put it into a heated saucepan with a teaspoonful of butter, half a pint of highly-seasoned tomato sauce, and the liquor, and let it simmer for half an hour. Just before dishing mash the yolk of a hard-boiled egg, stir a quarter of a teaspoonful of curry powder into it and mix with the stew.

LIGHT CHOCOLATE CAKE.—The ingredients of light chocolate cake are two cupfuls of sugar, one cupful of butter, three and a half cupfuls of flour, one cupful of milk, one-half teaspoonful of soda, one teaspoonful cream of tartar, the yolks of five eggs and the whites of two. For the frosting use the whites of three eggs, 18 teaspoonfuls of sugar, two squares of chocolate and two teaspoonfuls of corn starch. Melt the chocolate, stir in the beaten eggs, the sugar and the corn starch, flavor with vanilla and put on the cake while hot.

BAKED INDIAN PUDDING.—Take a part of a quart of milk and stir in a cup of Indian meal; put the rest of the quart on the fire, add a teaspoon of salt; when it boils add the Indian meal, stirring constantly for several minutes; while boiling remove from the fire and mix in a cup of molasses, and one and a half of cold milk; bake in a buttered pudding dish four hours, or better, all night in a slow oven; raisins can be put in if desired after the pudding has been baking an hour.

ONION TOAST.—Boil some onions of moderate size, change the water twice in boiling; salt in the last water. When nicely done take out with a skimmer. Make a gravy such as you make for cream toast. Toast slices of bread, lay them in a dish, put the onions on the slices, one on a slice, and pour the gravy over both.

Note.—The onions will cook in half the time if you cut them into 3 or 4 slices before you put them into the water.

CREAM TOAST.—Boil a pint and a half of cream or new milk and thicken with a table-spoonful of flour or corn starch, add a little salt. Toast slices of stale bread quickly, of an even brown on both sides, lay them in the toast dish and dip over them a plentiful supply of the hot thickened cream; add another layer of toast and then more cream.

TO REMOVE INK-STAINS OR TO BLEACH WOOD. Oxalic acid dissolved in warm water and applied to the parts stained will remove the stain, or bleach wood that is too dark to match any other part.





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W. B. EWER.

G. H. STRONG.

SAN FRANCISCO:

Saturday, October 1, 1881.

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## The Week.

The week has been filled with mourning and the heart of the people has overflowed with sadness. It is remarked that such universal and unfeigned grief at the death of a ruler, is not within the memory of any one. There have been good and great men died before, and died too at the hand of violence, calculated to excite the fullest indignation and sympathy. But none has died so profoundly mourned. The truth of the matter is that not for a generation perhaps has our people been so closely united in heart, sympathy and aspiration. The old issues were long since buried, and the animosities they engendered have melted away in the warmth of the new and stronger union. Thus when the assassin lifted his hand at the President, he struck at the whole people, and there is but a single sentiment of bereavement pervading the nation. It is glorious to know that the fraternity strand of our threefold cord, liberty, equality, fraternity, is so strong. May it never weaken. The public demonstrations at the obsequies of the late President were greater than have

ever been known before. On Monday, at Cleveland, Ohio, where the interment took place, there was every possible token of respect, esteem and remembrance. At the same hour, from end to end of this country, memorial services were held. In San Francisco, the procession of military and civic societies was two and one-half hours passing a point, and appropriate services were held in the great pavilion of the Mechanics' Institute, which only a fraction of the great multitude could enter. Everything has tended to make the incidents of the past three months doubly impressive upon the minds of the people, and their lessons will not soon be forgotten.

## Notes on Fairs.

The State fair and several of the district fairs have come and gone, and it is perhaps the right time to put on record a few remarks on the policies and methods of the managers of so called agricultural fairs. These remarks are made about once a year, and they do not seem to have any effect upon the character of the exhibitions. It is, however, good evidence of the soundness of the criticisms made, that there are marked signs of dwindling in several of the leading societies. This dwindling shows their position in the popular mind—or the lack of it, which is, perhaps, the better statement of the case.

It is, perhaps, worthy of first mention that the moral tone of the exhibitions has not yet reached its proper height. There have been commendable efforts made to stop the gambling abomination at some of the district fairs. At Oakland, there were arrests made, and the robbers shown that their business was not in high esteem. This was good, and we hailed it as a hopeful sign that the laws and the right and the decent were about to prevail. The best organized gambling, however, still prevails, and the pool business was in high feather. We suppose the State of California, through its representatives, the directors of these societies, sold to some expert gambling promoter the right to ply his arts and lead to transfers of money, for which no value was received. Thus we have a State which is so highly moral on the subject of lotteries that it is a crime to publish a lottery advertisement within its borders, so far forgetting its morals on that more engrossing game of chance—pool selling—that it not only permits it, but it takes some of the unholy money, thus dividing the profits with the bosses of the gambling. What consistency! The commonwealth of California the silent partner in the firm of Gambler & Co., pool sellers! Of what use has it been that the Governor pronounced so vigorously against gambling in his message to the Legislature a year ago? What has been accomplished? A few miserable chuck-a-luck ring-tossers and the like have been choked to death by the police, and thus prevented from distracting attention and patronage from the pool stands of the State of California.

Turning away from this most disagreeable feature of our fairs, we come to another consideration which is unfortunate, and that is that the agricultural fairs, as a rule, do not draw out the exhibits which are truly representative of the products of the country, and, in some cases, are lamentably deficient. What can be said of the last Golden Gate fair? Alameda is one of the great fruit, grain and vegetable counties of the State. Its agricultural industries are perhaps better diversified than in any other county of the State. Its range of mechanical products is also very wide. And yet a fair was lately held in Alameda county last year by the aid of State money, at which there was absolutely no show at all of anything from field or orchard, or garden or vineyard; and no attempt made to have one. Last year there was an attempt and the result was a mass of city merchandise and nothing from the country. What was the trouble? It is not hard to find. The directors of the Golden Gate District association are as far as we know estimable gentlemen; those with whom we are acquainted are reputable and representative citizens. They have made personal sacrifices to maintain an exhibition from year to year. They have lost money by the undertaking. They have done their best. Why have they not done better?

With an exception or two the directors of the Golden Gate society are not representative of the rural population or rural producing interests. They are public-spirited city men, but they are as little adapted to excite the interest of the country in making a creditable exhibition of produce as a group of rural producers would be to act as city council. From their long acquaintance and labor in other fields, they are altogether unfit to awaken the country to exhibition and competition of products. There will be no good general agricultural fair in Alameda county unless the directors are representative men from all the parts of the county, each one willing to exert his home influence for the filling of the fair, and his influence in the Board to secure proper place for the showing of legitimate products and proper awards for excellence in them. There has always to be a large amount of direct appeal made to producers to get them to bring out their products, and then they must be shown due consideration. If this is done, and the chief effort and means are not bestowed upon side issues of questionable value, the fair will become an established institution of the district, and will increase in interest from year to year.

## Imperial California.

Col. Marshall P. Wilder, the honored President of the American Pomological Society, is one of the truest living friends of the whole country. He is most quick and generous to concede excellence to the newer regions and delights to see the growth and progress of the children of the family of the Republic. In horticulture, which is Col. Wilder's chosen field, he has done and said many handsome things for the encouragement of the West, and we are therefore not at all surprised to find the following allusion to our State as the crowning region of the West. We will reproduce the paragraph alluding to the horticultural possibilities of the newer States, especially of the Pacific coast:

But who can form any adequate conception of the vast proportions and value of the fruit culture of our country, when it shall have opened up to its full extent by our various Pacific railroads with their connections, and other means of transit—when the Northern Pacific, soon to reach our Western coast—when Washington Territory and Oregon, with a climate in many places varying only one degree in 11 years from that of Paris, with millions of acres of fruit lands, and even in southern Alaska, Sitka, and other places where the mercury, close as they are to the Arctic circle, has only fallen four times in 40 years below zero; where the average of winter temperature is above the freezing point, and for the entire year 43°; where ice and snow are exceptions; where the tropic waters of the Japan gulf stream, crossing the Pacific, softens the climate so as to make it similar to that of Kentucky, and where they can plant earlier than we can at Boston. Nor should we omit the possibilities for fruit culture even in the colder States of our northern borders, like Idaho, Montana, Minnesota and Dakota, with rivers and valleys of great extent and astonishing fertility, the latter especially favorable, with her 100,000,000 acres of tillable land, sufficient for half a million of large farms, and on which 100,000 emigrants have settled in one year. Hardy varieties of fruits will be produced in these regions, and on the upper waters of the Columbia, where now they grow spontaneously, and where along their rivers and streams the wild grapes abound; and it is thought that that portion of the country northwest of the Rocky mountains will be peculiarly favorable for the growth of the apple.

And turn we now to the Southern Pacific road, which is opening upon us the vast regions of New Mexico, southern Colorado, Arizona and the valleys of the Rio Grande and El Paso, already renowned for their grapes and wild fruits, and whose fertile lands yield abundantly, where the climate is as mild as Italy, and where, in some instances, the capabilities for fruit culture are of great promise.

And to these great resources we may add those of Texas, greater in territory than all the New England and the Middle States, opening up another avenue by this road for the transport of its products, and affording great facilities for fruit culture. And, to crown all, we have Imperial California, whose products, by the facilities of transportation, are sent to all parts of our Union, whose capacity for fruit culture is marvelous, whose wines are exported by cargoes to Europe, to be muddled over and returned for consumption by those who prefer "far-fetched and dear-bought" to the products of our pristine soils.

When I reflect on the possibilities of the great future, our fertile virgin soils, our amazing agricultural, mineral and pomological resources, our ever-increasing population, prosperity and power, in all of which fruit culture will have its full share, I fully concur in the opinions of Mr. Gladstone, when he says: "The American Union has territory fitted to be the base of the largest continuous empire ever established by man." And I would say with him, also, "I am proud of America and her physical capacity." Glorious words, indeed! but not more glorious than prophetic of the great future of American civilization.

**HARDINESS OF PALMS.**—Our palm growers may be interested in a note on the effect of frost on two species of chamerops which we find in an English exchange. Commenting on recent observation in France it says that of all the palms, *Chamerops excelsa* is the hardiest. *C. humilis*, which is indigenous in the south of Europe, and grows well at Montpellier, is very hardy when adult, but tender in the young state. Side by side, beds of young plants of *C. humilis* and of *C. excelsa*, of one or two years' growth, each plant having three or four small leaves, were exposed to a severe frost in January last (therm. 10° Fahr.); all those of *C. humilis* were destroyed, while those of *C. excelsa* were unharmed. Adult plants of *C. humilis* were not injured. This is a lower temperature than may be expected in most parts of California. We have young plants of these two species in our garden in Berkeley which were not injured last winter. We lost a *Corypha Australis* but a *Latania Bourbonica* did not succumb, although it has put forth rather sickly colored leaves this summer.

Up to the 20th of this month, 41 schooners have arrived and departed from Westport, Mendocino, laden with ties, posts, bark, lumber, etc.

## Durability of Redwood.

The general desirability of our redwood timber and lumber is becoming widely known, and is leading to a promising export trade, as we have noted from time to time in the PRESS. It seems that the durability of the wood in situations which lead other woods to quick decay, may be the foundation of a special trade in redwood. At all events, wood of long life under adverse conditions is such a desirable thing to Eastern builders, that they are inquiring the record of our redwood in this respect. All who have had to do with it here know very well that it has remarkable durability underground or between wind and earth. In order to present Eastern correspondents an object lesson in the soundness of redwood, Fulda Bros., of Spear street, S. F., who are exporters of lumber, have just sent East a piece of one of the posts which formed the stockade of Fort Ross in Mendocino county, accompanied by certified statements concerning the history of the specimen, which are of general interest, and we publish copies of them as follows:

Messrs. Fulda Bros., S. F.:—By your request I send you, by the schooner *Euphemia*, a piece of the old stockade at this place. The stockade was built by the Russian Fur Company in 1811. Eight years ago, as the stockade was in my way, I had most of it cut down level with the ground, and the sample which I send you is a piece (about a quarter) of one of the butts of the posts left in the ground. In getting your sample, we only took up one post, and it is about a fair average. As you will see, it is perfectly sound, excepting the sap wood, after being buried for 70 years.—G. W. CALL, Fort Ross, Sept. 13, 1881.

State of California, City and County of San Francisco (ss.):—I do hereby certify and declare on oath that the piece of redwood lumber referred to in the within statement was taken up by me from the original stockade erected by the Russians in 1811. It was standing buried in the ground, excepting the upper end. The whole piece being too heavy, this was split off from the log, it being about two ft. thick.—H. BORCHERS, Captain schooner *Euphemia*.

Sworn and subscribed before me this 14th day of September, 1881, John E. Hammill, Notary Public.

Here, then, is a piece of a redwood post which has been near the surface of the ground 70 years. As Mr. Call says in his statement, the post was perfectly sound excepting the thin layer of sap wood on the outside. This had decayed, but the balance was perfectly sound and as bright-colored and solid as though it had been fresh from the lumber yard. The alternating soaking and drying of the ground for 70 years had left no effect upon it, and it is impossible to tell how long it would have endured. Seventy years' duration will, however, satisfy the ambition of most modern builders, and it would not be surprising if our redwood should be called for on account of its durability, and a profitable trade arise.

In this connection it is interesting to mention a fact concerning the second growth of redwood which Mr. Call of Fort Ross relates. He knows of shoots from old stumps which have grown to be three and four ft. in diameter in 40 years. This would indicate restorative powers in redwood forests which would ensure a future supply of the timber.

The redwood which is in demand here for underground use is what is known by the lumbermen as "black heart redwood." It shows a dark color when cut with a knife, the outer layer only becoming "seasoned." "Black heart" is exceedingly heavy; too heavy to float. One who has observed schooner loading at chutes along the coast assures us that a post of this wood which plunges overboard never rises, and a board lingers on the surface a moment and then slowly slides down into the depths. This is the sort which is sought for in the foundation of our buildings, and under brick walls is believed to be imperishable.

**A LARGE COLLECTION OF SPIDERS.**—Capt. Holden, of Cincinnati, Ohio, is credited with an exceptionally valuable collection of spiders, numbering nearly 25,000 specimens, and embracing 4,000 species. They are arranged in bottles, with labels giving name, collector and locality. California furnished 5,000 specimens, and New England as many more. One species is represented by 108 specimens, from all parts of the United States, showing how much effect environment has in modifying form. The collection is supplemented by a full and complete catalogue of the literature of the subject, comprising about 70,000 references on 10,000 cards. This valuable contribution to the study of this little-known branch of natural history he hopes to complete and publish at an early day.

**A GROSS WRONG.**—This year, as other years, the reports come in of the butchery of deer for their hides, by those who oast the flesh to waste. The Enreka, Humboldt county, *Democrat*, says: Hundreds of fresh carcasses are now lying on Redwood, having been slain merely for their pelts. Is it not possible to put a stop to this? Is it not a matter of sufficient interest to every permanent resident of the county to take the pains to inform upon and have the culprits arrested? Our county is now well stocked with game, but the custom will soon run it out and we shall lose the attractive hunting grounds we now possess. Such outrages should be stopped.

It is understood that Postmaster-General James will, in his report to Congress, strongly urge the adoption of a system of postal savings banks on the general but lately improved plan of the English Government.



## The Panama Canal.

We give on this page a panoramic view of the Panama canal as planned by M. De Lesseps. The general principles of the plan are now so well known as to need no detailed description, and the engraving will give a much better idea than columns of figures would. It shows the course and the relative positions of the rivers. It also shows the location of the big dam which is to turn the Chagres river.

A great deal of preliminary work is now being done at the canal in the way of surveying, boring, etc. They are also studying a way to dispense with a lock at Panama. The high tide at Panama is 32 ft., and on the Atlantic side it is only 1 ft. 6 inches. The problem presented by these differences is now being studied. They think the current will be very small, and that it will present no difficulties to be overcome.

These facts we gain from Mr. Prosper Huerne,

canal. Fig. 13, discharging ditch formed by the bottom of the levees. Fig. 14, cut of the Calehrra, hight, 87 meters; length of the canal, 74 kilometers, 49 being in plains, 28 in the rocks; breadth, bottom 22 inches in plains, 24 meters in rocks; water level, 50 meters in plains, 28 in rocks; depth, 8 meters, 50 in plains, 9 meters in the rocks; shortening of distances by the canal from 1,400 leagues to 4,800 leagues.

The survey and staking of the line of canal has been accomplished by two corps, which has employed a large number of natives. The check surveys and leveling of the railroad have been finished from Colon to a point beyond Pedro-Miguel on the Pacific side. The bench marks of the leveling have been engraved on the abutments of the railroad bridges, and also on the mile-stones at the necessary points.

The leveling of the longitudinal section of the large canal and likewise the cross sections already laid out, have been connected with the line of the railroad which serves as a base, the level of which commences at the ocean, and which was determined by the first observations

certain places mixed with sand; and near the shore, pure sand is found, mixed with small shells. The rest of the bay is bordered with a belt of coral. The softest mud is at the mouth of the Folkes river. This deposit was originated by the stoppage of the current around the island, owing to the construction of the railroad embankment. It can be dredged out, however, if it is decided to make there a harbor of refuge for deep-water ships and coasters.

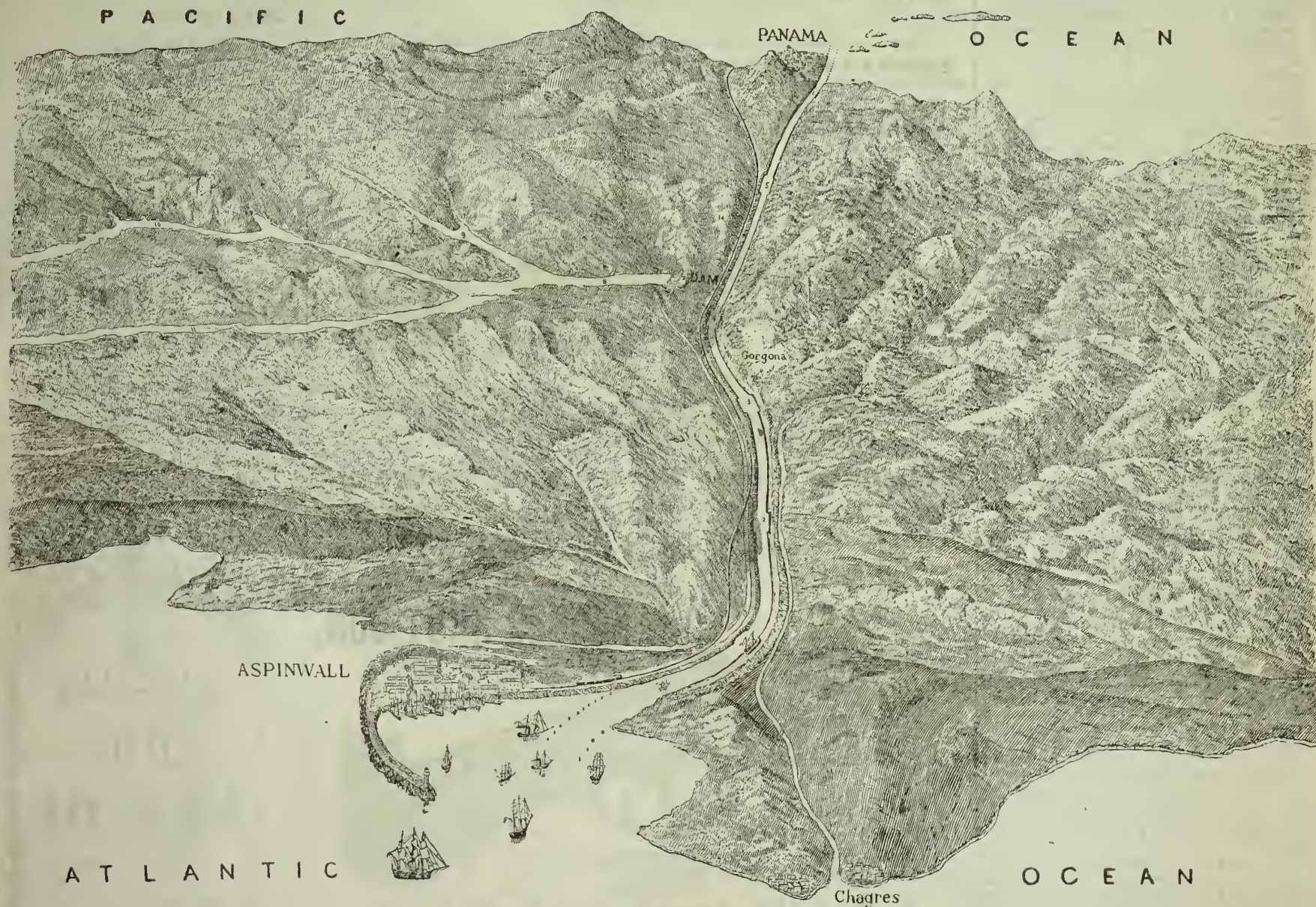
The temperature varies in Colon between a maximum of 30° C. and a minimum of 21° 9' C. The daily averages are between 29° 4' and 26° 2' C.

These meteorological observations have been regularly made at Colon at the mouth of the Rio Janeiro (Pacific) and at Gamboa (the central point on the Chagres). Borings have been made along the line of the canal across the Calehrra to determine the character of the ground. Six shafts have been sunk between kilometric points 51 and 56. The deepest, which is 50 meters deep at station 51, struck hard rock at 43 meters. The next one, at station 52, at 23 meters, struck a bench of very

## Why He Chose California.

Prof. Husmann, who resigned his position in the Missouri State University, and severed his business connections in that State to accept a home in California, has reached the ranch of J. W. Simonton, in Napa county, which is to be the scene of his future labors. Prof. Husmann edited the department of Horticulture in the *Rural World*, of St. Louis, and in announcing his departure, he gave the following reason therefor, which it is well to place upon record as the opinion of one who is well acquainted with the grape interests of the whole country:

We became satisfied, during our last visit in California, that there is the true home of horticulture, and especially our favorite fruit, the grape; and when we were offered a situation there so congenial to our tastes, where grape culture promises to become the leading industry, and can never be fettered by unwise laws—when we also thought of our years of grinding and unfruitful toil, when it took hard and unceasing labor from morning until night to gain the humblest living for our loved ones, and when we often asked ourselves, "Is this the reward for your unceasing labors for the benefit of the State you loved, perhaps, not wisely, but too



PANORAMIC VIEW OF THE PANAMA CANAL.

an architect of this city, who has just returned from Panama, where he remained several months, superintending the construction of buildings in one of the villages on the line. There will be 15 or 16 of these villages on the line. The first one Mr. Huerne laid out at Cahun, and at the next station to that place. All the material for the building was procured in this city and shipped down there ready to be put together. The mill work, etc., was all done here. Mr. Huerne took about 40 American carpenters with him. Another village station will soon be established. Each village has for buildings, a large shed, store houses, lodging houses, an engineers' cottage, hospital, workmen's kitchen, dining rooms, foreman's lodgings, bakery, water tank, ice house, etc. The villages are arranged precisely alike. Every possible means has been provided to keep the men in good health. The buildings are well ventilated, and all the sanitary requirements are well cared for. The design of the buildings and the general plans were by Mr. Huerne, and were adopted without any demur. Water is brought to all the dwelling houses and they are all properly sewered.

In the panoramic view, Figs. 1, 2, 3, 4, 5 and 6 show stations in the canal where vessels turn out to let others pass. Fig. 7 is the dam for controlling the waters of the upper Chagres; length, 1,500 meters; breadth, 960 meters; height, 45 meters. Figs. 8, 9, 10 and 11 are valleys inundated by the rivers Chagres, Chilibre, Pegueni, Gatuncillo, height of the inundation, 38 meters; volume of the water, 1 milliard cubic meters. Fig. 12, lower Chagres, separated from the upper by the levees of the

made by the hydrographic corps.

The staking out of the work in the mountain regions is nearly completed. There still remains, however, a small amount of leveling of ditches between Obispo and the Chagres river and the crossing of the neighboring summits, the timber from which has been cut down in order to facilitate triangulation. Two corps are at work on the survey of the dam for the reservoir at the head of the upper Chagres.

A corps has been organized to run a line across the mountains by way of Upper Obispo and the river Pedro-Miguel, although the reconnaissance made of this district last year seemed to show that this passage was not as favorable as that by Calehrra. The engineers consider that it is necessary to verify this by correct level in order that no possible economy may be overlooked in the definite staking of the canal. Another line is run from the mouth of the canal near Panama to an embouchure on the Rio Grande.

Instruments will be placed on the Chagres at Gamboa for the purpose of observing the velocity of the current and the rise and fall. Similar observations will be made on the Gatuncillo and the Obispo, affluents of the Chagres, and on the Rio Grande. At Colon surveys are being continued in order to determine the mouth of the canal, and also works for the protection of the harbor.

About 1,500 soundings have been taken in the immediate neighborhood of the line of projected mouth of the canal. Samples of the bottom are taken with each sounding, with a view of determining its hardness. The bottom of Colon bay is covered with mud, which is in

hard rock, of two meters and more in thickness. Then it ran into a conglomerate; and then a second bench of very hard rock was struck. Finally they passed through a very thick bench of hard rock, which they struck at 31 meters.

The other shafts have only indicated an argillaceous conglomerate. Finally to determine the character of the ground at Emperador, a large shaft having a sectional area of 10 meters, has been sunk. At a depth of eight meters, they came across angular pieces of dolomite imbedded in a mass of colored sand.

The shafts are timbered, and have two compartments. Six houses have been built at Emperador for the corps of miners. A large carpenter shop, blacksmith shop, etc., have been put up for convenience in the shaft work. The frame-work and machinery for the sinking to 100 meters have been received and housed in. At some of the shafts palm roofs only have been put up to protect the men from the rain and the rays of the sun.

**GOLDEN GATE FAIR PREMIUMS.**—Seymour, Sabin & Co., who have a new manufacturing establishment at No. 654 Washington St., Oakland, made one of the finest displays in the State of agricultural machinery, and received first premiums on separator (Minnesota Chief), engine and horse power, and on display of machinery; also the award of a special certificate and special diploma for the finest and best machinery manufactured for the Pacific coast. Without incentive competition from abroad this Oakland house made a display that would have been decidedly creditable at any time or place.

well?"—we could not hesitate one moment, in justice to ourselves and our family, when we ought to go.

We doubt not the change will be a successful one, and that many others of the zealous horticulturist of the East will also find in California a field far more satisfactory and more profitable labor than they now occupy.

**SPECTRA OF FIRE FLIES.**—During the past summer Mr. W. G. Levison, of Brooklyn, N. Y., has studied the spectra of the light of fire flies and other light-producing insects. He finds that the ordinary small species of fire fly gives a spectrum from which the blue and violet are omitted, and that in all cases examined the less refrangible rays predominate. Phosphorescent oils and glowing phosphorus give a spectrum consisting of green light only. A fire fly that is injured and glows permanently seems to give a nearly similar spectrum, but the bright light given by the insect when living affords an entirely different spectrum, as mentioned above.

**SOUTHERN GRASSES AND FORAGE PLANTS.**—Our experimenters with pasture improvement by the introduction of new grasses and forage plants will be interested in a pamphlet entitled "A Manual on the Cultivation of the Grasses and Forage Plants of the South," by C. W. Howard. There are certain points of similarity in the conditions here and at the south, and a knowledge of southern experience with the different "tame grasses" will be of advantage. The pamphlet can be had, post paid, by sending 30 cents to the *Live Stock Journal Co.*, Starkville, Miss.



## A Study of Children's Teeth.

For two or three years Dr. Samuel Sexton has been engaged in an investigation of the teeth of school-children with special reference to the influence of decayed teeth upon the sight and hearing of children so afflicted. The investigation was suggested by the almost constant occurrence of defective teeth in cases of inflammatory diseases of the eye and ear.

In the course of his work, the *Times* states, Dr. Sexton has taken some hundreds of accurate casts, in plaster, of the interior of the mouth in cases that have come under his notice, and has collected a cabinet that is invaluable as a contribution to science. His method has been, first, to take a complete cast of the internal cavity, and then from it to mould each jaw separately, and unite the two posteriorly with a neat brass hinge, so that the state of the teeth, their arrangement, and all their peculiarities can be observed at a glance. He has found a pretty constant association between impaired hearing and defective teeth, the cause of which he believes to lie in the distribution of the fifth pair of nerves, which is at once a sensory, motor and trophic pair, supplying the teeth, the tissues of the nose, those of the eye and ear, the integuments of the frontal and temporal region, and so on. Irritation of the whole region is consequently produced by a defective tooth, and, in point of fact, some of the severest cases of neuralgia, temporal, facial and ophthalmic, arise from impaired teeth; often in cases where the teeth themselves give no trouble whatever, and none save the acutest medical intelligence can trace any relation between the fierce attacks in the eye, ear or temple, perhaps, and the caried tooth that gives no local trouble whatever. In a few cases progressive dementia has been arrested by immediate repair of a tooth that produced no apparent disturbance, but was responsible for deep-seated cerebral trouble; but these cases have been too few to lay stress upon as factors in the investigation. On the other hand, troubles with the eye and ear are often traceable to defective teeth, and Dr. Sexton regards irritation of the maxillary limbs of the fifth pair as among the principal causes of the progressive near-sightedness of school children, as observed by Drs. Agnew, Loring, Parke Lewis, Kohn and other ophthalmologists.

## The "White House" Wash.

A correspondent in the *Scientific American* says: "I have noticed in several answers to correspondents and in at least one article in your valued paper an allusion to what they call the whitewash on the White House. As I know something of that preparation I think it proper that I inform you and your many readers. About the year 1836, John Ogden Dey, Esq., a maternal uncle of mine, visited Washington. He was a man of very observant habits, and, in his inspection of the White House and the old Capitol building (the central part of the Capitol as it now stands), he found that the stone of which it was erected was being acted on severely by the weather. The outside of the stones had splintered by exposure and contraction and the disintegrating effect of the atmosphere to such an extent as to seriously threaten its permanency. He sought the Committee on Public Buildings and proposed to remedy the evil, not with stucco, but with a cement wash. After a full interchange of opinion, he was empowered to send the material and instructions to Washington, which he did; and it was put on the next year, and has stayed there ever since, protecting the building material effectually. The information was given without fee or reward.

"The old man has passed away long since, and, in justice to his memory, as well as to inform the public, I have penned this. The material used was "Onondaga Hydraulic Cement," from the State of New York, mixed with a small amount of glue and with milk; the exact proportions I do not now remember. I have seen several brick houses covered with this cement that have stood all kinds of weather for years. Some I have in mind were washed 35 years ago, and still retain the full coat and look as well as when put on. The cement has to be applied soon after it is mixed, and put on as thick as the brush will carry it. Sometimes two or more coats are required."

**NEW USE FOR PETROLEUM.**—In the town of Beku, in the Russian petroleum district, the crude oil is worth but six cents a barrel and the authorities use it for "watering" the streets in preference to sea water, though the latter costs only the hauling. The oil in combination with the sandy soil makes a solid and compact pavement which lasts for many days. Nothing is said about the prevailing odor in Beku.

**A NEW VARNISH.**—A very useful kind of varnish, according to the *Scientific News*, has been made known by M. Leon Vidal. It is excellent for producing an imitation of ground glass, and it will doubtless be found available for other purposes. The formula given is as follows: Sandarac, 18 parts; mastic, 4 parts; ether, 200 parts and benzole, 80 to 100 parts.

**LARGE MIRRORS.**—Some of the largest mirrors ever manufactured were recently made for the Grand Opera House at Paris. They measured 45 by 52 ft., their weight being from 1,200 to 1,600 lbs each.

**PLASTER OF PARIS FIGURES.**—Common plaster of Paris figures may be made to look like alabaster by simply dipping them into a strong solution of alum water.

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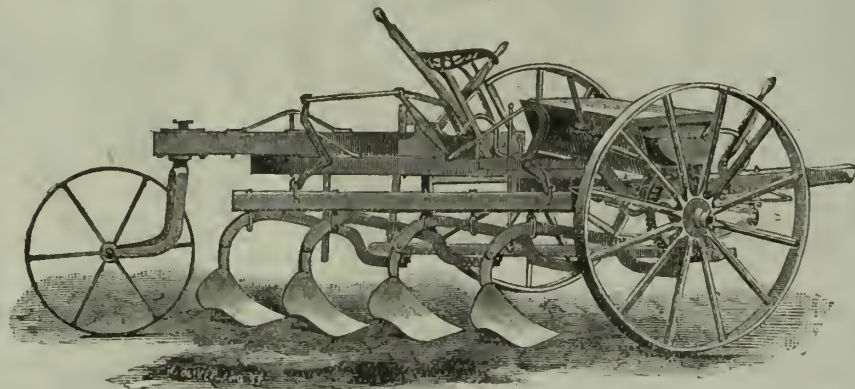
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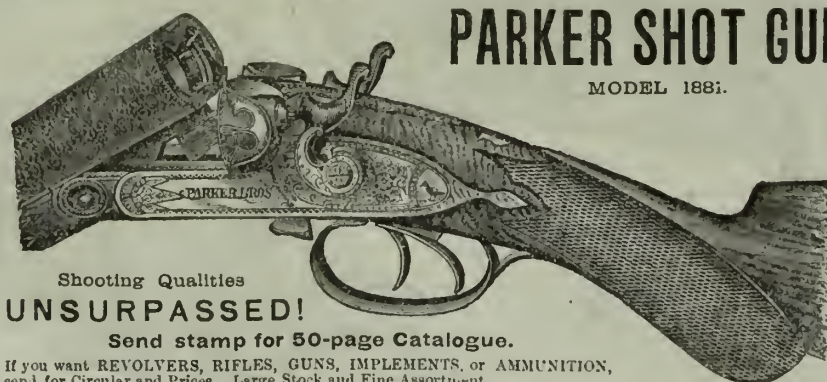
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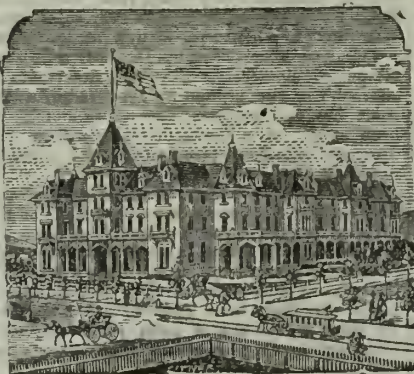
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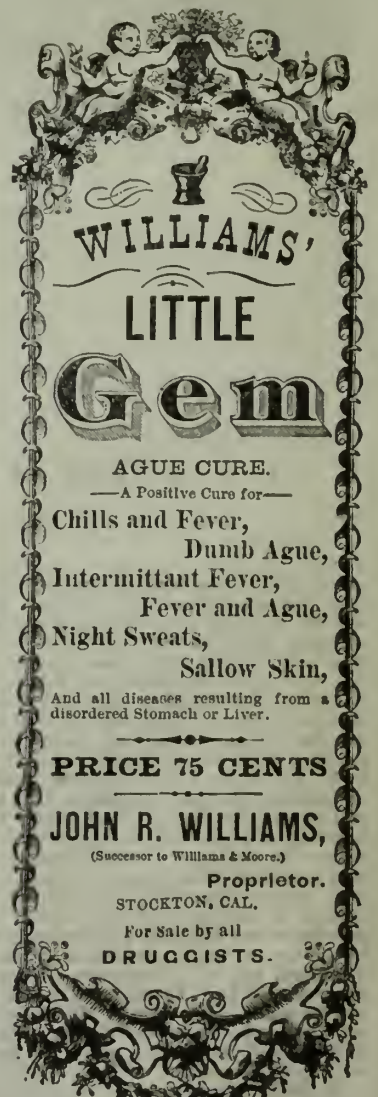
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**WILLIAM NILES**, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

**HENRY PIERCE**, 728 Montgomery Street, S. F. Jersey Cattle, bred from importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted butter strains on the island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound butter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

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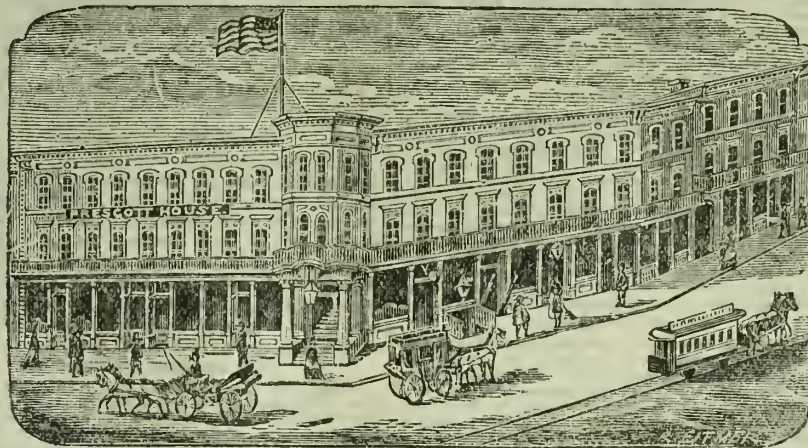
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One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

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This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

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\$2 per Gallon.

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## Implements and Machinery at the State Fair.

The following random notes are not put forth as an account of the State fair, but merely points of interest which chanced to attract the attention of the writer:

### Insect Killing.

Now that insect killing is one of the main labors of the horticulturists in some parts of the State, there is much interest in insecticides and their application. D. N. Dilla showed the "Lewis Insect Exterminator," a cheap and effective spraying pump which has been fully tested and highly approved at the East. It will throw any liquid, can be instantly changed from a solid stream to spray, and is light and easily worked. It is worth examining. D. N. Dilla may be addressed at 825 29th St., Oakland.

### Dairy Machinery, etc.

J. S. Woolsey had a very interesting exhibit of his well-known cheese making apparatus, steam vats, heaters, and the like, now in use in some of our best factories. He had also his patent animal gun, which is designed to kill any kind of game or pest from a mouse to a bear. It is claimed to be a dead shot for gophers, and has been successfully used for squirrels, rats and coyotes. A full description of the animal gun can be had by sending for a circular to J. S. Woolsey, Gilroy, Cal. Mr. Woolsey has also a lawn sprinkler believed to be the cheapest, most durable and effective sprinkler now in use.

### Thrashing Elevator.

A. W. Lockhart exhibited Lockhart's patent self-feeder elevator, which attracted a good deal of attention from its simplicity and efficiency. This machinery is at the N. W. corner of 15th and D Sts., Sacramento, Cal.

### Ditching Machine.

We have frequent inquiries for ditching machines, and those interested should see the ditcher and excavator devised by A. Haskins. As shown at the fair it attracted much attention. It is claimed that it will excavate a 20-inch ditch for 10 per rod. Further particulars may be had by addressing A. Haskins, S. Helena, Cal.

### Davis Iron Wagons.

These wagons, of which we have spoken highly upon several occasions, made a good record at the fair. They were shown by E. A. Scott & Co., of San Francisco, and one of them was offered by the agents as a special premium for the fastest walking team. All who witnessed the walking match, had an opportunity of seeing these wagons, as the wagons drawn by the three horses contesting were of this pattern. The wagons drawn, however, were of this pattern. The winner of the walking match pronounced them the easiest running wagons he ever hitched to, and he won a farm wagon of the same make. These wagons being all iron are especially adapted to the dry climate of California, as the weather cannot affect them.

### Hollow Tooth Harrow.

The Russell hollow-tooth harrow was exhibited by Garoutte & Johnson, and is manufactured at Woodland (Yolo county), Stockton and San Leandro, and the demand was so great for them last season that it could not be supplied. This year the facilities for manufacturing have been greatly enlarged, and it is hoped the demand may be supplied. For this harrow it is claimed that the teeth being round and hollow, a large number of them can be used on the harrow without encumbering the team with their load, and the teeth have greater strength, with the same weight of metal. The harrows are made in sections and coupled, so that the harrow adapts itself to the condition of the soil and surface of the land. This harrow is used and highly recommended by many practical farmers.

### Geo. Bull & Co's Exhibit.

One of the largest and most attractive exhibits of agricultural machinery was that of George Bull & Co., of 37 Market St., S. E. and San Jose. The machinery was shown by Mr. L. Oler, and its points were well brought out by his explanations. Among the important machines exhibited were the J. I. Case & Co's celebrated wood or straw burning engine; the Agitator separator, which is claimed to have a larger cleaning capacity in proportion to the length of the cylinder than any other machine. They also show the J. I. Case fanning mills, the Smith gang plows, Little Chief fanning mills, Harrison wagons, Eagle self-dumping horse rakes, McKenzie seed sower, Tolly's cultivator, Knapp's side-hill plow, etc. The Case & Co's threshing engine, mounted on improved iron wheels. The straw burning attachment seems very good. It has a separate straw box in which the straw is first burned, and all the gases and sparks are drawn into a separate fire box or combustion chamber, in which they are entirely consumed. This engine was working on the ground, and the straw burning feature was illustrated to the satisfaction of all who saw it.

### Grain Cleaners.

The popular Nash & Cutts grain cleaners were shown with good effect. The hand-cleaners for ordinary farm use are now so well known, and have proved so satisfactory, that it is hardly necessary to say much about them. The large cleaners for use with the separators and in the warehouses have also made an excellent record, and are worthy of general attention. There is abundant testimony to their excellence—far more than we have space to mention. Two notes of approbation—one from a thrasher, another from a warehouse man—will represent many more of similar import: "It is the boss trick, and every thrasher should have one. I cleared the price of mine in 19 days."—Walter Miller, Sacramento Co. "Washington Corners, Alameda county, August, 1880."—Gents: "The cleaners which you have sold here are giving perfect satisfaction. I am now buying wheat cleaned by them that runs 150 lbs. to the sack, and is all A No. 1."—Wm. Mortimer.

### Sulky Scraper.

H. L. Babcock, of Modesto, exhibited a sulky scraper for road or field purposes. It is 8 ft. wide, with a carrier extending down within 10 inches of the ground. Under that diagonally is a steel scraper, 16 inches wide and 6 ft. long; steel held in position by a supplementary frame. There are three sizes, for two, four and six horses. They seem well adapted for rapid moving of the ground.

### Feed Mill.

The feed mill, which has become well known to our readers through the advertisement of Rusby & Mery, made a good record at the fair, being awarded the first premium for its work.

### Barbed Wire.

The Glidden barbed wire for fencing is also familiar to rural readers. We are pleased to note that the general agents for the Pacific coast, Messrs. Jones & Givens, show the prosperity of their business by removal into better quarters, at No. 209 J streets, Sacramento, where they have recently removed and fitted themselves up in elegant shape, thus locating in the wholesale business portion of the city, in proximity to railroad and steamer travel.

### Hill's Carriage Works.

J. F. Hill, of Sacramento, has one of the most extensive, valuable and interesting exhibitions on the ground in the shape of wagons, carriages and buggies. Mr. Hill is one of the fine one of the most popular and successful. His works, located at Nos. 1303 to 1323 J street, corner of Thirteenth, are the most extensive in the city. Every description of carriage and wagon work is carried on at this immense establishment. The work is all under the personal supervision of Mr. Hill, whose long experience as a practical workman has fitted him to turn out nothing but first-class work. He makes ordered work a specialty, and his patrons can be found in every hamlet north, south, east and west. Send for Mr. Hill's catalogue.

### Merrill's Rein Holder.

One of the most interesting appliances at the fair was Merrill's patent rein-holder, which is so attached to the

hub of the wheel of a wagon or carriage that the lines can be hung on to it, and is an absolute prevention of horses starting forward. By stopping the team at any place, and simply hooking the lines to this attachment, they are as securely fastened as if tied to the strongest hitching post. The team can back, but they cannot go forward, and the thing is so contrived that the backing does not tighten the lines, but leaves them slack. The rein-holder can be attached to any vehicle. W. P. Merrill, of Florin, Sacramento, is the inventor, as can be seen by his advertisement in the Press.

### Briggs' Carriage Exhibit.

A splendid show of fine carriages was made by R. F. Briggs & Co., of San Francisco, who were exhibitors of rockaway, phaetons, top and open buggies, manufactured at Amesbury, Mass. Theirs is the largest wholesale house on the Pacific coast in this line of goods. Salesrooms, 220 and 222 Mission street, San Francisco. In the construction of these carriages, none but the very best second-growth timber is used and seasoned especially for this climate. Every carriage or wagon is sold under a full guarantee of the firm.

### Campton Farm Gate.

The Campton single-farm-gate was exhibited by the inventor, A. P. Campton, Rhonerville, Humboldt county; patented May 5, 1881. This is an iron gate, or can be made of wood. It is generally called a self-opening gate, but is opened and shut by those who pass through it on horseback or in a wagon or carriage, by pulling a chord hanging over a pulley at the proper distance on either side of the gate, so that a man sitting in his carriage can pull on it and open the gate, and having passed through, he pulls on another similar cord and closes the gate. The latch is so contrived that no stock can open it, and it is impossible to open without intelligent intention and assistance. This gate was awarded the first premium.

### Butter Refrigerator.

An excellent device for keeping a family supply of butter cool and free from the contamination by wood or vegetables which may be near it, is Bundeck's patent refrigerator for keeping butter cool and sweet without ice. It is an arrangement of terra cotta which encloses the butter, and it is kept cool by the evaporation of water, which is held in a reservoir below the butter and in a recess between the inner and outer walls of the cover. This apparatus has already received the full endorsement of many who have used it in this State. B. N. Buzbey is agent for this coast as may be seen from his advertisement in the Press.

### Excelsior Entrance Gate.

A very easily made and satisfactory farm gate is "Strong's" Excelsior Entrance Gate, which has been awarded numerous premiums at fairs, from the Centennial Exhibition at Philadelphia, through the list of Eastern States and county fairs. It is easily opened by one sitting in a vehicle by pulling a rope which hangs from a lever arm above. It is exceedingly simple in construction and can be made on the farm from boards, pickets, or barbed wire. This gate has been introduced in many parts of the State and is highly praised by those who have it. Henry Brightman, of Macerville, is owner of the rights, and an advertisement in the Press tells other valuable particulars about it.

### L. D. Burgess' Exhibit.

L. D. Burgess, of Rio Vista, Cal., showed the Acme harrow, pulverizer and clod crusher, made by Nash Bros., of New York. This is well known to our readers through the advertisements in the Press. It is well spoken of by those who have used it. Mr. Burgess also has Gardner's hay and straw elevator and carrier. This is a hay fork that will load itself and by a spring movement on being elevated passes on to a cable track and carries the hay or grain on to the stack. A practical demonstration on the ground proved its efficiency.

### Other Exhibits.

We have not mentioned all the exhibits of agricultural machinery. In fact, we have laid aside some of the largest displays for special description when we can command more space than is available in this issue.

At Rest.—Elijah Dewey Waters, Sr., died at Stockton on the 4th inst., of Bright's disease of the kidneys. Mr. Waters came to California from Bennington, Vt., in 1853, and his was one of those families well-known in moral and religious circles in those early times. While in the East he was engaged in commercial business, and was at one time here, for several years, connected with the *Mercantile Gazetteer*. His sons, Dewey and Frederick, learned the printing trade, at which the latter is still employed. Mr. Waters always devoted his efforts to the best interests of society in his newspaper connections. His liking for agriculture lasted him through life, and he enjoyed greatly a few of his latest years on the ranch of his son, near Stockton. We believe he was at one time the most elderly member and attendant of the Stockton Grange. His life was kindly, unobtrusive and useful.

ABOUT five miles of grading on the Candelaria extension of the Carson & Colorado railroad has been completed.

### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McCREW—Santa Clara county.  
M. P. OWEN—Santa Cruz county.  
J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
JAMES C. HOAG—California.  
B. W. CROWELL—Yuba and Sutter counties.  
D. W. KILLBURN—San Mateo and Santa Clara counties.  
C. E. WETMORE—Alameda county.

### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

How TO STOP THIS PAPER.—It is not a benevolent task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So we sure and send us notice by letter.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

MANSION HOUSE.—First-class in every respect.—When you visit Stockton stop at the Mansion House. Free Coach to the house. J. H. CROSS, Proprietor.

## S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 28, 1881.

The trade of the week has been broken up by the days of mourning for the President. Prices for grain have been maintained, and in some cases slightly advanced. There is now a general disposition to trade of all kinds, and the balance of the week promises to be brisk. The latest from abroad is as follows:

LIVERPOOL, Sept. 27.—Good to choice California Wheat, firmer, at 11s 2d @ 11s 5d. Csrgoes are stronger, at 5s 4d @ 5s 6d per quarter.

#### Freights and Charters.

The following vessels were chartered prior to arrival to load Wheat for Europe: *Astronomer*, 1,119 tons, Liverpool, 80s; *Bacchus*, 1,250 tons, Cork; *City of Shanghai*, 990 tons, Cork, 85s; *Colchagua*, 597 tons, Cork, 70s; *Edwin Fox*, 830 tons, Cork; *Friedburg*, 780 tons, Cork, 80s; *Glendon*, 1,896 tons, Cork, 80s; *Glenhart*, 1,230 tons, Cork, 71s 3d; *John Gambles*, 1,027 tons, Cork, 77s 0d; *Mirzapore*, 429 tons, Cork, 67s 6d; *M. & E. Cox*, 1,180 tons, 62s 6d. The only discharged ships in port this morning were the *Carrie Clark* and *Red Cloud*.

#### The Foreign Review.

LONDON, Sept. 27.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: "There were violent storms in Scotland and the north of England early in the week, causing a destructive flood north of the Tweed. The harvest south of the Lumber is concluded. In Scotland it is only half over, a portion of the grain being still unripe. As the supply of native Wheat increases complaints get louder on account of its wretched condition. A large proportion is useless to millers, who now depend almost entirely upon the foreign supply. A few decent samples come in, but ill-conditioned parcels continue to decline. Of the foreign, two-thirds of the supply was American. All descriptions were firmer Friday than they had been for a week, notwithstanding the liberal supply and the increased shipments from America. The rise is probably due to the sharp advance in America. On the Liverpool market there was a similar advance. In the off-coast cargoes a large business was done Friday at hardening rates. American Red Winter reached 54s net and California 55s 5d; floating bulk has decreased during the week. Of flour the supply was large, but stocks are low and prices close rather firmer. Foreign is in restricted supply and closed firm. Two-thirds of the week's arrivals were American. Barley samples show that the crops are greatly damaged. Grinding samples sell slowly in favor of buyers. Foreign is dull. Oats are very scarce and obtain full rates. Foreign is in large supply, and values are higher, especially of Russian. There is no American Malze off the coast. The department supply is small, and prices have risen 6d since Monday. Sales of English Wheat during the week were 40,616 quarters, at 49s 5d per quarter, as against 92,180 quarters, at 59s 5d per quarter, during the corresponding week of last year.

#### Eastern Wool Markets.

Boston, Sept. 24.—There continues to be a good demand for Wool. The sales for the week foot up 3,000,000 lbs., all kinds, which is a large business, considering the interruption caused by the President's death and the very large sales of two weeks previous. Prices are firm and the advance is well maintained. The demand has been mainly for fine grades, with lots of Ohio and Pennsylvania fleeces, which foot up sales of 221,000 lbs., from 40c to 70c @ lb., including 6,000 lbs. Ohio No. 1 at the latter figure. Another lot of 15,000 lbs. Ohio No. 1 sold at 45c. Of Michigan and Wisconsin fleeces there were sales of 202,400 lbs. from 40c to 47c, including 40,000 lbs. Michigan X at above 42c; 30,000 lbs. Michigan X at 42c; one lot, 20,000 lbs. No. 1 Wisconsin, brought 46c, which made the extreme range. Combing and delaine range from 30c to 47c; scoured and tub-washed sold 33c to 40c @ lb., and California Spring from 22c to 33c, and Fall 18@20. Pulled Wool met with a large demand, and sales ranged from 25c to 45c @ lb. Unwashed and unmerchantable sold from 12c to 35c. There is nothing of consequence doing in foreign Wool.

New York, Sept. 24.—Wool supplies are all in hand, and offered only on full limit. Sales include 34,000 lbs. Spring California at 23 3/4 @ 34c. Dry Goods are quiet and steady, in first hands.

#### Eastern Grain and Provision Markets.

New York, Sept. 24.—The market here, as a general thing, remained firm. Wheat, after some activity and higher prices on better cables, eased and closed dull. Shippers are doing very little, as this market was too high. Barley was in good demand, at \$1.15 for No. 1 Canada. Provisions are dull and heavy.

CHICAGO, Sept. 27.—Wheat, strong, excited and higher, at \$1.30 1/2 cash and October, \$1.38 1/2 for November, \$1.39 1/2 for December. Corn, strong and higher, at 69 cash, 69 1/2 for October, 70 1/2 for November, 70 for December, 74 1/2 for May. Oats, strong and higher, at 42 1/2 cash, 42 1/2 for October, 43 1/2 for November, 44 1/2 for December, 45 1/2 for May. Rye, \$1.00 @ \$1.10. Barley, \$1.13. Pork, firm, at \$19.30 cash and October, \$19.52 1/2 for November. Lard, firmer, at \$12.20 cash and October, \$12 3/4 for November, \$12.72 1/2 for January. Whisky, \$1.17.

#### New York Dried Fruit Markets.

New York, Sept. 24.—Foreign Fruits are moderately active and prices firm. Valencia Raisins are now held at 9c.

BAGS—Unchanged.  
BARLEY—A farther advance has been made, and the best feed is now held for \$1.40 @ ctl, while choice Chevalier has gone to \$1.50.

BEANS—There is no change since last week's advance. CORN—A little White is arriving and is taken quickly at \$1.52 1/2; Yellow at \$1.55.

DAIRY PRODUCE—The old rates have prevailed. EGGS—Quiet and a fraction lower, 37c being the top for fresh California.

FEED—Bran has gone to \$20.

FRESH MEAT—Unchanged

FRUIT—The fruit list is shrinking. Citrus fruits are unchanged. Cantaloupes, Figs, Strawberries and Watermelons are lower this week.

HOPS—There is no change here. New York by telegraph, Sept. 26, reports: "Hope are in moderate demand from brewers and prices are firm."

OATS—Surprise have gone as high as \$1.75 @ ctl. Feed Oats are firm and unchanged.

ONIONS—The best are now \$5c.

POTATOES—The late advance brought a crush, and the price dropped away 25%. Full prices may be seen in our list.

PROVISIONS—The demand is fair, and prices of Bacon, Lard and Hams have all advanced.

POULTRY AND GAME—Poultry seems to show a bet-

ter feeling, but prices are as yet the same as last week.

VEGETABLES—There is no change in values.

WHEAT—Another advance of 2 1/2 @ ctl is recorded. The foreign markets are advancing, and there seems a prospect for a good trade. Values are still kept down by high charter rates. All arriving vessels are quickly taken.

WOOL—Unchanged.

#### Domestic Produce.

WHOLESALE.  
WEDNESDAY M., September 28, 1881.

BEANS & PEAS. Silver skin. Oregon. @ 35  
Bayo, ctl. 2 25 @ 25 50  
Butter. 3 00 @ 35  
Castor. 3 50 @ 40  
Peas. 3 50 @ 40  
Red. 2 25 @ 25 50  
Pink. 2 25 @ 25 50  
Small White. 3 50 @ 40  
Lima. 5 12 1/2 @ 50  
Field Peas, blue key. 50 @ 75  
do, green. 1 75 @ 50  
LIVERPOOL CORN.  
Southern. 4 @ 31  
Northern. 4 @ 6

POTATOES.  
Early Rose. 75 @ 1 00  
Potatoes, ctl. @ 1 00  
Tomatoes. @ 1 00  
Humboldt. @ 1 00  
"Kidney. @ 1 00  
"Peachblow. @ 1 00  
Jersey Blue. @ 1 00  
Cutley Core. 1 00 @ 25  
Rivers, red. @ 25  
Sweet. 62 1/2 @ 75

CHICKEN.  
California. 4 @ 41  
German. 4 @ 41  
DAIRY PRODUCE, ETC.  
Cal. Fresh Roll. B. 35 @ 37 1/2  
do Fancy Branda. @ 40  
Pickle Roll. @ 32  
Firkim, new. 27 1/2 @ 30  
Eastern. 20 @ 25  
New York. @ 25  
do. Cheese.  
Cheese, Cal. B. 13 @ 14  
EGGS.  
Cal. Fresh, doz. 35 @ 37 1/2  
Ducks. @ 25  
Oregon. @ 25  
Eastern, doz. 13 @ 25  
Picked here. @ 25  
Utah. 22 @ 25

FEED.  
Bran, ton. @ 20 00  
Corn Meal. @ 24 00  
Hay. 7 00 @ 12 00  
Middlings. @ 27 50  
Oil Cake Meal. @ 20 00  
Straw, bale. @ 42 1/2 @ 45

FLOUR.  
Extra City Mills. 5 25 @ 55  
do, Country Mills. 5 25 @ 55  
do, Oregon. 4 50 @ 50  
do, Walla Walla. 4 50 @ 50  
Superfine. 2 75 @ 50

FRESH MEAT.  
Beef, 1st quality. 5 1/2 @ 6  
Second. 4 @ 5  
Third. 3 @ 4  
Mutton. 4 @ 5  
Spring Lamb. 3 @ 4  
Pork, undressed. 5 1/2 @ 6  
Dressed. 8 @ 8 1/2  
Veal. 7 @ 7 1/2  
Milk Calves. 7 @ 8  
do, choice. @ 8 1/2

GRAIN, ETC.  
Barley, feed, ctl. 1 35 @ 40  
do, Brewing. 1 40 @ 55  
Chevalier. @ 1 50  
do, choice. 1 37 1/2 @ 42 1/2  
Ruckwheat. @ 1 50  
Corn, White. @ 1 52 1/2  
Yellow. @ 1 55  
Small Round. @ 1 55  
Oats. @ 1 30  
Milling. @ 1 60  
Rye. @ 1 70  
Wheat, No. 1. 1 70 @ 72 1/2  
do, No. 2. 1 62 1/2 @ 67 1/2  
do, No. 3. 1 40 @ 50  
Cholce Milling. @ 72 1/2

HIDES.  
Hides, dry. 19 @ 19 1/2  
Wet salted. 10 @ 11

HONEY, ETC.  
Beeswax, B. 23 @ 25  
Honey in comb. 14 @ 20  
Extracted, light. 10 @ 15  
do, dark. 8 @ 8 1/2

HOPS.  
Oregon. @ 10  
California, new. 17 @ 21  
Wash. Ter. @ 10  
Old Hops. @ 10  
N. T. Hobbs.  
Walnut, Cal. 8 @ 8  
do, Chile. 7 1/2 @ 8  
Almonds, bl sh lb. 8 @ 10  
Soft shell. 12 @ 14  
Brazil. 10 @ 12  
Pecans. 15 @ 17  
Peanuts. 4 @ 5  
Filberts. 14 @ 15

ONIONS.  
Red. @ 75

CRUDE OIL.  
Refined. 6 1/2 @ 7  
Wool Etc.  
Spring—1880.  
Oregon, Eastern. 24 @ 26  
do, fine, heavy. 21 @ 23  
do, Valley. 27 @ 30

SAJON, QUINCE, CHOICE  
do fair. 17 @ 18  
do Southern Coast. 17 @ 18  
Slightly Bury. 15 @ 16  
Bury and Seedy. 15 @ 16  
Northern choice. 25 @ 26  
Bury or Seedy. 20 @ 22  
Sonoma, Mendocino, Humboldt, fauzy. 29 @ 30

FALL—1881.  
San Joaquin. 11 @ 14  
do, Lamb. 13 @ 15  
do, Southern Fall. 11 @ 13  
Northern, free. 17 @ 20  
do, defective. 14 @ 16

FRUITS AND VEGETABLES.  
[WHOLESALE.]  
WEDNESDAY M., September 28, 1881.

FRUIT MARKET.  
Apples, box. 2 50 @ 1 00  
Bananas, bunch. 2 50 @ 4 00  
Cantaloupes, cr. 65 @ 1 12  
Cocoanuts, 100. 6 00 @ 7 00  
Crab Apples. 50 @ 75  
Cranberries, bl. 50 @ 75  
Figs, box. 50 @ 75  
Grapes, 15 @ 15 00  
Limes, Mex. 15 00 @ 17 50  
do, Cal. box. @ 10  
Lemons, Cal. box 2 50 @ 4 00  
Sicily, box. 10 @ 12 00  
Australian. @ 10  
Nectarines. 15 @ 17  
Oranges, Cal. box 4 00 @ 5 00  
do, Tabiti M 20 @ 25 00  
do, Mexican. @ 10  
do, Lorato. @ 10  
Peaches, bsk. 60 @ 1 50  
do, Mount'n, b. 1 00 @ 1 50  
Pears, bx. 50 @ 1 00  
do, Bartlett, bx. 2 00 @ 2 50  
Pineapples, doz. 7 00 @ 8 00  
Plums, bx. 50 @ 1 00  
Prunes, German. 75 @ 90  
Quinces, bx. 50 @ 60  
Blackberry, cb. 5 00 @ 6 00  
Raspberries, cb. 4 00 @ 6 00  
Strawberry, cb. 4 00 @ 6 00  
Sugar Cane, bble. 4 00 @ 6 00  
Watermelon, 100 4 00 @ 8 00

DAIRY PRODUCE.  
Apples, sliced. 5 @ 5 1/2  
do, quartered. 4 @ 5  
Apricots. 14 @ 16  
Blackberries. 10 @ 11  
Citron. 23 @ 30  
Dates. 9 @ 10  
Figs, pressed. 5 @ 9  
do, loose. 4 @ 5  
Nectarines. 14 @ 15  
Peaches. 12 @ 14  
do, pared. 16 @ 18

FRUIT MARKET.  
Pears, sliced. 8 @ 9  
do whole. 7 @ 8  
Pitted. 11 @ 12  
Prunes. 9 @ 10  
Raisins, Cal. bx. @ 2 25  
do, Halves. @ 2 50  
do, Quarters. @ 2 75  
Rhubarb, choice. 8 @ 10  
Zante Currants. 8 @ 10

VEGETABLES.  
Asparagus, bx. @ 10  
Artichokes, doz. 10 @ 12  
Beets, ctl. @ 65  
Beans, Lima, lb. @ 25  
do, String. 1 @ 1 1/2  
do, Wax. @ 1  
do, Fountain. 1 @ 2  
Cabbage, 100 lbs. 75 @ 1 00  
Carrots, sk. 40 @ 50  
Cauliflower, doz. 60 @ 65  
Cucumbers, bx. 25 @ 30  
Egg Plant, bx. @ 50  
Garlic, b. @ 1 1/2 @ 2  
Green Corn, doz. 10 @ 17  
Green Peas, bx. @ 25  
do, Sweet. 2 1/2 @ 2 1/2  
Gr'n Pepp'rs, bx. @ 50  
do, Chile, lb. 50 @ 75  
Lettuce, doz. 10 @ 10  
Mushrooms, lb. @ 10  
Okra, lb. 2 @ 3  
Parsnips. @ 1  
Rhubarb, box. 50 @ 75  
do, chest. @ 10  
Squash, Marrow. 8 00 @ 10 00  
do Summer, bx. 40 @ 50  
Spinach, lb. @ 10  
Tomatoes. 35 @ 40  
Turnips, ctl. @ 50



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**MILLER & CO.**  
J. P. HULME.

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Commission Merchants.

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SAN FRANCISCO.

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GILES H. GRAY,

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**GRAY & HAVEN,**

Attorneys and Counselors-at-Law,

530 California St., SAN FRANCISCO.

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MADE FOR VINEYARDS OR ORCHARDS. PERFECT  
SAFETY TO THE TREES, AND PUL-  
VERIZES THOROUGHLY.

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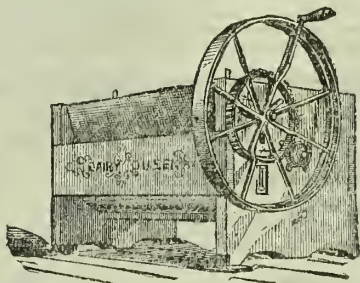
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Improved Churn and Butter-Worker.

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Notice is hereby given that, at a meeting of the Directors of said corporation, held on Monday, the 27th day of June, A. D. 1881, an assessment has been levied of ten per cent. upon the capital stock of said corporation, amounting to the sum of two and one-half (\$2.50) dollars upon each and every share of said capital stock, payable July 23, 1881, to Amos Adams, the Secretary of said corporation, at his office, No. 38 California Street, in the city and county of San Francisco, State of California. Any stock upon which this assessment shall remain unpaid on the 24th day of October, A. D. 1881, will be delinquent, and advertised for sale at public auction, and, unless payment is made before, will be sold on Monday, the 21st day of November, A. D. 1881, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

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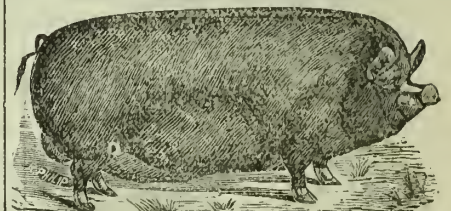
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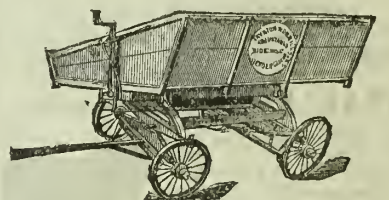
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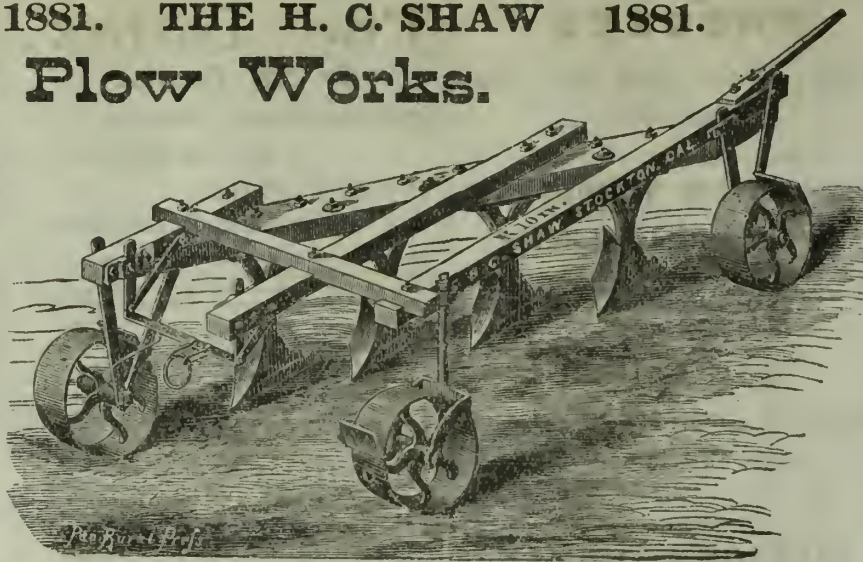
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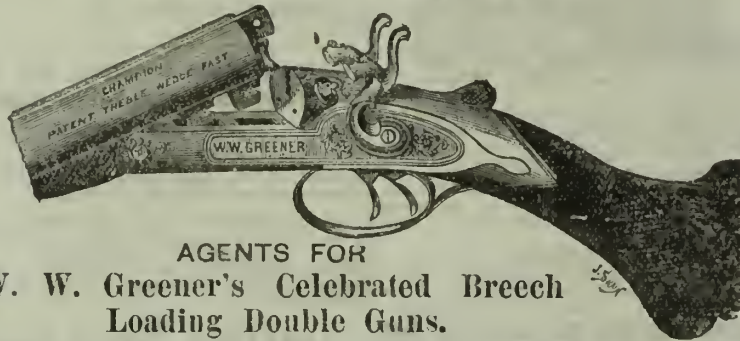
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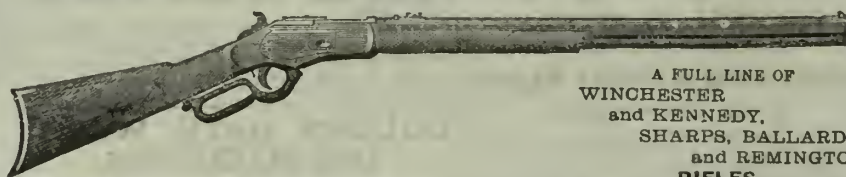
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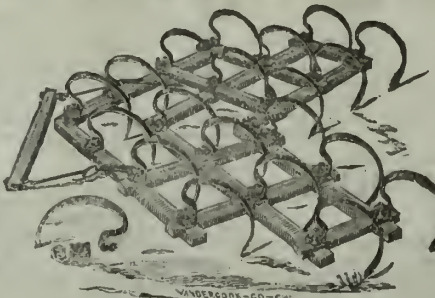
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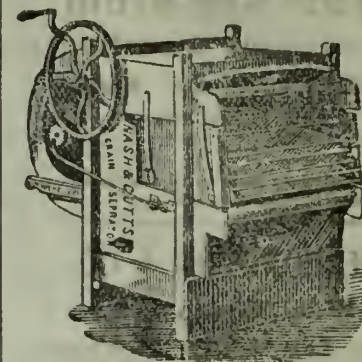
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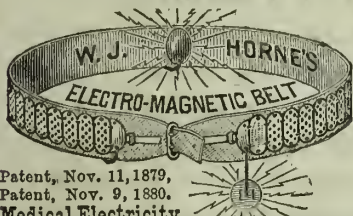


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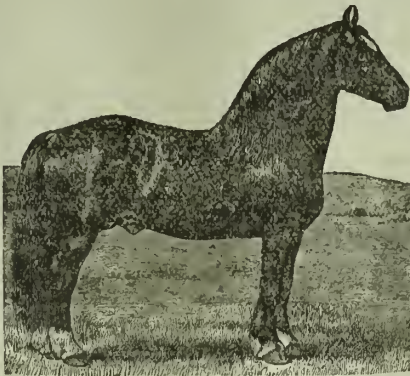
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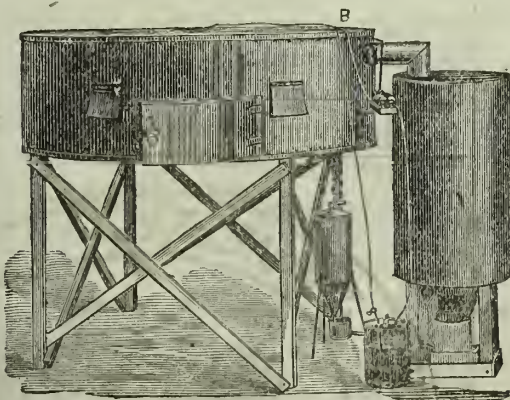
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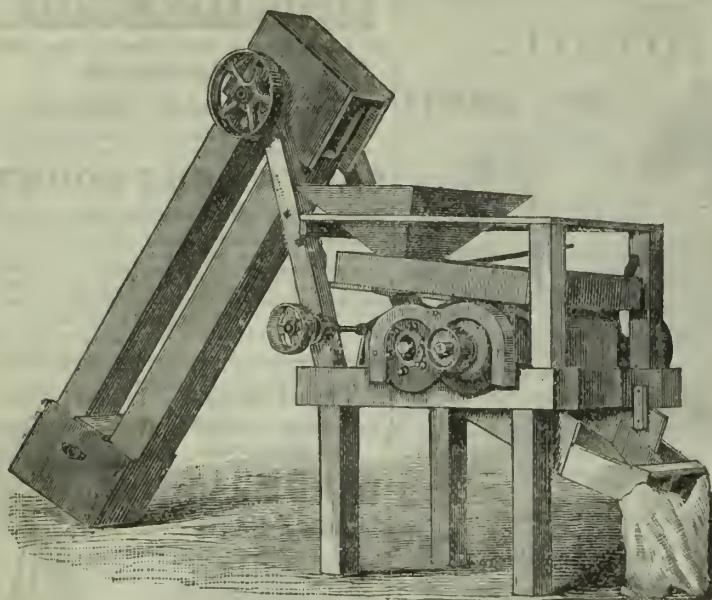
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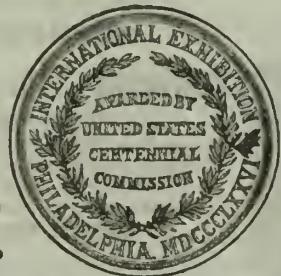
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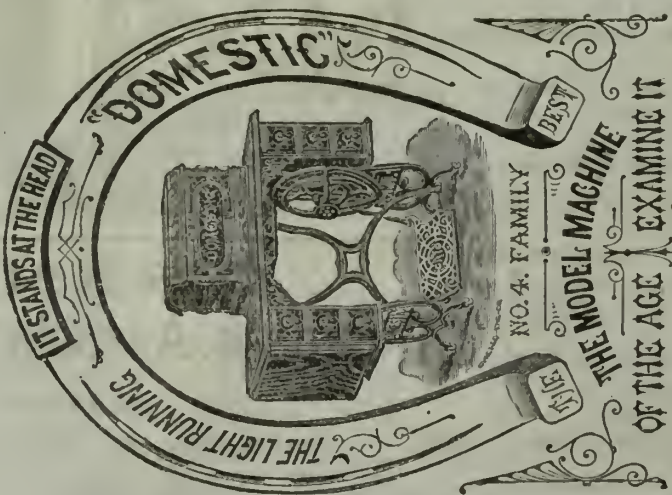
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There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Grant.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for free circulars containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

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Volume XXII.]

SAN FRANCISCO, SATURDAY, OCTOBER 8, 1881.

Number 15

### Hawaiian Agriculture.

The island kingdom is a neighbor of ours, and many of our citizens are interested in its industries, either as workers or investors. It is fair to believe that the fertile islands will, in the end, be greatly benefited by the infusion of skill and capital from this State, and it is evident that the islands need them. It is, however, a serious question if the effort on the part of Californians had not better be centered upon California soil and industries, for they also need rebuilding and development. But we will not discuss that question at this time, except by remarking that the injustice to our producers of a treaty which relieves sugar from a government duty, and yet does not cheapen it to the consumer, is manifest.

We find in the *Saturday Press*, a journal published at Honolulu, some interesting statements concerning the decadence of agriculture on the islands, which will be new to most of our readers. It is shown that as early as 1850 agriculture had grown to such proportions that an agricultural society was formed, and fairs were held annually. The whaling fleet was largely supplied by the productions of these islands, and many articles were then shipped to California in large quantities, which, for years past, have not figured among Hawaiian exports; and some of these are now supplied to the islands from our former market. Of late years the growing of sugarcane has been the leading industry. Rice is also largely raised, but the supply of every other article grows less year by year. Even coffee planting is neglected, much land where it was formerly cultivated now being allowed to lie idle. From July 1, 1850, to June 30, 1851, one year, the exports of coffee amounted to 150,583 lbs.; in 1880 the amount had fallen to 99,508 lbs.

Further figures of the decline of mixed husbandry during the last 30 years are as follows: Among the exports from this group for the year ending June 30, 1851, were 71,985 barrels Irish potatoes; 10,837 barrels sweet potatoes; 3,759 barrels onions; 10½ tons hay; 143,600 oranges, and 89 barrels yams, besides other products. A considerable quantity of fruit was then shipped also, and in the list was the item of cured figs. In 1880, 294 lbs. of figs were imported into Honolulu. Hay, instead of being an export, was imported to the amount of 14,441 hales; sweet potatoes, Irish potatoes and onions no longer find a foreign market, but 1,416,165 lbs. of Irish potatoes and 121,496 lbs. of onions were brought to the islands in foreign vessels last year. Grains of different kinds and many other articles that once were largely grown for the foreign trade, and for which there is still a good market, are not grown now in sufficient quantity to supply home consumption.

The local authorities rightly regret this increase of imports of articles which can well be produced at home, but believe that the tide will now turn, owing to the arrival of Portuguese and other immigrants who will naturally take up "small farming." Concerning the agricultural area of the islands, it has been estimated that of the total area of 4,000,000 acres of land in these islands, 500,000 are fit for plowing, 200,000 are adapted for pasturage, and the remainder is timber land, barren lava or unavailable mountain land. This cultivable area, since the above estimate was made, has been increased by the introduction of a system of irrigation, and there is much fertile but rocky soil that can be cultivated without the use of the plow.

### The Sword-fish.

Our younger readers will be interested in the engraving on this page which shows the sword-fish in pursuit of its prey, and in the present case the sword-fish is an unconscious benefactor, for the dolphin which have leaped out of the water to escape the piercing of the sword will fall upon the raft upon which the group of shipwrecked persons are famishing. Stranger things have happened in real life than the artist has shown in the picture. It is not only the sword-fish which sometimes finds his selfish efforts frustrated or so shaped as to serve the general good.

Sword-fish is the common name for fishes of the family *Xiphiidae*, remarkable for having the upper jaw prolonged forward in the shape of a bony sword. The sword-fish is often from 10 to 16 ft. long, has very fine scales, no ventral

A SIMPLE METHOD OF TESTING BUTTER FOR WATER.—Among other practices had recourse to for fraudulently increasing the weight of butter, the commonest and most useful to the adulterator, because not easily estimated by the purchaser, is that of incorporating it with large quantities of water. Ewin Johanson, the author of this paper, takes the average amount of water in unsophisticated butter to be 10% to 12%, and considers all above that as a fraudulent excess, and gives the following easy and quick method of testing the matter: Five g. of butter are brought into a burette graduated into 1/10 c.c., and treated therein with 25 to 30 c.c. of petroleum, ether or benzine, the whole put in a warm place and often shaken, so as to dissolve the fats, and then left to settle. The solvent is then poured off from the aqueous stratum, and this latter again treated with the same quantity of petroleum, ether, or benzine, as before. When the mixture has again settled the number

### Pacific Coast Ships.

There has arisen an interest in home-built ships to be owned by Californians, and we hope the discussion which is now being had among those who have the money to invest will result in some practical moves in the right direction. It seems altogether wrong that a country with such a sea coast, and with such timber and such a wealth of skillful mechanics and such hoards of money lying idle, should be content to have its products go out in foreign bottoms and the money for shipbuilding and the profits for ship owning go to spread comfort and competence in lands across the sea.

The present movement is under the auspices of the San Francisco Board of Trade. The shipping committee of this organization, consisting of Messrs. Hopkins, Rosenfeld, Merry, Avery and Dingley, held a meeting last week.

The subject of shipbuilding on the Pacific coast was discussed at length, and the advantages which would accrue to the people of this section were clearly shown, if the industry was properly encouraged.

Capt. Merry stated that the labor required on a ship was 90% of the cost, the material being but 10%, and that if shipbuilding was inaugurated successfully here, a new field would be opened to skilled and unskilled labor, which would be of inestimable value to this region. He advocated the repeal of the tonnage tax on freight brought here by deep-water vessels from distant domestic ports, giving as his reason that there was now a tax of 30 cts. per ton on vessels, which had been imposed when the government was in need of revenue, while the railroads were exempt from the burden. He considered it as an unjust discrimination, and thought that Congress should rectify the wrong.

The committee then discussed the feasibility of incorporating a shipbuilding company, with a capital stock of \$5,000,000, and the proposition seemed to meet the hearty approval of those present. A letter was read from Congressman Rosecrans, requesting that the committee inform him of anything he could do to forward the interests of the people of this State at the coming session of Congress.

Mr. Hopkins, in a letter to one of the daily papers, takes the ground that the hardship to ship owners in this State lies in the taxing of the ships by State and municipalities, and not through any specific tax by the general Government, as many suppose. He argues that this bar to the investment of capital in ships here should be removed, and if this is not done, it will lead the proposed shipbuilding company to operate in Puget sound, because the laws of Washington Territory, where the vessels would be built, permit the formation of such corporations there under favorable conditions; that taxation there is light compared with this city; that by an act of our last Legislature, whose constitutionality has been affirmed by the Supreme Court, certificates of stock are not now liable to assessment in California. As vessels are assessed at the port where they are registered, those owned by such a company, organized in Washington Territory, as is now in contemplation, would be subject only to the rate of taxation levied in Washington Territory, and as the stock would not be assessable, the enterprise would thus escape taxation. We submit that if this reasoning of Mr. Hopkins be right, and we see no escape from it, it would be far better to exempt the ships at once, and thus save the building to our State and the distribution of the money among our own mechanics.



THE SWORD-FISH IN PURSUIT OF DOLPHINS.

fins, a long, broken dorsal fin and a large, deeply forked tail. It is a very rapid swimmer and is reputed to attack the largest whales with its sword. It sometimes strikes ships with such force as to penetrate several thicknesses of planks, and the sword is broken off and left in the wood. It is generally esteemed as food, and taken with the harpoon affords a dangerous and exciting sport.

VINEYARD AND ORCHARD PROPERTY.—Attention is called to the advertisement of orchard and vineyard property in the La Jota rancho, Howell Mountain, Napa county. The land is adjacent to the famous Napa valley, is accessible by rail to St. Helena. There are many features of the sale which are attractive aside from the choice location of the lands. It is to be a credit sale, and there will be provision to have the land planted and cared for, if purchasers are not able to give it personal supervision at present. The tracts are small and will meet the needs of those of moderate means. The advertisement in another column names the agents for the sale of the property, from whom any further particulars can be obtained.

A SEMI OFFICIAL note has been published in Paris reiterating the statement that in spite of the rumor to the contrary, England and France have resolved to maintain accord on the Egyptian question.

c.c. of water are read off, and the percentage calculated.

THROUGH the columns of the *Sun*, parties in New York are proposing to organize a colony to go to California or some Southern State. One writer says: "I send my address, with a view of organizing a colony to go out next spring and take up a good location either in northern Georgia or southern California, or elsewhere, as shall be voted. The Anaheim colony from San Francisco has been conspicuously a success, and there is an unbounded field for many such colonies."

The debt statement shows a decrease of the public debt during September of \$17,483,641. The cash in the Treasury is \$250,686,547; gold certificates, \$5,248,920; silver certificates, \$64,149,910; certificates of deposit outstanding, \$8,315,000; funding certificates, \$636,950; legal tenders outstanding, \$346,681,016; fractional currency outstanding, \$7,098,506.

The family of Samuel Hamlin of Yuba City partook rather freely of new almonds the other day, and all the family, except the father, were taken violently ill, and were only relieved by vomiting and purging. Their experience may be a warning to others with reference to eating undried almonds.



## THE DAIRY.

### Early Dairying in Humboldt County.

EDITOR: PRESS:—As you are getting scraps of history of the productions and industries of other counties of the State, with your permission I will try in my homely way to give a history of the dairy business in this county (Humboldt county, Cal.) In the first place, no one, that I know of, has become particularly rich at it. No one, as yet, as some of your correspondents have; no one has made lucky strikes in buying cattle at a very low figure and making a handsome profit out of them. No one as yet has become a noted dairy farmer, as some have become in other parts of the State.

Your correspondent came to the county in 1856, from the mines, with very little of this world's goods, and has managed so far to hold his own bravely; but, as I do not intend to write an autobiography, I will at once state what I know of the use and progress of the dairy business in this county. It is now needless for me to state that Humboldt county is in California, and not in Oregon, as formerly supposed; for not long ago it was a region not generally known by a number of what would be called intelligent people, but as an abode only fit for deer, bear and the Digger Indian, and a class of men that thought they would take up their abode outside of civilization, and live a life of semi-barbarism amongst the grizzly bears and Diggers. However that may have been, things are changed. All that we want now is the iron horse to make Humboldt county second to no other county in the State; our climate is unsurpassed, our resources are of a varied character, which, when properly developed, will make us wealthy and happy as a people. True, the farm land is not extensive, but it is very productive. One acre will produce more than two or three in many other counties of the State, and what is still better, we are sure of a crop every year. We have ample room for an increase in our population of men of energy and some means. Our forests of redwood are a mine of wealth in themselves; sheep and cattle are becoming an extensive business. True, they are not owned by individuals so largely as in other parts of the State, which is of course so much the better. We have not very many large land owners. There is considerable government land held by what is known as the fence law, which is, in my opinion, a very bad law—bad in this way, our grazing land is all more or less hilly or mountainous, with patches of timber, mostly fir. Some individual will run a fence, brush or otherwise, from one point of timber to another (in many places it may not be over 1/2 of a mile) and claim all the grazing land inclosed in that way, sometimes several thousand acres, which of course prevents any peaceable man from entering that inclosure. But times, men and laws change, and when the time comes to change the fence law as it now stands it will be done.

The dairy business was carried on in a very primitive manner here in 1856, the year that I made my advent into the county from the mines. Indeed, there was only one dairy that might be called a dairy, owned by the Cooper brothers, and that had only 50 or 60 cows. The butter was sent to the mines and brought a very good price although it was anything but "gilt edged." It was done up or put up in lumps something in the shape of a brick, and put into redwood boxes that held from 125 lbs. to 150 lbs., and packed on mules or horses according to the taste or means of the packer. When it came to the mines, along Trinity river up to Weaverville, in the sun and dust, it had not a very prepossessing appearance, as the lumps in the boxes were neither square, oval nor round, but in just such shape as one might expect after being packed a distance of 120 miles over a rough mountain road, in the hot sun. Sometimes mule or horse, load and all, would roll down a slight declivity of several hundred feet into a gorge or canyon. But then with all its shapelessness and sometimes a few hairs, it was an improvement on the slush in the shape of butter that was brought from the East to be sold in the mines.

The pioneer packer went by the euphonious name of Patrick McComisky, as fine a specimen of the Emerald Isle as could be scared up in the State. After butter began to be put up in better shape, and Pat had rival packers to contend with, he left and went to other parts, and now, perhaps, is in the happy hunting ground of the noble red man, or in purgatory doing penance for overloading his mules with the not overclean and bairy butter originally made in Humboldt county.

But to give your readers an idea of how dairying was done here in those days, I got acquainted with a very worthy gentleman who kept a dairy—a Mr. Wm. Taylor. As butter was bringing a good price, and Mr. Taylor had a number of good cows, he thought he would dairy a little. He dairy-house, I think, was about 12x14, and answered the purpose of bedroom, kitchen and parlor, which may be supposed dairying could not be carried on on a very extensive scale. As wages were pretty well up, he concluded he would do the work himself (he was a bachelor) and have all the profits. He accordingly milked his cows, made his butter and sold it in Eureka.

The first two or three lots sold quick and well,

at from 60 to 75 cents per lb. It was done up in lumps, and I think taken in sacks on horseback, carried before or tied behind him, as the case might be, as there was very little sawed lumber to be had in Eel River valley then; but the last lot he took into town to sell, the buyer complained about the hairs that were visible in it. He came home in disgust and told some of the neighbors the people of Eureka were getting too particular, and that he guessed he would quit dairying and rent his cows out, which he accordingly did, to the neighbors who had no cows, at the rate of \$2 50 a month, which paid him as well as dairying under the existing circumstances. Others dairied on the same principle for quite a while. At last there came a cooper into the valley who made butter kegs, which was an improvement on the rough box of split redwood or sack. The calves always sucked the cows, and when it was thought they had enough they were kept off with a stick three ft. long; the circumference was decided by the humanity or conscience of the milker, that is, if he had any. Not a few had left whatever little conscience or humanity they had quite a long distance behind them, but like old Mr. Waltzer, a worthy Jew who did a merchandising business in Eureka, when he would ask an outrageous price for some article, his customers would ask him if he had any conscience. In reply he would say "not understanding what the word conscience meant," no; but it is coming up on the Wyandott, a vessel that ran from San Francisco to Eureka at that time, so that some milkers had their consciences coming up on the Wyandott, or some other vessel, which in some instances never arrived; consequently they have none to the present day.

There is one thing very certain, that if the brute creation are permitted to go into the other world and are called upon to give in their evidence by the society for the prevention of cruelty to animals, the milkers of early days will stand but a slim show of getting through the pearly gates to the celestial city, except they have repented in dust and ashes for the unmerciful poundings given to calves' legs in the beginning of dairying in Humboldt county.

I am proud to say for the progress of our county and humanity in general, that this last vestige of barbarism has almost become extinct among us. We have only one man among us who persisted in it until last year. It is astonishing how we cling to old habits and usages, however ridiculous they may be. But, with all our inhumanity to calves, and, indeed, sometimes to cows, and putting up butter in unshapely lumps and sending it to market in rough redwood boxes or gunny sacks, no one in the county so far as I know ever pretended to carpet their butter-room, as one of your correspondents stated some time ago in writing up a gentleman dairyman's improvements (for certainly he must have been no ordinary man). How nicely everything was arranged about the dairy-house, and to cap the climax, the butter-room was actually carpeted! Such an idea could not have struck any ordinary mortal. I would like to know how long that model butter-room was kept carpeted? or if so, how it was kept anything like clean? There is only one way that I can devise that it could be done, and that was to remove the carpet every time that butter was prepared, or washed, salted and made in that room. If churning was done every day there would not be much time for the carpet to remain on the floor of the butter-room. If this carpeting is a success I would very much like to know it, as I am in the dairy business and intend to remain in it, and if this carpeting my butter-rooms will give a better flavor to the butter so that it will bring a better price in market, I will certainly do it, as I want to adopt all the modern improvements that will in anywise bring in the coin, for I must acknowledge that I dairy for profit and not pleasure. I will simply state here that it is utterly impossible for any butter maker to use the quantity of water that must necessarily be used in a butter-room, to have a carpet on the floor without it being saturated with water, so that in a week or two it would smell so it would have to be removed. But what I think would be an improvement in the milk-room is to cover it with oil-cloth, if a piece the size of the room could be had, so that any milk that would accidentally fall on the floor, could be wiped up off the oil-cloth instead of the bare boards, as the sweeter and cleaner floor of a milk-room is kept, the sweeter and better butter will be made everyone knows that knows anything about dairying. But I hope your readers will pardon this digression.

There was quite a number of years that dairying remained in its infancy, as everybody let their calves suck the cows while they were milked. They were only milked a few months, and then cows and calves were turned out together, so that the cows were always in low condition, so that from 50 to 100 lbs. of butter was only made from each cow—more frequently the former than the latter amount; but beef was a good price, so that if there was a loss in the quantity of butter, it was made up on beef. Nearly everybody had their own cows and land, and until a few years ago, when one of the dairymen made a lucky strike in buying cattle and land, and going into other business, he commenced to rent out his cattle and land. The reuter gave him one-third of the butter and raised the calves when he dairied. He used to run it night and day, with the exception of two or three hours sleep which was taken on very dark nights when there was little or no light

from the moon. All his complaint was that the days were so short for him and his hired man, Dutch Mike. One day I happened along. The day was very hot. Dutch Mike and he were building fence. He commenced complaining as usual about the shortness of the days (it was in June), and how little time there was to work between milkings, but Mike thought differently. "By Gott!" says Mike, "the days are plenty long enough for me, for we milk all night nearly." One very dark night they kindled a fire of pine knots so they could see what they were doing. About 11 o'clock they got through milking the cows, but there were about 30 heifers in a pen by themselves that were to be milked. Mr. — says to Mike: "Mike, don't you think the heifers ought to be milked?" "Yes," said Mike, "hut, by Gott! you can milk them yourself, for I won't; I am going to bed." "Oh!" said he, "I did not ask you to milk them, only if they ought not to be milked." But Mike would not or did not take the hint, but went to bed. Very fortunately for the cows, Dutch Mike and all concerned, Mr. — got out of the dairy business, and as stated above, rented out his dairies and engaged in other business, and has become one of the wealthy men of Humboldt county. RICHARD JOHNSON.

Bear River.

(TO BE CONTINUED).

## THE VINEYARD.

### Grapes for the Table and for Raisin Making.

(The following essay was read at the meeting of the State Horticultural Society Sept. 30th, by Leonard Coates, of Yountville.)

The grape is one of the most promising fruits of California, and its history has been peculiarly characteristic of most of the industries and enterprises started on this coast. It has had its fluctuations in value, and, as a natural consequence, in public favor.

In early days, the variety known under the various synonyme of "Mission," "Californian" and "Native," commanded almost fabulous prices as a luxury. Later, the Muscats, Tokays and Malagas drove this variety to the wall, and these, in their turn, have in many places been discarded, to give place to the best wine varieties. The grape industry may be divided into three branches, which may be known respectively, named in their order of commercial importance, as wine, raisin and table. It is the object of this paper to deal very briefly with the last two.

Much depends upon the selection of

Soil and Location.

And it must be borne in mind that a locality in which grapes for wine purposes may be raised to perfection, is not therefore best suited to the cultivation of those for the table or for raisin making, but rather the reverse.

Some of the rich valley lands of the coast counties will produce the finest Muscats and Tokays, but they are too late to be of much value, and the San Francisco retail market is the only available source for converting them into coin. While in some cases this is fairly remunerative, we would not advise any to plant large vineyards of these grapes in such locations, for there is, practically, no market outside of the one alluded to. Muscats, Malagas and Tokays, the three best shipping varieties, have not long been ripe in Napa, and by this time the Eastern markets are laden with the choice grapes, hybrids, and others, which are hardly enough to stand the severity of Eastern winters. Each year some new and choicer varieties are added to their already long list. Consequently, sufficiently high prices cannot be obtained to pay the California shipper for the great expense and the risk he runs in exporting. The section of country in which these grapes should be planted for profit should be, therefore, an early one, to enable the grower to get prices high enough to justify him in catering to the wants of a foreign market. Size and appearance being of the first importance, it is desirable, further, that the soil should be of a rich, alluvial nature. In a word, then, to insure success, a warm, early summer, with a dry atmosphere, and a deep, rich soil in which is a considerable proportion of sand, are points necessary to be realized. There is no difficulty in marketing these grapes, if of first-class quality, and early, for Eastern buyers will be on hand to contract for the whole crop. Many parts of the counties of Solano and Yolo are, to my knowledge, admirably suited to this industry, and doubtless also thousands of acres in Kern, Fresno and Tulare, but in these irrigation is generally necessary.

The Cañon Hall Muscat is by some considered superior to the Muscat of Alexandria as a table grape, owing to the size of its berries and its handsomer appearance.

The Almeria, recently introduced into the State from Spain, through the enterprise of the San Francisco Bulletin, and also by several private persons, bids fair to be a valuable acquisition, and is said to be a very late keeper and will stand shipping well. Among the desirable Eastern grapes which are well worthy of cultivation here for home use is the Agawam. It is of a red color like the Catawba, but much larger, as well as two or three weeks earlier,

and in flavor is more delicate, less pulpy and with a less astringent skin. The large size of the leaf makes it desirable as an arbor grape.

For raisins, the Muscat of Alexandria is most extensively used, which is by some claimed to be synonymous with the Muscatel.

Time will not permit of a detailed account of the art of raisin making, for an art it is, though one easy to be acquired, especially when we have such veterans in the business as Mr. Blowers of Woodland and the firm of Briggs Bros., who have the largest raisin vineyards in the State. The grapes must be of the best quality, must be picked when just ripe, and laid on wooden trays in the sun, where they remain until dry enough to be turned, which is done by placing another tray on them, and two men, by a quick movement, reversing them. After this, when they are dry enough they are placed in the sweat boxes, where they remain about two weeks, when the skins become toughened, and the grapes of a better appearance. The packing follows, which should be done with the greatest care, and the boxes branded correctly and conscientiously. Raisins which have been produced by the above mentioned firms, as well as from some growers in the southern country, have been pronounced by experts at the East to be at least equal, if not superior to the best imported article.

The cultivation of the grapevine must be thorough. The ground selected for a vineyard should be prepared by plowing at least twice and subsoiling, and the surface levelled and smoothed off. The cuttings should be taken from well-ripened, short-jointed wood, and should be 18 or 20 inches long, cut off square at the butt end immediately below a bud, and at the top should be cut midway between two buds, as the wood being hollow, water settling in it too near the bud is liable to injure it. Not more than two buds should be above ground, and great care must be taken that the earth is firmly pressed around it. An iron bar is generally used in planting, but some prefer an auger.

Muscats, Malagas and Tokays are all better for training low down, near to the ground, but some varieties, such as the Rieslings, will bear heavier crops by being trained four ft. high. To know how to prune a grapevine may be learned in half an hour with a practical viticulturist, by anyone having any taste at all in that direction.

#### The First Disease

With which the grape grower may have to contend will probably be the oidium or mildew. To prevent this, sulphur must be applied by means of bellows or dredge in early summer, two or three times, at intervals of 10 or 12 days. Clean culture and careful pruning will go a long way toward warding off other diseases to which a neglected vineyard is more or less subject; but when we come to the phylloxera we have a much more serious and perplexing subject to deal with. Books enough to form a library have been written on this matter, and in this paper it can be but touched upon in a few of its aspects. Those only who have seen the ravages of this dreaded insect, and have observed its encroachments during the last few years can form any idea of the danger that threatens the grape industry in California.

It is more than probable that grapes planted in our rich valley lands will withstand its attack for a number of years, and many are planting with this consolation, that they can make enough in comparatively a few years to insure a good interest on the investment, the price paid for grapes being so high. Notwithstanding what is being done by the Viticultural Commission, and through other means, but a small number, as yet, of would-be grape growers, during the "boom" in this business, have the full exercise of their judgment, and are willing to resort to the one expedient which has been abundantly proven to be the only sure salvation for this important industry. We refer to the use of resistant stock on which to graft the European varieties. Some are not willing to benefit from the experience of the French, and want to see for themselves before they are ready to resort to this expedient. To such we would say that in vineyards in Napa and Sonoma, as well as in other parts of the State, where the vines are dead, or so nearly so, that their recovery is impossible, where there are a few vines of the Isabella and Catawba varieties, these are seen to be perfectly healthy, making plenty of wood and full of fruit. These are native American vines, and though belonging to the Labrusca family, are not classed as being most thoroughly resistant. The idea that the phylloxera only attacks vineyards in poor soil is an absurdity; it takes longer to kill the vines there, that is all. A rich soil, constant manuring, good cultivation, sub-irrigation, dipping the cuttings before planting in bone meal moistened into a kind of paste, and other methods, are all good, but is not 50 acres of vineyard on resistant stock more valuable property than 150 where all these appliances are being resorted to, and the fear in the background that they all may be of no avail, at least ultimately? Mr. Briggs, of Winters, intends to plant another vineyard in the southern country, in the most practical way that has yet come to our knowledge. He will plant his cuttings alternately, one of Muscat and one of the American vines for stock, 6x8 ft. apart. The next year he will graft Muscats on to the American vines, and will leave them all standing thus for several years until he has had two or three crops from the Muscats on their own roots; these he will then take up, and will then have a vineyard in bearing grafted on resistant stock, 8x12 ft. apart, this being the relative distance he pre-



fers for a raisin vineyard. In this way he does not lose any time.

The Clinton, Taylor and Wild Riparia are considered the best stock, being thoroughly resistant, and rooting with great ease. Seedlings of these may also do equally well, and also of the wild Californian *vitis*, but of that nothing very definite is yet known.

The expense in raising these cuttings is not so great as has been supposed, and every vineyardist should raise his own. Cuttings of the Clinton planted last May, without irrigation, have grown so much that from them I can take as many as ten cuttings large enough to plant in nursery to root. At this rate, starting with 1,000 cuttings, in two years' time it is possible to have 100,000. Much more might be said, the subject being of such vital importance, and all that it is possible to do is being done by the head of the agricultural interests of this State and his assistants.

## THE APIARY.

### Points of Practice.

EDITORS PRESS:—I have no desire or intention of maintaining an acrimonious discussion on bee culture with any correspondent of the RURAL PRESS. Plenty of good and authentic works on bee culture have been published, which give ample and reliable information to all who seek for knowledge in that branch of industry. Besides, in every honey district of note in the United States, there is an organized association of beekeepers, who hold regular meetings for the purpose of discussing, trying and testing every mode and implement pertaining to bee culture. Therefore, anyone can always obtain reliable information from members of the bee association, or from the bee books. The most prolific source of loss to amateur apiarists is working too much with their bees, and handling them when they ought to be left alone, for every disturbance stops work in the hive and reduces the store of honey. The improper handling of one colony of bees may not only destroy the bees in that hive, but engender that most malignant of all diseases which infest the apiary, foul-brood, which has at different times destroyed many fine apiaries in California. Langstroth in speaking of this disease says: The disease called foul-brood is of all others the most fatal to bees. The sealed brood die in the cells, and the stench from their decaying bodies seems to paralyze the bees. The bees will remove dead larva from open cells, but if the brood is chilled to death after it has been sealed, the bees will seldom uncap it, so the unhatched bees are left to rot in their cells and beget disease. Foul-brood is so contagious that when it once breaks out, every apiary in the district is liable to be infected and destroyed. Therefore, I, and every apiarist in California who derives a revenue from bee culture, has a direct moneyed interest in the careful and proper management of every colony of bees in the State. For it is very plain that if by improper management a hive containing a large amount of sealed brood, is left with an insufficiency of bees to maintain the proper warmth in the hive, the unhatched brood would die, and perhaps create a disease which would spread to surrounding apiaries.

We take it that the main object of the RURAL PRESS is to disseminate on-y such precepts and knowledge, as may prove advantageous to your readers, or of some probable utility in the science of husbandry. We do not believe the RURAL PRESS would knowingly publish anything which might cause a moneyed loss, or endanger the property of anyone. And yet there are many articles published in the PRESS in the way of instructions from correspondents, which can only entail loss, and do harm to anyone who attempts to put in practice their foolish precepts. In the RURAL of Sept. 10th, we notice another of those harmful communications on apiculture, headed "Introducing Queens," and said to be taken from the *American Bee Journal*. That article or something similar to it, may have found its way into the *American Bee Journal* as correspondence, the same as it found its way into the RURAL PRESS. But we will venture the assertion that neither the *American Bee Journal*, nor any other intelligent bee journal, or bee book, or bee association in the United States, ever recommended that manner of introducing a queen bee to a strange colony. Mr. Enas says, after placing the caged queen in the hive, to close the hive for 48 hours, then, with bellows smoker, smoke lightly; then open carefully and remove the cage. After taking out the cage the hive must be kept strictly closed for a week, at least, to make the queen perfectly at home in the hive, when any queen cells that might have been started may be cut out.

Now, Mr. Editor, what does Mr. Enas mean when he says, close the hive for 48 hours, and then, after taking out the cage, the hive must be kept strictly closed for a week, at least? Does he mean just what he says, that the hive is to be closed for a week, and shut the queen and bees up together for a week, to make the queen at home in the hive? Or did he mean not to close the hive, but not to disturb it for 48 hours, and then, after liberating the queen, to leave the hive undisturbed for a week? Now, to close a hive containing an average colony of bees for one week, or 48 hours, or even one

day during the honey season, without properly ventilating (and Mr. Enas does not mention that), would be sure to destroy that colony by melting down and smothering. And on the other hand no intelligent apiarism would turn a queen loose in a strange colony and not look after her for seven days. Last year I witnessed a sample of that kind of bee culture. One of my neighbors lost 24 out of 26 colonies of bees by closing the hives without giving proper ventilation. So he paid about \$120 for that bit of knowledge which he could have obtained from any dollar bee book or journal.

The following is from Mr. R. Wilkins' handbook on bee culture, page 36: When bees commence to rob, close all hives to the least capacity for a bee to pass out and in; if they are ungovernable, close the hive entirely and carry it to a cellar or dark, cool place, etc. Before any hive is entirely closed, it is necessary to have some holes in it, and cover them with wire cloth, to prevent smothering. Closing a hive excites the bees to fever heat, and then the hive requires more ventilation than when the bees have their liberty. Mr. Wilkins says (on page 90) the successful introduction of a queen, greatly depends on the temper of the bees when she is presented, and if their own queen has been removed only a short time, the bees will often destroy her when she is again presented to them.

Langstroth says (on page 203): Great caution is not only requisite in giving a hive a strange queen, but in all attempts to mix bees belonging to different colonies. And no apiarist with any knowledge of his business ever thinks of uniting two colonies of bees without first sprinkling them with sugar-water scented with peppermint or some other strong odor; otherwise the uniting is apt to result in a war of extermination to both.

And yet Mr. Enas in his two former articles, tells the inexperienced beekeeper to unite a queenless colony with another as if all there was to do was to tumble all the bees into one hive. I have no personal acquaintance with Mr. Enas, and to him personally, and to every correspondent and reader of the RURAL PRESS, I entertain no feelings of kindness and goodwill. I know Mr. Enas only through his articles on bee culture, and I know that the instructions given in those articles are positively bad, and could not be practiced in the apiary without loss, and I have not heard a single apiarist speak of it that did not denounce it as injurious to bee culture.

Mr. Enas appears to feel injured by my criticism on his articles on bee culture. If the instructions given by Mr. Enas were proper and correct, beekeepers, bee books and bee journals would sustain and endorse his mode of managing an apiary. In that case, I would be censured for my unjust criticism, and Mr. Enas would not be injured. Many of the things advocated by Mr. Enas have been tested and decided against by beekeepers and bee associations more than 10 years ago.

In the RURAL of July 30th, speaking of raising queens from brood, Mr. Enas says: "Even if the bees started royal cells, how can one be sure that they are started from the egg and not from larva, which do not produce the best queens, or may produce laying workers, as I have seen and know there are such." Now there is no question nor any doubt about what produces the fertile worker, and they are never hatched from larva in queen cells, and 99 times out of every 100 the bees raise a queen from larva, and not from the egg.

On page 13, Mr. Wilkins says the first queen will hatch in 10 or 11 days after removing the queen, for the bees use brood five or six days advanced to raise a queen; and Langstroth and all the bee books agree with him in that. Eight of my best queens, which are now at the head of populous colonies, were hatched this season in ten days from the time of starting queen cells, and Mr. J. A. Corey says he has queens hatched in ten days that were good laying queens for five years, and it takes 16 days for a queen bee to hatch from the egg. Mr. Langstroth says (page 173) if the apiarist prefers to dispense entirely with natural swarming, he may deprive his fertile queens of their wings. Yet Mr. Enas advocates clipping the queens' wings where natural swarming is practiced, which must entail a loss of queens, and therefore a loss of money.

Mr. Enas advocates loose bottoms for hives, which, in our dry climate, is disastrous to bees. Langstroth says: "The bottom-board should be permanently attached to the hive, for convenience in moving it and to prevent the depredations of moths and worms." And on page 231: "If movable bottom-boards are used it will be next to impossible to prevent the moth from laying her eggs between them and the edges of the hive; the smallest opening will enable her to place her eggs where her progeny will find an easy admission to the hive."

On page 129 of *Gleanings* is published a list of questions answered by the Northwestern Beekeepers' Association, which ought to be pretty good authority. Question. Which is preferable, a hive with loose bottom, or bottom fastened to hive. The answer is, bottom fastened to hive.

Mr. Enas talks about procuring tin rabbits from *Gleanings*. They can be had at any hardware store in Ventura for 75 cents per 100; so tin rabbits for one hive would cost one cent and a half, and oak rabbits on a beehive would be a useless and unnecessary expense, and it is wrong to advise a useless, foolish expenditure of money.

It is a well authenticated fact, that a laying

queen is often destroyed by removing her from her hive for a short time, or by a slight jar, or by hunger or cold. And it is a conceded fact, that a swarm of bees, if they did not light after coming out of their hive, could fly five miles from the apiary before an experienced apiarist could, on an average, get up a smoke, uncover a hive and find and cage the queen, to operate in catching the flying swarm with.

In regard to undecided questions and untested modes of managing bees or anything else, no one has a right to say, that his theory, and his practice is right, and the theory and practice of another is wrong. But there are settled fixed laws in bee culture, as well as in agriculture which cannot be transgressed without incurring risk or loss; and the theory and practice given by the apiarist of Sunnyside apiary, is just as incompatible with the successful management of an apiary, as it would be for a farmer to recommend the inexperienced agriculturist to plant corn in December, and aver it was just as proper to plant corn in December, as it would be to seed wheat or barley in that winter month.

The production of honey is one of the principal moneyed industries of our country. Some of our beekeepers ship their honey direct to Europe and realize good sales in the English market. Mr. John G. Corey paid \$150 per colony for bees in 1859; he is still in the bee business in this county, and has imported Cyprian queens in one of his apiaries. So you see the apiarists of Ventura, keep up with every advancement in bee culture, and have made some very material improvements to the extractor and cold blast smoker, which have been generally adopted by apiarists and bee journals in the East. But the proclaimed experience of Mr. Enas with bees, directly contradicts the experience of the most learned and experienced beekeepers in Ventura, and is no where to be found in the bee books. Take the following paragraph, for instance, which is copied verbatim from instructions given by Mr. Enas in the RURAL of July 30th, on page 67:

"In case the old queen should be lost, and swarm return while the young queen is in the cell, the bees will generally cluster in front of the hive in a bunch. On seeing which, after dinner, the apiarist will know at once that that hive must be seen to immediately. All queen cells might be cut out, but one, or the hive divided, or a young laying queen might be given to them, and placed in a position for surplus honey and no time lost."

Every point in that paragraph is wrong, and could not be practiced without loss. It is wrong in fact, because he says when the bees return after missing their queen, they will generally cluster in front of the hive, when in fact the bees will generally on their return to the hive, go straight in without clustering at all, and besides in warm weather, the bees cluster on the outside of all the hives during the heat of the day. He says the apiarist will know that hive must be seen to immediately, and that is wrong instruction, for if a swarm has lost their queen and returned to the hive, the safest and best way would be to let them alone, and when there was a young queen hatched they would swarm again, and the young queen would go with them, but if all the queen cells but one were cut out there would be no hatching queen to remain with the original colony, and to divide them would only be to create two queenless colonies, and would be apt to destroy both, and to talk of giving them a laying queen is silly, for those apiarists who can supply a laying queen do not let their queens get lost in swarming.

In conclusion I wish to reiterate my protest against the publication of instructions in bee culture, which can only lead to disaster and loss to the inexperienced beginner. If my criticism is unjust, or my theories on apiculture are incorrect, both are open to the criticism and censure of any and all intelligent apiarists.

ROBT. LYON,

Cliff Glen, Sept. 26th.

## HORTICULTURE.

### Meeting of the Horticultural Commission

The quarterly meeting of the Horticultural Commission, advisory to the State Board of Viticultural Commissioners, was held in this city on Thursday, Sept. 29th, President C. H. Dwinelle in the chair, J. H. Wheeler, Secretary. There were present Commissioners Felix Gillet, S. F. Chapin, Matthew Cooke, Charles H. Shinn, Elwood Cooper and Charles A. Dwinelle. The following is an outline of the proceedings:

A report on olive culture and the insects that are destroying that fruit, was read by Elwood Cooper, of which we hope to give our readers an account hereafter.

Felix Gillett, of Nevada City, the Commissioner for the El Dorado district, reported that the codling moth was effecting so much harm that if its ravages were not stopped there was danger of the fruit crop being destroyed. To fight, capture or destroy the perfect insect or moth three ways present themselves: Poison, light traps and ichneumon flies. Mr. Gillett proffers the last named remedy. In conclusion, he suggests the appointment of a State Entomologist, whose duties it would be to act with the Horticultural and Viticultural Commissions; the encouragement of the study of entomology by farmers, and the awarding of premiums by the State and Horticultural Commissioners and societies for the best traps to capture insects,

and the establishment by the State of stations for the raising of predaceous insects to destroy the noxious insects which are destroying the orchards, vineyards and fields.

### Quarantine Laws.

The rules presented by Matthew Cooke of Sacramento, Chief State Executive Horticultural Officer of the Board, for quarantine laws under the Act of the last Legislature, were presented. Mr. Cooke stated that he had recently obtained specimens of fruit shipped from Australia, with numerous diseases, which, if not disinfected, would spread new diseases. The suggestions as to quarantine regulations were unanimously adopted. These rules provide for the disinfecting of trees, cuttings, etc., and go into detail as to the remedies suggested for the protection of fruit and fruit trees. The quarantine regulations will, it is stated, be first submitted to the Attorney-General for his supervision, in order to see if they contain anything contrary to the Constitution. It was reported that large quantities of fruit sent to Chicago have been sold there at five and ten cents per box, because of the hatching of the codling moth en route.

### A General Meeting of Horticulturists.

The following resolutions were adopted by the Board:

*Resolved*, That the Chief Executive Horticultural Officer be authorized to call a general meeting of the horticulturists of California to consider their interests in the matter of destroying insects injurious to fruit and fruit trees; the said meeting to be held at some convenient place in San Francisco, early in the month of December next. The above officer shall confer with the representatives of the leading transportation lines, with a view to securing reduced rates of fare to those horticulturists attending the above meeting. At this convention there will also be displayed apparatus for disinfecting, pumps, washes, insecticides, and free packages for fruits. (By free packages is meant, one to go with the fruit in its sale.)

### Looking Toward Fuller Organization.

The following resolution was proposed by Mr. Gillet and unanimously adopted by the Board:

Owing to the failure of certain counties in appointing Horticultural Commissioners after having been petitioned, as required by law, and such action being injurious to the horticultural interests of the State at large, for the reason of the transgression of this law will lead to great injury, owing to the fact that those counties, being doubtless afflicted with insects injurious to fruit and fruit trees, might cause much deception to the public and to those who are engaged in the planting or contemplation to plant orchards in counties thus afflicted; we, therefore deem it highly essential that this Board, which is formed for the protection of our horticultural interests, shall prevent such action by these counties, and that it is the duty of its members to take such steps as will frustrate any deception sure to be practised, if not immediately stopped. And we do think that it is but right and our duty to acquaint the public of ravages done by insect pests in any portion of the State, regardless of the injury that may affect the interests of the county where noxious insects may exist. Be it, therefore, moved that the Chief Horticultural Officer be instructed to make out a list of every county in the State where the codling moth has made its appearance, and, also, to make out a list of all counties where scales and other insects injurious to fruit and fruit trees have so far made their appearance, and to report to this Board the extent and nature of the damage done by such insects.

### What the Situation Demands.

President Dwinelle made the following remarks upon matters which cannot be too strongly impressed upon the horticulturists of the State: If there was before any doubt as to the need of protection for our horticultural interests against the insect pests which are being imported and disseminated through our State, the experience of the last six months must have removed it. While these insects were comparatively few in number and the fruit which they injured low-priced, the damage was not considered serious. Now matters are changed. The pests have increased enormously, and, at the same time, the market price of many kinds of fruit has risen very much. Foreign markets have been secured where our products are highly appreciated, and climatic disasters have fallen upon other producing regions, which have reduced the world's supply of choice fruit. Meanwhile rates of interest have fallen so much that capitalists are more inclined to loan money in the country, and not a few of them are themselves investing in orchards. From these various causes horticulture has received a great impetus. Methods of culture and desirable varieties are much better understood than formerly, so that it is comparatively easy to secure crops of good fruit.

The greatest dangers to the industry are now from insect enemies. It is known that most, if not all, of these can be mastered by vigilance and industry. The important question now is, who are to be one's neighbors? Will they breed pests for the orchards of the thrifty, or will they have intelligence enough to study the noxious insects, and pluck to fight them? Many who formerly denied the need of a war on insects now advocate it, as they see that the prosperity of the whole neighborhood depends upon it. Education in economic entomology is the first step toward changing an obstructionist to an ally in this movement. The patient and zealous labors of our executive officer, Mr. Matthew Cooke, both in the field, and latterly in conducting the exhibit of insects at the State fair, deserve the highest commendation. The elements of general entomology should be taught in all our public schools, and also the life history of our most common injurious and beneficial insects. Return packages, boxes and baskets still continue to be the most efficient means of disseminating pests. The fruit growers about a common shipping point should continue to establish facilities for disinfecting packages on their return from market, by scalding or other means. Prizes should be offered for the best and cheapest free packages to go with the fruit. A 50-lb. apple package is particularly needed.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### State Grange Meeting.

The tenth session of the State Grange of the Patrons of Husbandry of California opened in Masonic hall, Santa Rosa, Tuesday, October 4th. An unusually large number was present for the first day. R. B. Spilman, W.M., delivered the following well received

#### Annual Address.

BROTHERS AND SISTERS:—We meet in this, our annual session, to promote the welfare of the people, whose representatives we are; and, through them, to extend the privileges, the benefits, and blessings that of right belong to all who perform faithfully and wisely the duties of life. As members of the California State Grange, we are by necessity identified with agriculture, the great industry in which our Order is founded. It is the leading purpose of all good Patrons to secure to this industry such consideration as its supreme importance demands, to dignify and ennoble the labor of the men and women, by whose patient efforts and skill the world is supplied with food and raiment, and a large portion of its inhabitants exempted from the first wants of life, left free to engage in other work tending to augment the sum of material blessings, and to the higher civilization and enlightenment of mankind. We believe that all useful labor is honorable, and that in the affairs of government it should have consideration in proportion to its importance as a factor in promoting the general good of the varied interests that in their development give the country greatness in the happiness guaranteed to citizens, and in its relations with other nations of the earth. We believe that when any important industry is hampered, restricted or impeded by undue taxation, through pernicious custom, with or without sanction of law, that the hurtful influence of such unjust treatment will inevitably extend beyond that interest into all others depending upon it. Hence, as a matter of wise policy, it is wise to secure and maintain an even balance in the rights, duties and privileges of citizens and their industries.

For our own vocation, we neither ask nor desire any distinction, beyond that to which it may be entitled, by virtue of its importance in the economy of government, its relations to the material development of resources, its part in contributions to the general prosperity of all useful labor, and its influence in creating and diffusing the benefits that reward all well-directed industry. We are to consider duty as it rests upon this associated body, the means by which the usefulness of our organization may be enlarged and applied, especially in the social and mental growth of men, women and children who spring from the soil, and whose lives must be allied thereto, in obedience to the injunction placed on the human race, which makes happiness the adequate reward of effort expended in the primary vocation of man.

#### Education.

There is no subject of more direct importance to our Order than the education of its members. In a broader sense, it is essential to the general welfare that all citizens should have the highest useful development of intellectual forces. But, as our responsibilities begin with the people whose lives are devoted to an occupation regarded by many as too simple in its requirements to need, in its workers, any mental culture beyond the rudiments in common branches of learning, supplemented by indefinite scraps of general intelligence picked up without special system in collecting or design in use, it behooves us to survey the intellectual waste with a view to its improvement, and the ultimate profit of our people. In a system of government based on equality of rights and privileges, every citizen has an incentive to development of mind, because thereby comes a degree of fitness for positions of honor—fitness secondary only to the virtues comprised in the fullest manhood but too often lacking in those who, by the lesser qualification win our votes and thereby attain power, which they use with selfish purpose and resulting hardship to the industry we serve. We must have adequate consideration in every department of government, or there will be constant liability to excessive burdens imposed on our industry through the incapacity, selfishness, or cupidity of men who do not appreciate, or do not regard its just rights in the economy of government. In plain terms, we must have representatives in the law-making bodies of the State and Nation, whose fitness shall be certified by their knowledge of political economy, the homely virtues, honesty and frugality, and direct association and acquaintance with our industry.

#### Co-operation.

The importance of true co-operation is so essential, that it should be brought more prominently before every Grange, and to the attention of every member in our Order, and to every farmer in the land. The millions that are saved annually to the members by co-operation should encourage us to renewed efforts to enhance and increase these benefits. Funds accumulated in the treasury of a subordinate Grange should be used for co-operative pur-

poses and advantages to the members of such Granges, either in building Grange halls, securing supplies, purchasing Grange libraries, or in distributing Grange papers to its members. Co-operation in its true sense is not confined to business principles alone, it is so comprehensive and applicable that its importance cannot be ignored nor its use dispensed with in any part of our work as an organization. Whatever we may attempt to accomplish must be by combined effort through education and co-operation. When we thus educate our membership and then apply the advantage of such education, co-operation will be made positive and effectual.

#### Dormant Granges.

The question is asked many times how dormant Granges can be revived, I append a part of the report of the Committee on Dormant Granges, adopted at the last National Grange, which reads as follows:

"If our people, our class, can only be thoroughly educated in all matters pertaining to our Order and their own interests, we shall have no fears as to the living of dormant Granges. The necessities of the times demand an organization of the farmers. The politico-economic condition of affairs in this country invites the formation of just such an association, holding just such views, and advocating just such measures as are held and advocated in the Grange—and the political animosities and partisan prejudices which, every few years, tear open afresh the wounds not yet healed, and array in hostile parties the great sections of our country, call loudly for just such a national, fraternal organization as is this body, which has done so much in the matter of pacification, and must go forward until it has fulfilled its high destiny.

"It is only necessary that the farmers be educated, that our members be instructed, and dormant Granges will be revived, and living, active ones will be cheered and encouraged, and our great Order will march forward on the road of advancement and reform.

"The great question to solve is, how shall the masses be educated in the principles of the Order of Patrons of Husbandry, and how shall they be made to fully understand the aims and purposes, and the proper way of effecting them?

"There are but two ways in which this can be done: by the living speaker and the press—by lectures and Grange literature. When the financial condition of State Granges is such as will permit them to use funds for both of these purposes, it will be best to have both; but when only one can be supported, your committee would recommend that the funds be used to disseminate Grange literature among dormant Granges; and when once the attention can be directed to the great work in which the Grange is now engaged, and the efforts which are being made to relieve the agricultural class of the burdens and oppressions under which they groan, shall be fully understood, we may reasonably expect that the dormant Granges will arise from their slumbers, and will come forward and take their places in the ranks, and our Order will march forward in an unbroken column to battle in the cause of right, and will never ground arms until a glorious victory be achieved."

At the last session of the California State Grange, a resolution was adopted requesting a change in the Constitution and By-laws of the National Grange, so that Past Masters and their wives, who were Matrons, could be elected as delegates to the State Grange, with all the privileges as Masters of subordinate Granges. The resolution was promptly introduced and duly considered by the National Grange, and, upon the final vote, was rejected.

The Executive Committee will present you with a detailed statement of their labors during the year. I refer you to the Worthy Secretary and Treasurer's report of the financial condition of the State Grange. Subordinate Granges neglect many times to send in their quarterly reports to the Secretary of the State Grange. I trust in the future they will be prompt in compliance with the law that governs in the cases. Promptness and compliance with our rules and regulations will do much toward building up our Order.

I also refer you to the report of Bro. J. V. Webster, manager and editor-in-chief of the *California Patron*. I trust you will put the paper on the high road to success. Bro. Webster has worked hard for the success of the *Patron* and the Grange. Too much praise cannot be awarded to him for his valuable services.

I have this present year visited 30 subordinate Granges; many of them are live Granges, while some of them are to some extent dormant. Yet, at the same time, there are members in dormant Granges that will not give up. State officers and County Deputies should visit weak Granges often. It would help to build up our Order in this State. If we all would live up to the obligation we have taken, our halls would be full of live members.

Brothers and Sisters, let us work for the success of our noble Order. This being the last occasion in which I shall appear before you as your presiding officer, permit me to express my lasting sense of obligation to the membership of the Grange for the greatest measure of partiality and kindness that could be extended to mortal man. At all times and under every circumstance of the case, for a period of two years intimate association as an officer of the State Grange, have I been received by brothers and sisters in the fraternal manner which our Order contemplates. The recollection of my visits to many counties in our State, where I have met

many farmers in public assemblies in the Grange hall, at the table of hospitable homesteads, and by the fireside within the family circle, will form the most pleasing reflection that can occupy my mind for the remaining days that are allotted to me upon this earth.

In conclusion, brothers and sisters, let no personal feeling or selfish motive interfere with your deliberations or the duties assigned to your charge. Much of the future prosperity of our Order in this State will depend on the action of this State Grange.

May your labors be harmonious and the choicest of Heaven's blessings rest with you.

The dues from subordinate Granges to the State Grange is six cents per quarter on each member. It is not sufficient to meet the current expenses of the State Grange. I would recommend that the dues be raised ten cents per quarter.

Reports of officers were read and the usual standing committees appointed. Furnas, of Nebraska, and Judge Jones, of the U. S. Arid Land Commission (members of the Order), were introduced to members, and on invitation made well-timed remarks, explaining the main object of their visit to be to obtain information and impart the same to the whole United States concerning this coast. They complimented our new State highly for its diversified agricultural capabilities, etc. The sessions are being held in the fourth (subordinate) degree, and of course the non-secret work alone is published.

The brothers and sisters present form the largest and best appearing meeting that has been convened at the annual gatherings for several years. Santa Rosa Patrons, who have done much for the comfort and advantage of their guests, are rightly pleased with this success and the compliment contributed to their beautiful town and county seat.

#### Former State Grange Meetings.

The State Grange was organized by Deputy N. W. Garretson, of Iowa, at Napa City, July 15, 1873, with the representatives of the 35 Granges organized up to that date. J. W. A. Wright was elected Master, and W. H. Baxter, Secretary. The next session was held the following October in San Jose, when J. M. Hamilton was elected Master. Successive annual sessions were held in October, respectively, at Stockton, San Francisco (two sessions), Sacramento and Oakland (two sessions). J. V. Webster was elected Master in 1875 and Amos Adams, Secretary; I. C. Steele Master in 1877, and R. B. Spilman in 1879.

The election of officers occurs again the present session. There is a goodly attendance of 4th degree members present from Sacramento, Stockton, Santa Rosa and Bennet Valley, Temescal and other Granges convenient to Santa Rosa.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

**BOILER EXPLOSION AT ALVARADO SUGAR.**—*Grocer and Country Merchant*: We learn through Mr. E. H. Dyer, Superintendent of the Standard Sugar Refinery at Alvarado, that an explosion occurred on Tuesday morning, Sept. 27th, which resulted in the destruction of one of the double boilers of the refinery, and fatal injury of the fireman in charge at the time of the accident. The explosion was caused by the inattention of the fireman, who permitted the water to get low in the boiler, on discovering which he commenced to pump cold water on the overheated flues. The refinery had just got fairly to work for the season, and any detention is a serious matter at this time. Mr. Dyer informs us, however, that he will be able to run under small capacity until the new boilers are in place, which will be within a few days. The loss is estimated at about \$5,000.

#### COLUSA.

**EDITORS PRESS**:—It commenced raining here at four o'clock this morning and continued for two hours, at an old-fashioned rate. At eight o'clock the sun began to peep out; but there are some angry clouds still hanging around. The ground in this vicinity is now pretty well soaked. Some of the pioneers seem to think that the storm of the 21st of last month was injurious to volunteer crops, as a great many had not finished dragging. However, I don't see any chance for injury to summer-fallows, or volunteer crops already finished. We have already rain enough to sprout the grain, and keep it growing till the winter rains set in. To show you that I was not talking at random at my last writing, I have enclosed a spear of barley which measured four inches when broken off above the ground. This is perhaps more than an average height; but it shows that any grain planted at that time is not liable to suffer much, especially if the weather continues cool. To-day winter clothing is very acceptable, and a good big hack-log in the old-fashioned fire-place is in order. The farmers are getting home from the mountains, contented to remain by their own firesides. This shows that the air is getting a little "too thin" for them up there. I would like to know how much rain has fallen in the different parts of the State. I like natural irrigation the best.—L. D. JENKEN, Olimpo.

#### FRESNO.

**THE RECENT RAIN.**—*Republican*: Reports from all parts of the country show that the rain of last week was one of the heaviest ever known in these parts during September. Grapes and

creeks suddenly filled up and came booming down the hillsides, and the rivers rose rapidly to proportions creditable to winter storms.

**IMPROVEMENTS AT EISEN VINEYARD.**—The already valuable and conveniently improved property of Mr. T. F. Eisen, east of town, is to be at once further improved by the erection of another wine cellar, a house for the employees and an elegant family residence. The wine cellar will be built of adobe, and be 106x130½ upon the ground and two stories high. The house for the employees of the place will be a frame building, two stories high, and 20x100 ft. on the ground. The exact plan of the new family residence has not yet been settled upon, but will undoubtedly be in keeping with the elegance and taste visible everywhere about the Eisen vineyard. The entire work will be done by the day, under the superintendency of our townsman, Mr. E. M. Clifford.

#### KERN.

**THE JOILY JUNE APPLE.**—*Kern Californian*, Oct. 1: Mr. Celsus Brower, who takes great interest in fruit culture, visited several orchards and vineyards in the valley during the past week and brought us some specimens of fruit from a tree belonging to Mr. J. S. Ellis. It is known as the June apple, and the samples left at this office showed six distinct stages of growth, from the blossom to the ripe fruit. The tree commenced to yield ripe fruit in June, and has continued to do so ever since, the supply being continually kept up by the formation of blossoms and the growth of new fruit. The tree at this time presents an extraordinary spectacle, showing blossoms and fruit in all stages up to maturity.

#### LOS ANGELES.

**WITHOUT IRRIGATION.**—*Express*, Oct. 1: As a sample of what can be done in our soil without water, we mention the vineyard of Mr. Johnson, on the mesa lands on the Alhambra tract. The vineyard is of Mission cuttings, set out this year, and entirely without water, either at the planting or since. The cuttings have made a remarkable growth, many of the shoots being over six ft. long. An unusually good stand was also secured, not over five per cent. being lost. Mr. Johnson planted the cuttings with a spade and subsoiled the vineyard to a depth of 14 inches. It only remains to be seen now what sort of grapes he will produce. Splendid corn has been raised without irrigation on the same place and the apple trees are in fine condition. The great secret of success with the non-irrigators is thorough cultivation.

#### SAN BERNARDINO.

**THE RIVERSIDE RAISIN CROP.**—*Press and Horticulturist*: A large portion of the grape crop is picked, dried and in the sweat boxes ready to pack. Another large portion is in the drying process on the trays, and some is not yet picked. The season thus far has been very good for drying. A few days the past week were unfavorable, but it has again cleared up and a good spell of drying weather is now in prospect.

**RAISIN FREIGHTS.**—Referring to the statement that "raisins will be taken from Colton to New York, Boston or Chicago, at \$1.82 per 100 lbs. by the earload to encourage production," the *Riverside Press* says: Yes, that is good encouragement, but the Riverside people can haul their raisins to Los Angeles and ship there at \$1.50 per hundred lbs. by the earload to New York, thus saving enough freight to more than pay them for freighting by wagon the good 60 miles. Mr. Stubbs would have encouraged us just as much by charging \$1,000 per ton from Colton.

#### SANTA CLARA.

**APRICOT LANDS.**—*Mercury*, Sept. 29: We are pleased to know that some of the farmers in the vicinity of Berryessa, located on what they have recently learned to call apricot lands, are preparing to engage extensively in fruit culture. Mr. Isaiah Shaw has out already 1,000 apricot trees, and intends to increase the number to some 3,000 or 4,000 the coming season. Last spring Mr. Shaw drilled 16 acres of this land to corn for the use of his stock, which corn received no attention or rain from the day it was planted to the present time. Such a perfect swamp of corn as it has produced is simply amazing. There is no sort of use in wasting such land in grain culture, and the farmers are beginning to see it. Apricot trees three years old have paid \$10 to the tree the present season, and on Mr. Hobson's place the yield of his old trees brought \$25 to the tree. There is not the slightest danger of overdoing the business, as our canneries can handle all the fruit that can be produced.

#### SANTA CRUZ.

**EDITORS PRESS**:—The first news I look for, in opening the PRESS, is under the heading of "Horticulture," and the next under "Agricultural Notes"—news from the different counties. But I have seen nothing from Santa Cruz county for some time. Probably the reason for this is, that our seasons are so regular and evenly tempered, bringing about a good crop of fruit, grain and vegetables regularly every year, without any violent winds, excessive heat, drouth or flooding rains to disturb our business or our comfort, no trouble with our fruit, grain or hay; in fact, in Santa Cruz county everything "goes smoothly," making no jar, nor noise, consequently you don't hear from us often. But let your readers know that Santa Cruz is heard from again. Yes, here is a sample of some of our pears, apples and corn—yes, corn. We can grow corn here, where it don't rain all summer—I mean it don't rain any in the summer, from the time the corn is planted till it is ripe, and



we don't irrigate either. One of these ears of corn I send you is 8½ inches around, has 18 rows of corn, and counts 700 sound and large grains; another has 16 rows of corn, is 9 inches long, with 640 grains. Now, we are not sending this corn to banter this State on corn growing, but to show the productiveness of our county. But we pass the corn, and show you five Nelis pears, weighing 3 lbs., and one of them measuring 10½ inches around; four Eastern Buerre pears weighing 3 lbs. It is rather early in the season for them to be well colored (Oct. 1st) yet, but you see they are smooth and clean, just like Santa Cruz fruit always is, when cared for as it should be. The Bellefleur apples are smooth, sound and well colored, and just as large as anybody wants them, and free from bugs—no codling moth or scale bug here.—M. P. OWEN, Santa Cruz, Oct. 3d.

## SOLANO.

**COTTON.**—*Republican*: As an experiment, Mrs. Pierce had some cotton seed planted last June, when planting corn, which has yielded far beyond expectations. The holls are large and well developed, and of most excellent texture. We are glad to record this, as it may prove to be a permanent industry in our country. Mrs. Pierce had a large acreage in grain this year, which yielded very well, though not by any means a full crop. But with the improved prices this year she has come out very well.

## SONOMA.

**THE FALL WOOL CLIP.**—*Healdsburg Flag*, Sept. 28: Fall shearing in Alexander valley began week before last. Geo. and Eugene Stockstill, Jas. B. Jacobs, Jr., Frank Critchfield and Perry Moore had, up to the time of our information, last week, sheared the large bands of Rowland Truitt and Murrell and Doane, reporting the fleeces of average weight and good condition. Dan. Brown, Price Jacobs, et al., sheared for Young Bros. & Cagwin last week and are now at Calvin Holmes'.

**DOUBLE FIG.**—A few days since we picked from one of our own trees a double fig—a fig growing from the bottom of another perfectly formed. The fig first grown was large and fully ripe, and attached to one equally perfect but smaller and unripe. The tree was overburdened with fruit, so much so that the figs were smaller than usual, but the specimen alluded to was of large size and of delicious flavor.

**GRAPE PRICES.**—*Healdsburg Enterprise*, Sept. 29: The grape growers and wine makers are at a dead-lock in this end of the county. The latter fixed the price of Mission grapes at \$18 per ton, and the former refused to sell their crops at that figure, demanding \$21 and upward. The wine men stood firm and the producers (at least quite a number of them) commenced to look abroad for buyers, some shipping to Windsor and some to the city, receiving, they tell us, from \$21 to \$24 per ton. What the wine makers will conclude to do, "deponent saith not." We presume they best understand their own business, and know what they can afford to pay. However, we deem it unfortunate that they can not, or will not, pay as much for grapes here as other sections pay for similar varieties, for quite a loss is entailed on the community by the shipment of grapes to places abroad, there to be manufactured into wine, to the detriment and suffering of idle labor here. The wine men say that in the southern part of the State Mission grapes are sold at an average of \$15 per ton, and that they have to buy as low as possible to compete in the San Francisco market with the cheap grades of wines from Los Angeles and other southern points. For our part, we do not know what grapes sell for in Los Angeles, although it must be admitted that a low price there naturally would affect the market here. In the Napa valley Mission grapes are worth more than in this county, for the reason that there they constitute only a small percentage of the crop, and by admixture with foreign varieties a quality of wine is produced that grades and sells higher than wines made from the Mission grapes exclusively. All in all, we opine that our wine makers can better afford to pay several dollars a ton in advance of \$18 rather than have the grapes shipped abroad; for if buyers abroad can pay more, we argue that our local buyers can pay more than they now offer. We hope soon to see our buyers and producers come together on terms equitable to both, and this, too, before any great quantity of grapes are shipped away from here.

## VENTURA.

**THE OUTLOOK.**—*Signal*, Oct. 1: Our county has never had a better outlook for the future than it has right now. Honey was the only crop in which we had even a partial failure. Beans are higher than ever before, and are still advancing in price, and our bean crop is simply enormous. Three more weeks will require the monster separators to finish threshing our immense wheat crop. Stock men are all smiling and happy, and it is easy to see that their expectations have been realized. We will not have as much corn this year as last, but the only reason is that there was not so much planted. Good crops and high prices have been the rule, and altogether, it has been an exceptionally good year. Such another would make Ventura one of the richest counties in the State of California.

OFFICIAL notice has been given at St. Petersburg that the importation of galvanic batteries, induction coils and insulated wire will be subject to the same rules of inspection and control as the importation of arms.

## The Drainage Act Unconstitutional.

The great case known as the Slickens case (People vs. Parks) has been decided by the Supreme Court and the judgment of the Superior Court of Sacramento county, from which Court the case was appealed, has been reversed.

The opinion considers the constitutionality of the Act of April 23, 1880, entitled, "An Act to Promote Drainage," and declares it to be unconstitutional on account of its contravention of Section 24 of Article IV. of the Constitution, which requires that every act shall embrace but one subject, which shall be expressed in its title.

The leading opinion is by Justice McKee, concurred in by Chief Justice Morrison. We are unable to give the decision in full owing to its length, but condense as follows:

The question presented for consideration in this case involves the constitutionality of an act of the Legislature, passed April 23, 1880. It is contended that the act is unconstitutional and void, and is no law, because it contravenes Section 24 of Article IV. of the Constitution, which requires that every act shall embrace but one subject, which shall be expressed in its title. In the consideration of such a question, it is a cardinal rule that nothing but a clear violation of the Constitution will justify a court in overruling the Legislative will. Every statute is presumed to be constitutional, and every intentment is in favor of its validity. When a statute is challenged as in conflict with the fundamental law, a clear and substantial conflict must be found to exist to justify its condemnation, but when found, courts must not hesitate to condemn.

## The Sovereign Capacity of the People.

The Constitution is the voice of the people in their sovereign capacity, and it must be heeded. When it speaks in plain language with reference to a particular matter, it must have effect as the paramount law of the land. According to the Constitutional requirement for the enactment of statutory law, the title of every bill introduced into the Legislature must denote the subject of legislation, and when the Legislative bill on that subject has assumed the form of law, its provisions must correspond with the subject of which the title is the name, standing for and representing it. The title of the act under consideration fairly indicates but one subject. As expressed in the title, the whole object of legislation is "to promote drainage." Anyone, after reading the title, would naturally expect to find in the body of the act provisions for carrying that into effect as the whole object of the law, because such provisions, in view of the constitutional provisions referred to, would be necessary to give unity and wholeness to the law. Looking beyond the title to the provisions embodied in the act under consideration, it will be found that they embrace more than one subject, and the question is whether all of them fall within, or anyone of them falls without, the subject expressed in the title. By Sec. 1 a Board of Drainage Commissioners is appointed to divide the State into several drainage districts, and to establish the boundaries thereof, and to organize each district for the purpose of carrying into effect the following objects, viz: "The control of debris from mining and other operations, the improvement and rectification of river channels, and the erection of embankments or dykes necessary for the protection of lands, towns or cities from inundation."

## Officers and Powers of District Boards.

Of the Board thus established, the Governor of the State was appointed President, and to him, as Governor, was given power to appoint within ten days after the organization of any drainage district, three persons resident of the district to act as a Board of Directors for the district, each of whom was to receive a salary of \$100 per month, and to hold office for four years, and until his successor was appointed and qualified. To each of such Boards was given power to appoint a Secretary and a district and resident engineer and to fix their salaries; to determine upon, with the aid of the State Engineer, a system or plan of works to be constructed in its district; to agree upon and adopt plans for such works; to award contracts for the construction of the same, upon the basis that no Chinese shall be directly or indirectly employed upon them, etc. Each Board was employed to raise money, in exercise of the powers of assessment and taxation, by levying a tax upon all the property of the district, to the extent of one-twentieth of one per cent. on the value of the taxable property therein, and an assessment upon all the hydraulic mines and all the mines washing earth or ores with water, of one-half of one per cent. for each miners' inch of water of each 24 hours' run used during the year; and upon all swamp and overflowed lands in the district, to the extent of not exceeding \$3 per acre. In addition to which, provision was made for the levying of a State tax in the year 1880, and each year thereafter, of one-twentieth of one per cent. on all the taxable property in the State. All these assessments and taxes were made collectable and payable as State and county taxes.

## The Scope of the Drainage Act.

But the moneys thus raised were to be used "exclusively for the construction of dams for impounding the debris from the mines hereinbefore specified, and for the improvement and

rectification of river channels, in which said debris flows, within the drainage district to be formed under the provisions of this act, at such points as shall be designated by the State Engineer, or deemed necessary by the Board of Directors of such drainage district." It will thus be seen that the body and scope of the act include a combination of subjects. Nor are all the subjects of the act such as would naturally fall within the subject of its title. The storage of debris "from mining and other operations" seems to be the paramount object of the act; to promote drainage the subordinate. What the phrase "other operations" may mean is not clear from the act itself. Under it may be concealed many subjects which are not expressed in the title, and the existence of such a phrase in a statute renders it obnoxious to the constitutional provision under consideration. But the storage of debris, and the promotion of the drainage of a district of country, are things essentially different. The storage of debris is, in its nature, a private enterprise in which the few are only interested. The drainage of a State is a public purpose, in which the public may be interested. To promote a public purpose by a tax levy upon the property in the State is within the power of the Legislature; but the Legislature has no power to impose taxes for the benefit of individuals connected with a private enterprise, even though the private enterprise might benefit the local public in a remote or collateral way. Legislative power of taxation is not illimitable. "Taxation is a mode of raising revenue for public purposes. When it is prostituted to objects in no way connected with the public interest or welfare, it ceases to be taxation and becomes plunder."

## Declarations to Public Purposes.

At least these two heterogeneous subjects are embraced in the act, one of which is not expressed in the title, and they cannot be segregated. The title does not express the objects or legislation embodied in the provisions of the act. It is, therefore, narrower than the body of the act, and fails to impart that notice of measures enacted which the constitution requires. To prohibit such legislation was the sole end and aim of the constitutional requirement. Moreover, the Legislature has not in any of the provisions of the act, designated any particular river, stream or locality within the State where drainage is necessary. To declare a public purpose, and to create a district over a designated area of the State in which that purpose shall be accomplished, and to provide ways and means for its accomplishment, are matters which belong exclusively to the Legislature. Furthermore, the act is unconstitutional, because it authorizes a local board to levy a tax and two assessments for a public purpose, at the same time, upon the same property, in addition to a tax levied by the State for the same purpose upon all the property of the State, which, of course, includes the property within the district. Duplicate or triplicate taxation levied at the same time, and for the same purpose, and upon the same property, within a territory of the State which has not been established by the Legislature as a special taxing district, is void, whether levied according to the standard valuation or benefits. Such taxation is destructive of that equality and uniformity which the Constitution requires for the validity of every tax. Judgment reversed.

## Concurrent Opinions.

Justice Ross's opinion, concurred in by Justice Thornton, concurs with the foregoing. It says there is no power anywhere to compel the Boards of District Directors to establish any particular district or districts, for the act has left the determination of those questions to their judgment and discretion. This it could not constitutionally do. The establishment of such districts is a legislative function, to be exercised by a legislative body, and the Legislature is expressly prohibited by the Constitution of the State from clothing any of its executive officers with such power. Numerous other objections are made to the act, which need not be determined, since the one just considered is fatal to it.

Justice Myrick also filed a concurring opinion, which says: The act is obnoxious to the Constitution, in that part of it discussed, in the opinion of Mr. Justice Ross and the opinion of Mr. Justice McKee. It may be very much doubted if by the so-called Drainage Act even its probable meaning and intent is expressed, viz: In speaking of the formation of districts it says: "Each of which shall include a territory drained by one natural system of drainage." It does not say that each district shall include all the territory drained by one system, but that the territory included within the district shall be drained by one system; a distinction leaving open a wide door for the creation of an almost unlimited number of districts. Therefore, and for the reasons given upon this subject by Mr. Justice McKee and Mr. Justice Ross, I concur in the judgment.

Justice McKinstry's concurring opinion says: So far as the tax on all the lands in the district is concerned, it may, under the act, be required to be paid before the work is completed or commenced. But if this were not so, the defect is in the law itself, which cannot be held to be good, because, by possibility, all the money raised in the State at large, and from the three modes of taxation applicable within a district, may be expended by the Board of Directors of that district.

## The Dissenting Opinion.

Justice Sharpstein dissents. In his opinion he says: The conclusion at which I have ar-

rived is that if all those provisions of the act which contemplate the raising of funds by taxing or assessing any property other than that of the entire State should be held to be unconstitutional, the defendants could not be ousted from office, nor enjoined from letting contracts, nor in this action from levying a tax within the district specified; and if the act be constitutional to the extent which I think it to be, it is quite clear that this Court cannot hold that said district has not been legally formed. It not being clear to my mind that those provisions of the act which affect the people of the entire State are unconstitutional, I think that the judgment of the court below should be affirmed.

## News in Brief.

RIVERSIDE is experiencing a genuine boom in real estate matters.

THE Colusa *Sun* wants a tax of \$25 a year levied on every pistol.

NEW YORK city's contribution to the Michigan relief fund amounts to \$63,582.

THE loss by the bush fires on Saugeen peninsula, Ontario, amounts to \$500,000.

It is reported that the building of several sawmills is in contemplation in Del Norte county.

THE coinage at various mints for September was \$7,847,300, of which \$2,400,000 was in standard dollars.

THE Ventura warehouse at the wharf is full of grain. Never in the history of Ventura county were the crops so good.

It is reported that Mrs. Garfield will shortly sell the house occupied by the family previous to her husband's inauguration.

THE Santa Cruz Narrow-gauge railroad was sold recently, under foreclosure, to the Pacific Improvement Co., for \$196,000.

It is said the second largest spring in Hell's Half Acre, near the Yellowstone park, has turned itself into a spouting geyser.

THREE engineering parties for the Northern Pacific are operating between the Mullan pass and the mouth of the Little Blackfoot.

THE O. R. & N. Co. are handling 800 tons of freight daily at The Dalles. There is a perfect swarm of laborers working day and night at the wharf boats.

THOUSANDS of railroad ties are being floated down the Willamette to a boom near McVey's point. They are banked at that place and piled along the track.

THE profits of the chief cotton corner in Liverpool are estimated from £250,000 to £500,000. But one small failure has occurred, and no others are expected.

WHEN the California Southern and the Atlantic & Pacific railroads are completed they will have built at least 350 miles of track in San Bernardino county.

THE Hailey paper, Wood river, Idaho, claims the county seat by a majority of 28, while the Bellevue *News* says the official count gives it to that town by a majority of one.

A PERMIT for a burial in consecrated ground was refused to a native Protestant at Xochiapa, Mexico, and the corpse lay decomposing for three days. The civil authorities could offer no relief. When the Protestants organized a funeral procession a mob stoned it and threatened further violence, so a secret burial took place.

## PACIFIC RURAL PRESS.

[Established in San Francisco, 1870.]

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IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

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### The Farmer's Daughter.

She lives within a quiet home—  
No model of the graces.  
Unknown to culture's highest walks,  
Or fashion's giddy places;  
A thoughtful girl so sweet and wise,  
With earnest face and loving eyes—  
The farmer's gentle daughter.

On baking days her tiny hands  
Are busy at the making;  
No bread more light and sweet than hers  
Was ever made by baking.  
She churns the butter, golden sweet,  
And keeps the dairy white and neat—  
The farmer's useful daughter.

Her garden is an Eden fair,  
And blooms with pinks and roses;  
She knows the name of every flower,  
And make some gorgeous posies—  
Grows peas, and radishes, and cress;  
And corn, and squash, and herbs to press—  
The farmer's happy daughter.

Long may she bravely smile on us—  
Our darling household fairy.  
The queen of gardens, house and lot,  
And princess of the dairy—  
To teach us by her pleasant ways  
To love the things of every day—  
God bless the farmer's daughter.

### How I was Elected Circuit Judge.

Rev. Dr. H. W. Pierson, who is doubtless known to many of our readers from his sojourn in this State about five years ago, is the author of a book, soon to be published by Appleton & Co., entitled "In the Brush; or Old-Time Home Life in the Southwest." The book will be a very entertaining sketch of the customs and characteristics of the dwellers in the back districts of the southwest a generation ago, and will give much amusement to the general reader and to those who happen to have had an opportunity to observe the home life which the author describes. From an advance sheet we take the following description of a style of electioneering, which shows how well local traits are touched off by Dr. Pierson "In the Brush."

"I made," said the Judge, "a very thorough canvass of the district with my opponent. We closed our public discussions, and I returned home a few days before the election, which was to come off on the first Monday in August. My opponent was Judge K—, whom you know as a very worthy man, a perfect gentleman, and a superior judge. He was honored by the bar, popular with the people, and a very hard man to defeat. He had held the office several years. I wanted it, had worked very hard for it, and was determined to gain it if possible. I looked over the district very carefully, made the closest estimate I could, and found I should be defeated unless I could make very heavy gains in some precinct. It was a desperate case, and I could in honor only electioneer on the 'still hunt.' I concluded to mount my horse and ride to C— F—, which you have visited and know is about the most ignorant and uncivilized region in the State. I thought it more than probable that I would find a barbecue-dance in progress there on Saturday afternoon, at which all the people in the precinct would be present. When I arrived I found a dance in full progress in the open air under the trees, and an ox roasting over the fire near by. It was the last of July, and very hot and very dry. A perfect cone of dust arose above the crowd, in which all the dancers were enveloped. It was a strange, wild scene—a scene to be witnessed nowhere else but in the wildest portions of our southwestern wilds. There were old men and old, grizzled-headed women, young men and young women, parents and children, grandparents and grandchildren, all mingling together and dancing with backwoods energy and wild delight. As I dismounted, hitched my horse, and went up and joined those that were looking on, one and another saluted me, very respectfully, with—

"How 'dy, Broadcloth?"

"As the weather was very warm, I had worn from home a black alpaca sack-coat. This was the only deviation from home-made butternut-colored jeans in the entire crowd. My black coat, therefore, distinguished me from everybody else; and as I walked about among the people, the invariable salutation was—

"How 'dy, Broadcloth?"

"I moved around among them very quietly an hour or more, observing all that was going on, and watching for the most favorable opportunity to make myself known to them and win their favor. At length my course was clearly settled in my own mind. I saw what would be my opportunity. I could see that the fiddler was already so drunk that he would fall off the block, dead-drunk, before a great while. I had learned to play the fiddle when a boy. I could take the fiddler's place and prevent the calamity of a complete break-up of the dance.

"His powers of motion failed sooner than I

had expected, and there was great sorrow in all the company. After a while I intimated quietly to some of them that I could play the fiddle, and they shouted at the top of their voices:

"Broadcloth can fiddle! Broadcloth can fiddle! Hurra for Broadcloth!"

"At once there was a general rush of the company about me, all of them imploring me to take the fiddle and play for them. I replied, very positively:

"No, gentlemen, I won't fiddle for you!"

"Why not, Broadcloth? Why not?" they all responded.

"I will tell you why not," I said. "I came here a stranger, and you haven't treated me with any civility at all; you haven't invited me to dance; haven't introduced me to the ladies; haven't made me one of yourselves at all; and I won't fiddle for you."

"But they made so many apologies for the past and promises for the future that I finally relented, changed my mind and agreed to fiddle for them. This announcement was greeted with a general shout of joy. I then began to brag in the most extravagant manner possible. I told them that when they saw me draw the bow, it would be such music as they had never heard since they were born. I took off my coat, unbuttoned my shirt, rolled up my sleeves, took the fiddle, and drew the bow across it, back and forth, for a minute or two, with all my might. They responded to this very noisy musical demonstration with a scream and yell of wild delight, and a 'Hurra for Broadcloth!' I took my seat and began to play just before sundown, and played—until the sun was up the next morning. During the night they came around me and said:

"Who are you, Broadcloth, anyway?"

"I told them I was a candidate.

"They shouted:

"Broadcloth is a candidate! Hurra for Broadcloth." And then asked me what I was a candidate for.

"I told them I was a candidate for circuit judge, and they repeated:

"Broadcloth is a candidate for circuit judge. Hurra for Broadcloth for circuit judge!"

"This was as much information as I dared to give them in one installment. I did not wish to give them any more until what I had told them was perfectly fixed in their minds, so that they would not make any mistake when they came to vote on the following Monday.

"One of them, a little more thoughtful than the rest, came to me afterward, and, applying an oath to the party to which I belonged, said he hoped I was not a ——. I did not, in behalf of myself or party, resent the oath or favor him with any definite reply to his question. I knew that the greater part of the company generally voted with the opposite party, and that, enthusiastic as they now were in my favor, too much information on this point would be fatal to my prospects. I felt quite sure that neither my opponent nor any of his friends would give them this information, and undo the work I had accomplished between that time and Monday morning.

"As the morning dawned, in response to the inquiries of some of the more enthusiastic of my friends, I gave them my name in full, which was greeted and repeated in cheer after cheer.

"When I bade them good-by, mounted my horse and rode away, they followed me with their cheers, and when out of sight among the dense forest trees I could still hear their enthusiastic—

"Hurra for S—, candidate for circuit judge!"

"When the election returns were announced, every vote in C— F— precinct had been cast for me. That night's work with the fiddle secured my election."

### Mountain Top Letters.—No. 16.

[Written for the RURAL PRESS by JEWELL.]

In the death of Mrs. Locke (Mary Mountain) "Our Home Circle" of the RURAL PRESS has lost one of its most cherished contributors and best beloved members, and many of its readers a dear personal friend. While the sad news was sudden, as death always is, yet all knew of her long suffering and had hoped for a change for the better in her removal to Berkeley. But it was not to be. Her longing to have her children educated at the University was gratified in part, and her dying eyes beheld one within its walls, I believe. God grant they may have received her mantle of gifts, and not only take her place, where she left it, but continue right on, upward and onward toward greatness and goodness as she did and would have continued to do had her life been spared.

The past month has been one of peculiar sadness; hopes and fears alternating in our hearts as the telegraph brought us good or bad news of our martyred President. Then came the end! And even our children stood mute and sorrowful at the words "Our President is dead!" It seemed as if the glorious faith of that blessed mother and heroic wife must save him! But no, the greatest skill and utmost attention of physicians and nurses, the purest love and deepest faith of mother, wife and dear ones, the prayers and earnest hopes of millions, could not save the precious life. What a lesson for Humanity to teach her children!—the evil consequences arising from one bad act—the work of an instant—causing pain, suffering, heart aches,

sleeplessness, agony and death, millions of dollars expense, and an entire change in government affairs—all done by that fatal bullet! Surely, such a murderer in our midst is worse than a wild animal. And yet there are more of them—men who fear nothing, desire nothing but to attain their own party ends. If the President don't attend to their modest request, why kill him and let the chief officer know his danger in not complying with the people's petitions. This is what I heard a voter say myself within a month.

Surely, politics have become low down and filthy, and greatly need the purifying, peace element our mothers, wives and sisters would give them. The best governed home is where both father and mother control, make the laws, and ask the co-operation of all the children in the execution of those laws. So it must be with the government of States, eventually, in the good time coming, when men find out the mistake they make in trying to bring sex into politics. Never fear of woman's unsexing herself by talking politics or human rights any more than a newly-made father is unsexed by kissing the wonderful baby, or rocking its cradle. It is a clear case of duty on the part of citizens (men or women) to wish to elect good, true, pure men to perform the duties of town, State or country. A duty of both sexes equally, to have good laws, and faithfully executed, for the preservation of order and peace in the community, as in the home. Then, why object to a woman's vote when you do not object to her presence at your meetings, or even to hear her voice in campaign songs or in a ringing speech for your candidate? Women can go to the postoffice without being insulted! Why not go to the polls and deposit her vote with equal safety? Are you men such brutes, such depraved creatures on that day only? Besides they are all somebodies fathers, husbands, brothers and lovers. What shields their dear ones from their infamous contact the rest of the year? Let us look into this evil and see if voting is the cause of their depravity. If so, deprive them of the privilege, and invest only those who can cast a vote without becoming degraded by passion or whisky.

Homes for the people are in plenty, ready to be taken up, occupied and made productive, attractive and remunerative too, within a few years, if hearts of families are only willing to endure hardships, trials and privation for a period. These mountains are destined to become our finest fruit lands; and in imagination I already see them covered with vines and trees, cosy homes nestling amid the well fenced and good roaded mountain sides. 'Tis a pleasing fancy, and our boys will see it realized, if our faded eyes don't. Among your most valued correspondences, are the home glimpses given in different parts of the State. Telling us (who are roughing it) how others are toiling and building homes, making the mountain sides blossom with fruit and vine; growing up a sturdy, healthy generation of sons and daughters, away from the vanities and dead-falls of the cities and towns—the greatest of all evils of city life and education for our young, is the lack of home influences. Parents see too little of their children, they do not really get acquainted with them, so many hours in school, and morning and night at home, when home duties or society claim the attention of the mothers. To see that the children are well fed and clothed, and are quiet and well behaved, is about all they do know of them. Of their little trials, temptations, thoughts, or confidences, what time have they to know? The younger ones claim the attention of parents, and those older naturally seek school friends for confidants, and teachers for examples. On our farms all is changed—the boys and girls are brought up to share the home and farm duties, and all are equally interested in the crops and orchards, stock and young on the farm. School is but a secondary object, and its duties but a continuation of home reading and study when there is no school. The mother's attention is not divided between society, with its endless routine and fashion, and the little family. She gets and keeps the confidences of her children, and is made young again in memory, while the father, if he be a true man, avoids those habits which he knows are injurious to his boys, because they are his companions, and naturally imitate his example, whether good or bad. Sunlight, fresh air, simple habits, and more than all the close contact with the beauties of nature, tend to elevate and purify both the bodies and brains of our growing children, developing limb and eye, by exercise and observation, into athletes and artists, thus making them capable of appreciation, or to occupy any position in life for which their inclination and capacity fit them.

Deer Ridge Farm, Sept. 30, 1881.

A YOUNG lady was sitting with a gallant captain in a charmingly decorated room. On her knee was a diminutive niece, placed there *pour less convenances*. In the adjoining room, with the door open, were the rest of the company. Says the little niece, in a jealous and very audible voice, "Auntie, kiss me too." Any one can imagine what had just happened. "You should say twice, Ethel dear; two is not grammar," was the immediate rejoinder. Clever girl, that!

A YOUNG man at Keene, N. H., licked 200 postage stamps and was badly poisoned. The mucilage contained corrosive sublimate. A clear case of star contractors trying to reduce the males.

### The Greed for Office.

Our every house is draped with mourning;  
Half-mast our sad flag flies;  
Historic page for aye adorning,  
Entombed loved Garfield lies.

Loved more and more, as more we con him;  
Each foul deed foiled with scorn;  
Greatness achieved, not thrust upon him;  
High bearing, not high-born!

Small need to laud each noble feature;  
World-wide his praises sound.  
Death-stricken, now God's noblest creature,  
By greedy maniac's wound.

What haps to-day may hap to-morrow;  
Our dead we can't restore.  
Let's prove the semblance of our sorrow  
By doing so no more.

For, as we sit in dust and ashes,  
Rueing our mighty loss,  
Perhaps this thought that o'er me flashes,  
Some other minds may cross.

This national office-seeking greed,  
At whose door lies the sin?  
'Twas madman wrought this special deed,  
Had I no share therein?

Share in that vile plan we inherit,  
Which yields to clam'rous cries,  
What to prove competence and merit  
Should justly be the prize.

—EDWARD BERNICE.

Carmel Valley, Cal.

### Who Are the Ladies?

In his address to the young women who competed for the premiums offered for culinary achievements at the State fair the President, J. McM. Shafter, said:

I do not think that baking a loaf of bread is the highest duty of a girl, but I do think that to become an accomplished housewife is not only one of the first, but one of the most imperative duties of women; and it is to direct attention to, and to create in you a belief of this fact that I offer you this premium.

I have called you ladies. What is your title to this appellation? There are titles of birth, place, honor and worship; these are of right. There are also titles of courtesy, and in this country lady is one. It is true that there are some who strive to confine this title to those esteemed or the highest in social position. But this assumption is denied by most, and the title is generally applied to all respectable women of tolerable manners. But I feel constrained, young ladies, to put you upon a higher plane than most, and to assert for you the highest and most time-honored claim to this honorable name. Indeed, you alone inherit it from that time when the memory of man runneth not to the contrary. Some hundreds of years before our era the Greeks and Romans made large conquests in Asia, the birthplace of the human race. They brought back to Europe the spoil of nations, captives, theology and the production of nature, including animals, fruits and grain. It was in this way that wheat among its agency was diffused throughout Europe, and soon furnished bread for all. While the warlike men from the north of Europe were making their excursions by land and sea, the mistresses of the household cared for the wild brood which remained. She prepared the stores of hard bread which the men carried away, and welcomed their return with a full supply of the staff of life. In their boisterous banquet, from her own baking she caused a manchet of bread to be placed at each seat, or sent the loaves of bread around in baskets to the feasters. To mark her high office she was denominated *lady*, the breaker, dispenser, and, with slight assumption, the maker of bread. While we may, out of our magnanimity and courtesy, allow this word to be used by those who have not of courtesy, but of right—and do not forget either, it is to be retained by practicing its virtues and its art—I have caused the legend Bread Maker to be engraved upon this piece of plate, and I trust the lady, Miss Clara A. Murphy, 17 years of age, a resident of Brighton, county of Sacramento, into whose hands I now place it, will always retain and exhibit it as evidence of actual merit and honorable distinction.

WOMEN'S RIGHTS.—Within the memory of people now living, married women had no legal existence. The law regarded them as practically the property of the husbands, who could not only spend their money and do as they pleased with their possessions, but could administer corporal punishment or deprivation of liberty the same as to their children. The wife had no redress. She had no rights before the law, and could not bring a suit, excepting with her husband's consent and in his name. In view of the representations heard at the present day of the degradation of women, it is well to look about and see what progress she has made. She can now hold property, engage in business, bring suits in her own name, and enjoy every right of citizenship except that of suffrage, and even that has now been granted, to a certain extent. And now the English House of Lords has decided that she is legally responsible for her own debts, which her husband is not bound to pay, provided he has furnished her the means for procuring necessities. He is not even bound to notify people not to trust her, nor to forbid her to pledge his credit. He is, in fact, relieved from all liability on her account, excepting in cases wherein he authorizes her to contract it. What result this reversal of a previously understood law will have upon this country remains to be seen.



## Chaff.

SLIPPERS for evening wear are cut exceedingly low, and the stockings to be worn within them are embroidered in proportion to the expected display.

ONCE they started a girls' seminary in one of the territories. It flourished well, but just in the height of its prosperity the principal eloped with the whole school.

LEMONADE parties in Bodie! A splendid opening for a coroner, and undertaker. They should each take along a barrel of citric acid and a lemon for baggage.

THE advice of one who had been kicked, and did not care to call the kicker out, though he deprecated a recurrence of the outrage, was, "Sit down whenever you see him."

LIFE is a pack of cards. Childhood's best cards are hearts; youth is captured by diamonds; middle age is conquered by a club; while old age is raked in by a spade.

SENATOR MAHON has twice been the father of triplets, and an exchange flippantly says that when the children are out in the front yard on pleasant days, his residence is mistaken for an orphan asylum.

SAID one fellow to another: "If I was as flat-footed as you are, I would not be afraid of slipping on the sidewalk." "Yes," was the response, "some people are flat on one end, and some on another." The first chap looked thoughtful and went down the street.

NOW is the winter of impecunious discontent made summer sun of oblivious repose by the new postal regulation about nuisance mail matter. No more can tailors and bakers dun an inoffensive debtor by postal card, for the said inoff. d. can just tell the p. m. to destroy all such agitating nuisances.

## A Mother's Influence.

Wendell Phillips related the following in an address a short time ago: In a railway car, once, a man, about 60 years old, came to sit beside me. He had heard me lecture the evening before on temperance. "I am master of a ship, sailing out of New York, and have just returned from my fiftieth voyage across the Atlantic. About 30 years ago I was a sot; shipped while dead drunk, as one of a crew, and was carried on board like a log. When I came to, the captain sent for me, and asked me: 'Do you remember your mother?' I told him she died before I could remember anything. 'Well,' said he, 'I am a Vermont man. When I was young I was crazy to go to sea. At last my mother consented I should seek my fortune in New York.' He told how she stood on one side of the garden gate and he on the other, when, with his bundle on his arm, he was ready to walk to the next town. She said to him, 'My boy, I don't know anything about the towns, and I never saw the sea, but they tell me those great towns are sinke of wickedness, and make thousands of drunkards. Now, promise me you'll never drink a drop of liquor.' He said, 'I laid my hand in hers and promised, as I looked into her eyes for the last time. She died soon after. I've been on every sea, seen the worse kinds of life and men—they laughed at me as a milkop, and wanted to know if I was a coward. But when they offered me liquor I saw my mother across the garden gate, and I never took a drop. It has been my sheet-anchor; I owe all to that. Would you like to take that pledge?' said he." My companion took it, and he added: "It has saved me. I have a fine ship, wife and children at home, and have helped others." How far that little candle threw its beams! That earnest mother saved two men to virtue and usefulness—how many more He who sees all can alone tell.

THE OLDEST PENSIONER.—Maryland can probably claim the oldest pensioner in the person of Mrs. Elizabeth Cretzer, who resides in the Ninth district of Baltimore county, upon the York road. She was 103 years old in last December, and is the widow of John Cretzer, of Capt. Parry's company of Maryland militia, who served in the year of 1812. Notwithstanding her advanced age she can walk about the house and attend to household duties. She has the record of her birth and her marriage to John Cretzer in the year of 1801. Her sight and hearing are good, and her mental faculties are in excellent preservation. On Tuesday, she was driven in to receive her pension payment at Maj. Adreon's office on Calvert street, and he would not give her the trouble to alight; he carried her check to her at the carriage, and found her thoroughly cheerful and in the humor for quite a talk. She is believed to be the oldest pensioner, if not the oldest person in the United States.

GIRLS, don't be in a hurry to get married. If you are but 16, don't allow such an idea to get into your head for at least four years. Don't even run the risk of it by permitting any young man to get as far as the proposing point. Fight him off, and make him wait or go away to somebody who is ready. Don't live under the impression that you must accept the first love-sick youth who proposes. Be patient, deliberate and eazacious. There is a world of happiness for you between 16 and 20. The world would be a dreary old waste if it were not for the sweet faces of young girls with their piquant sayings and melting smiles. After you have reached 20, it would be well to consider the matrimonial problem with some seriousness.

## Young Folks' Column.

## Cured by Kindness.

"You oughtn't to do so," shouted Willie as the peddler dashed past in his wagon, giving the whip unmercifully to his poor half-starved horse. Another moment in turning the corner the wagon was upset and the horse broke into a run. He ran for a mile or more. The wagon was broken to pieces, and the man thrown out and badly bruised. Next day the "vicious beast" was offered for sale. Willie's father bought him for a low price for use on the farm. It was a foolish bargain, people said, for the horse was quite uncontrollable. Even his owner said he would bite, rear, kick and run away. But Mr. Ely bought the horse to please Willie, whose tender little heart was full of pity for the poor animal. "We will be so kind to him that he won't want to be bad, papa." So they agreed to follow Willie's plan.

Before long Mr. Ely and Willie began to drive the horse. People were surprised at the change in him. "He would go as slow as desired," said the gentleman who told the story, "stop instantly at whoa, follow his master, come at his call and rub his head on his shoulder." What had made the change? Not force! The poor horse had been beaten, kicked and starved before, and grew more and more stubborn. Now he was well fed, well bedded, well watered; not over driven or overloaded, never whipped, kicked or scolded. Kind words were given him, and now and then an apple or a piece of sugar. No gentler or more faithful horse went on the road. Willie's plan had succeeded. The little fellow fairly lived with the horse, and the horse seemed to know he was his best friend. Ben was a favorite with all the family.

One night Mr. Ely was away from home. He had taken Ben early in the afternoon, but when bedtime came he had not returned. Thinking he would not be home that night, the family closed the house and retired.

About midnight, Willie heard Ben's neigh. Jumping out of bed, he ran to the window, and there was Ben at the door without his father. In a few moments the family were aroused, and Willie's brother hurriedly opened the door. No sooner had he done so than Ben turned around and trotted off toward the road. He followed him quickly. Ben lead him a quarter of a mile and then stopped. There Mr. Ely lay on the ground in a swoon. When he was taken home he soon recovered, and told them that as he was riding through the woods, he struck his head against the overhanging branch of a tree and fell from the horse. He was stunned by the blow, and did not remember anything more. After that night Ben was the hero of the village. But there was one strange thing about him, he never forgot either a benefit or an injury. Sometimes when in harness he would see his former master. Then all his old fire would return; his eyes would roll, he would champ his bit fiercely, and show his intense desire to get at his enemy. Only Willie or his father could quiet him then. Ben taught the people in that village more than they ever knew before of the power of kindness. And a good many of Willie's little friends began to practice his way of treating their dogs and ponies. They found that the surest way to manage them was by kindness.

This, you know was Mr. Rarey's way. It was his secret in training horses. If any of our boys have any doubt on the subject, suppose they try it for themselves; for this story of Ben is a true one.

## The Baby Died at Sea.

[Written for our YOUNG FOLKS by S. K. Saxe.]

It was in the summer of '73 that we made our first trip to Oregon. The weather was extremely hot, and the John L. Stevens—commanded by the lamented Captain Connor—was crowded. Among the second-class passengers on board was a family of seven, consisting of father, mother and five children. They had come from southern Missouri and were seeking a home in the Willamette valley. During their long and tedious journey the youngest child—an infant—some 10 or 12 months old, had contracted *cholera infantum*, and the first night out from San Francisco it died. The ship carpenter prepared a plain box in which the attenuated little form was placed, the whole covered with coarse canvas and prepared for burial at sea; but the poor afflicted mother supplicated so strenuously against this, that the sympathetic heart of Captain Connor was touched and he consented for it to remain on board until we should reach Astoria. At this port, while the ship awaited the incoming tide, we went on shore and gathered flowers, which we hastily formed into a wreath and cross; Capt. Connor enshrouded the little coffin in the blue field and white stars of the American flag, upon which we placed our floral offering, and thus it was given into the hands of the Masonic fraternity, of which the father was a member.

'Twas a touching sight, as the ship sped on in its course up the winding beautiful river, this stricken family, gathered in a sad group at the vessel's stern, straining their tearful eyes for one last lingering look at the store-house where, under the stars and the roses, they had left the mute form of their little one to be buried by kind-hearted strangers.

## GOOD HEALTH.

## Action of Jaborandi on the Hair.

Science, of Sept. 17th, contains some further particulars in reference to the action of jaborandi in changing human hair to a darker hue, beyond those we gave in our last issue. The active principle of the drug, which was employed, is known as philocarpin—an alkaloid, derived from the plant jaborandi, which has been quite recently introduced into medicine from Brazil. The philocarpin was administered by hypodermic injection. It has a peculiar and powerful effect upon the human system, producing profuse perspiration and salivation. It also stimulates the growth of the hair. It was administered for the purpose of eliminating urea from the system of the patient, which was present as a consequence of the suppression of urine due to other troubles. About 40 centigrams were put in gradually increasing doses, and producing 22 "sweats," and it was estimated that 14 pints of fluid were removed by these "sweats." The ureamic symptoms were completely removed.

The administration of the philocarpin was commenced Dec. 16, 1880, and the change in the hair was first noticed Dec. 28th. After that time the change was gradual. The hair, in its normal state, was light, tinged with yellow. In Jan., 1881, it became a chestnut brown, and in May following almost black. In addition to the change of color, the hair also became thicker and coarser. While previously quite dry, it became moist and oily. The hair on all parts of the body underwent the same change. The eyes also became much darker—a dark blue.

Another case, that of a 14 months-old infant is reported by the same party—Dr. D. W. Prentiss, of Washington City—with the same results in case of the hair. In this instance the drug was administered for membranous croup.

The effect of this drug on the hair appears to be something new, and if experience confirms these observations, another will be added to the several already-known marvelous influences which philocarpin has upon the human system. The *modes operandi* of the change is yet to be determined. It is known that the drug stimulates the growth of the hair, and the suggestion is made that the change in color may be due to an oily pigment that is increased in quantity under the influences of large and continuous doses. As age advances the processes of nutrition are enfeebled, and the hair gradually becomes thin and dry and white, until it finally dies and falls off. Possibly this drug, if it can be administered without detriment to the general system, may become valuable as a preventive to premature baldness.

## Brain and Body Work.

Physiologists, after patient and close inquiry, have arrived at the important and practical conclusion, that the power of the entire man, his vitality, is as much expended by two hours of deep mental effort as by a whole day of ordinary bodily labor. This fact seems to be founded on observed physiological laws; hence, the man who spends four hours in the 24 in earnest mental labor, goes to the utmost allowable limit for a day's work, and all the time that remains, after deducting 10 hours for eating, sleeping and dressing, should be conscientiously expended in muscular exercises, which require no brain effort, and such exercises should always, by preference, be those which are agreeable, useful and profitable; for they not only promote the healthful condition of the body, but give rest to the brain, which, by that rest, recuperates its powers; many can remember, when turning back to their school days, that they have gone to bed feeling that they did not know their lessons, yet, on rising in the morning, the mind would run over them with a gratifying and surprising clearness. It is this which accounts for the observation that persons have striven hard to remember some important fact, or as to where valuable papers have been laid, and towards morning, when the mind began to awake, a little before the body, this being the time of dreams, the point is made clear in the form of a dream, thus showing that rest of the brain, whether by actual sleep or the passive, comparative rest which manual labor affords, gives mental activity, vigor, perspicacity; from these it follows that no form of muscular exercise is ignoble in a student, a brain-worker, which has to be done by some one, and by being done by him, will save money, or will save the time of another, who, perhaps, may already be overtaxed. How many servants are overtaxed! how many faithful, uncomplaining wives are overtaxed! and sons and daughters sometime; and clerks, and apprentices, and other employees. In every dwelling in a large city, there are many things which the master could do which would reflect benefit on himself and others.

TO CURE FITS OF SNEEZING.—Surgeon Bradley says, in the *British Medical Journal*, that being tormented by one of the most distressing symptoms of hay fever, incessant sneezing, and having tried all remedies suggested, in sheer desperation, he plugged his nostrils with raw cotton. The effect was instantaneous; sneezing ceased, and after repeatedly testing the remedy, he concludes that it is worth knowing and recommending.

## DOMESTIC ECONOMY.

## Preserving Dried Fruit From Insects.

EDITORS PRESS:—The following recipe is worthy of trial by those who are putting up dried fruit:

After curing the fruit, place it in a basket and dip it in a boiling solution of one ounce of borax to one gallon of water, drain and dry off. I know of its having been used for protecting figs with perfect success, while others not so treated became infested with insects.

C. H. DWINELLE.

Berkeley, Cal.

GALETTE.—This cake is a great favorite in France. Sift a pound of the best flour, put it in a heap on the pastry board, make a hole in the middle, put into it a pinch of salt and one of sifted sugar, three-quarters of a pound of butter, and a gill of water. Knead the ingredients together, and when they begin to mix sprinkle over by degrees half a gill of water, continuing to knead with the palm of the hand, and when the paste is perfectly smooth make it into a ball and let it lie for an hour. At the end of this time roll out the paste to thickness of half an inch. Mark the edges as for Scotch shortbread, put the cake on a baking sheet, brush over the top with yolk of an egg, and score it in the form of diamonds. Bake in quick oven for half an hour, or until the galette is elastic on pressure of the finger.

CHICKEN CROQUETTES.—To one chicken and one pound of cold veal chopped very fine, almost to a paste, add one-half a chopped onion, one tablespoonful of chopped parsley, one salt-spoonful mace, and one egg; take the same quantity of stale bread crumbs as there is of chopped meat; if you have any gravy or stock, heat and gradually stir in bread crumbs until the bread absorbs all the gravy; add that to the meat. The mixture must be quite smooth and thin; if not thin enough add a little cream or milk; it whitens the croquettes; roll the croquettes egg-shaped or cone-shaped in an egg, beaten with a tablespoonful of milk, then in bread crumbs dried in the oven; fry in boiling grease in a deep pan; when done put on brown paper to absorb the grease.

CHOCOLATE PIE.—Take 4 tablespoonfuls of grated chocolate, 1 pint of boiling water, let it simmer for a few minutes, then take the yolks of 2 eggs, 2 tablespoonfuls of cornstarch, and 6 tablespoonfuls of sugar. Stir the mixture together, and boil until thick, like boiled custard. Make a crust as for lemon pie, bake it, and then put in the cooked chocolate. Beat the white of the 2 eggs to a stiff froth, beating in a tablespoonful of pulverized sugar; put this on the top of the pie and set it in the oven to brown. Serve cold; it is not at all difficult to make and ought to be a perfect success. It takes longer to prepare than some other dishes, and it is wise to make it in the early morning, and not run the risk of spoiling it by being obliged to hurry.

DAMASCENE ROLL.—Boiled pastry should be prepared with as much care as that meant for baking, the proportions of butter, lard and flour the same. Stew the cherries or whatever fruit you desire, with a little sugar; roll out the pastry into a thin sheet—the thinner the better; spread over a thick layer of the fruit, and then, commencing at one side, roll carefully until all the fruit is inclosed within the paste; punch together at both ends, and tie up in a strong cotton cloth, then drop into a pot of boiling water. The Morello cherry is the best for this purpose, or some other fruit possessing acidity. To be served with sweet sauce.

DANISH PUDDING.—Miss Parloa's Danish pudding is a pleasant variation on the ordinary tapioca. To make it take one cupful of tapioca, three pints of water, half a teaspoonful of salt, half a tea-cupful of sugar, one tumblerful of any kind of bright jelly; wash the tapioca and soak in the water over night; in the morning put in a double boiler and cook one hour; stir frequently, add the salt, sugar and jelly, and mix thoroughly; turn into a mold that has been dipped in cold water and set away to harden; serve with cream and sugar.

WHIPPED CREAM PIE.—Sweeten a tea-cupful of very thick, sweet cream and make as cold as possible without freezing. Line two small pie-tins with moderately rich crust, prick in several places to prevent blistering and bake in a quick oven. Flavor the cold cream and whip as you would eggs for frosting. When the crusts are cold, spread on the cream and if you like to add a finish, put bits of jelly on top.

FRICASSEED CHICKEN.—Cut up and put on to boil in a small quantity of water. Season with salt, pepper and an onion if liked. Stew very slowly until tender, then add a half pint of rich milk or cream and thicken with butter and flour rubbed together, add a little chopped parsley just before serving. Have toasted some thin slices of bread, arrange on a platter and pour over the chicken.

A GOOD GLUE AND MUCILAGE.—The best quality of mucilage is made by dissolving clear glue in equal parts of water and strong vinegar, and adding one-fourth of an equal volume of alcohol and a small quantity of a solution of alum in water.





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## The Week

The rain has come again, and with the trade wind stilled, the dust laid, the air transparent, and the sun giving tempered sidelong glances, there is a perfection of weather which calls every one without the doors. The attendants at the fairs, which are now being held from week to week, are enjoying those conditions to their utmost, for the subdued dust cannot becloud the roadways. The rain has been heavy enough in the upper counties to start the new growth of volunteer, and it is to be hoped that conditions will be favorable to its constant but not too rapid growth. In most parts of the State, however, the rain has only amounted to a shower-bath and has refreshed where its other effects, either for good or evil, have not been appreciable. It serves, however, as a reminder that a new season is approaching, and it behooves all to lay their plans early for the winter's work. There should be a large planting of trees and vines this fall, and the early securing of the stock will be found advisable.

The effect of the rain upon exposed raisins and dried fruit has not been reported. It was feared that some grapes might suffer in the wine districts, but the showers, probably, ceased short of injury. The raisin men are arming themselves more generally with arrangements for artificial curing, to be used in case of storms, and this is the part of wisdom, for the sun is sometimes an uncertain agent even in California.

## The Public Lands.

We stand a fair chance now to get some authoritative information concerning the whereabouts of public land still available to entry, and to have it surveyed, mapped, etc., so that the selector need not work to so great disadvantage in the tiresome hunting which he has had heretofore to practice. The surveying, etc., of our government lands is to be urged upon Congress at the coming session and the appropriation of money to secure the work is to be asked for. The present movement to secure this is being undertaken under the auspices of the Board of Trade of this city, which seems to be awakening to the need of doing something to induce desirable immigration, and is holding meetings for the discussion of the best means of securing it. As a preliminary step toward rendering our public lands more available, a communication was addressed to Theodore Wagner, U. S. Surveyor-General for California, and a reply was received which embodied the following statements:

The area of the State of California, as estimated by this office, is 100,500,000 acres. The area of surveyed agricultural and mineral land is 58,828,227 acres, and of unsurveyed agricultural and mineral land 29,237,000 acres, making the aggregate area of the public lands 88,065,227 acres, leaving an area of 12,434,733 acres, divided as follows:

	Acres.
Private or Mexican grants.....	8,758,151
Indian and military reservations.....	318,631
Swamp and overflowed lands.....	1,204,751
Lakes, bays, navigable rivers, salt marsh and tide lands.....	1,637,200
Total.....	12,434,733

The surveyed lands embrace all the large plains and main valleys of the State, as well as the greater portion of the high table lands in the Sierra adapted for the grazing of large herds of cattle and sheep. They also embrace a large portion of the two timbered mountain regions—the Redwood belt, extending from the Bay of Monterey northwesterly to the Oregon line, for a distance of about 350 miles, and from the sea coast easterly toward the Coast Range mountains, with a general width of 30 miles, and the other covering with valuable timber of pine, fir and spruce the slopes of the Sierra Nevada, between Mt. Shasta on the north, and the junction of the Sierra Nevada with the Coast Range on the south, for a distance of about 500 miles in length, with an average width of 50 miles. Both of these mountain regions, as well as the other surveyed portions of the Coast range running southeasterly from the Bay of Monterey to the south boundary of the State, are sufficiently watered, and contain many small fertile valleys and sunny and grassy hillsides and oak openings, well adapted for the raising of all kinds of California fruits and vegetables and offering cheap and comfortable homes for industrious farmers.

The unsurveyed lands chiefly embrace portions of Del Norte, Siskiyou, Humboldt, Trinity and Shasta counties in the northwestern; of Modoc, Lassen and Plumas counties in the northeastern; of Placer, El Dorado, Alpine, Tuolumne, Mariposa, Fresno, Tulare and Kern counties in the central; and of Mono, Inyo and San Bernardino counties in the eastern part of the State; also of Santa Clara, Stanislaus, San Benito, Monterey, San Luis Obispo, Santa Barbara, Ventura, Los Angeles and San Diego counties on both slopes of the Coast range of mountains.

The unsurveyed lands, although in the main rough and mountainous, contain many fine spots for homesteads, treasures in water power for mill sites, in valuable timber and in precious metals, the development of which would furnish homes and occupation for a large population. For this reason these lands should be speedily subdivided. I cannot, however, tell how it will be done, as it depends altogether upon the yearly appropriations made by Congress for the surveying service.

It is quite true, as has been often stated, that the best portions of the public domain have passed into private ownership under the different ways of taking up land which have been provided by law; but there are, no doubt, tracts of comparatively small area still available, and should be turned to agricultural account. The Board of Trade is endeavoring to obtain from the local land officers through the State, general statements of the land still open in their several districts. The first report received is from J. C. Bradley, Register at the Marysville office, and it is as follows:

There are nearly 1,200,000 acres surveyed and unsurveyed government land in this district not yet disposed of. These unsold lands are all, or nearly all, foothill and mountain land, and a greater part thereof so mountainous and broken as to render them unfit for cultivation or settlement. They are not confined to any particular locality, but are scattered all around, each county in the district containing more or less. There is no place or locality containing any quantity of unsold land suitable for settlement that I could at present call your attention to, the valley lands having all been disposed of some time ago. It is true that there are large quantities of foothill land in the counties of Nevada, Yuba and Butte, now considered almost valueless, which, in course of time, may become valuable for orchard and vineyard purposes, but until cheap means for irrigating these lands can be devised, and carried into effect, it will be useless to send immigrants thither with the expectation of being able to make a living and build up homes for themselves and families. In the southwestern portion of Plumas county, not far distant from the town of Quincy, lies the largest body of unsold land now in this district, and it is possible that this section of country could absorb a large population than there is now, but the altitude is so great, and the winters consequently so long, that farming or stock raising cannot be made as profitable as in places nearer the valley. There is a range of mountain and foothill land running up through the eastern portions of Napa and Lake counties and the western parts of Yolo, Colusa and Tehama counties, some of which is yet unsurveyed, where I think the attention of parties desiring to make new homes might be directed. In this mountain range no one need expect to find any large amount of arable land; but there are many little valleys scattered among the mountains where parties wishing to go into the stock-raising business might profitably locate.

The Marysville district is one which has been prominently before the public since the early days, and has been run over by hosts of miners and locators. It is natural to expect that less land would be left in such a region than in some of the newer districts, and this the reports, which may be expected from the Registers therein, will show. We shall give our readers all information on this subject which can be obtained, for aside from the openings for immigrants there are many of our own people who would like to get more room for their orchard and vineyard enterprises; and they are prepared to turn good land to quick account whenever they get a hint of where it may be found.

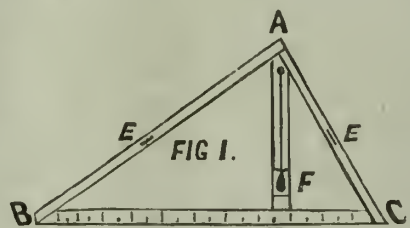
It is said that there still remains in the Truckee basin, Sierra Nevada mountains, 5,000,000,000 ft. of timber and 10,000,000 cords of wood, all of which is so situated that it can be brought out to market.

## QUERIES AND REPLIES.

## Leveling Lands for Irrigation.

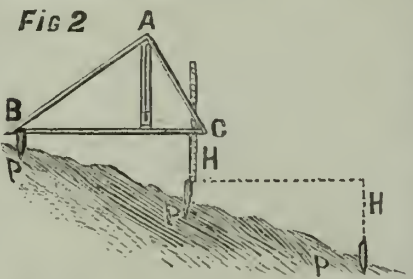
EDITORS PRESS:—Can you give me a simple, easy method or rule for finding the level of land which it is intended to "check and irrigate"? Ordinary engineers cost \$10 a day, including traveling expenses and their time, etc., in transit. That is too extravagant for the ordinary farmer on a small scale, and I believe anything you may favor me with—if through your columns—will be appreciated by many.—ROBERT G. SMITH, Madera, Fresno Co.

EDITORS PRESS:—Of the various methods employed in leveling, I will outline only one. With such lumber as may be at hand, a triangle is constructed as indicated in the sketch. The three pieces, A B, B C, and C A, are made fast to each other at A, B and C. The board, A D, is fastened to the triangle at right angles to B C. Near A, on the board, A D, a plumb-line is made fast. The plumb, like a mason's plumb, hangs in a hole at F, so that when A D is vertical, the string hangs very near the surface of the board, A D.



It will be seen that when A D is exactly vertical, B C is exactly horizontal, if the angles at D are true right angles. An ordinary carpenter's square need in the construction of the apparatus will insure sufficient accuracy in the position of A D.

In marking on the board, A D, however, the line in which the string of the plumb will hang when B C is exactly horizontal, more care is required. Two pegs are driven, as far apart as B and C, for these points to rest on. The highest one is driven into the ground until the plumb-line follows about the center line of the board, A D. Having marked this position of the plumb-line, the triangle is reversed so that the end, B, rests on the peg where before we had the end, C, and vice versa.



Should the plumb line be in a position at variance with the first one marked on the board, then the correct position, for the B C horizontal, will be exactly in the middle between the two found by the aid of the two pegs.

With the instrument thus adjusted it will be found very simple to find differences in elevation between any points or to locate on the ground a line of uniform elevation.

For instance, to locate a contour (a line of equal elevation), as required in the construction of a check levee: Drive a peg until its top has a convenient elevation from the ground, say one ft. Rest one end of the triangle on this peg and swing the other around until when B C is horizontal this other end has exactly the same elevation from the ground as the top of the peg. At this point drive a second peg and proceed as before. If the tops of the pegs be chosen at the height of the levee they may be retained as grade stakes as well as line stakes for the embankment.

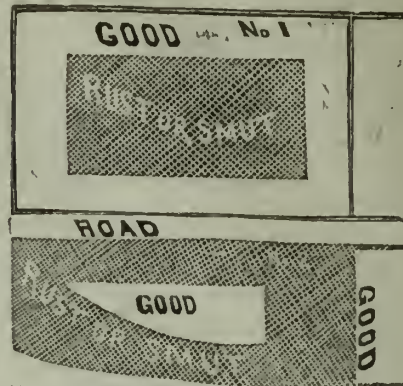
To find some point of the check levee, next below one already located, or below the highest point of a field, begin as indicated in Fig. 2, where P represents the starting point. Below C drive a peg, P; raise or lower C until B C is horizontal; measure with some convenient scale the height (h') of C above P, and make a note of the same. Repeat this operation between P' and P'', and continue until all the heights, h', h'', etc., added together are equivalent to the height of the starting point above the base of the next check levee below it (generally the height of each embankment). The last peg should be of course a peg with its top at the surface of the ground.

It will frequently be found convenient to have a scale of feet marked off on B C. The dimensions of the triangle may be about as follows: B C, 12 ft. long; A D, 5 or 6 ft.; and C D, 3 or 4 ft. Holes in the pieces A B and C A at E, E', or handles, will make the triangle convenient to carry. Only two men are necessary in using it.—C. EWALD GRUNSKY, Asst. Engineer, Office of State Engineer, Sacramento.

## Singular Freaks of Rust.

EDITORS PRESS:—The enclosed diagram illustrates the condition of a large sowing of oats on the farm of E. L. Mayberry at San Gabriel. On the first day, the patent machine which plows and seeds at the same time, left unfinished of field No. 1, a portion in the center, which was completed in the second day's work. On the opposite side of the road, another field,

similarly conditioned as to soil and exposure was next plowed and seeded, making the third day's work. A gore in the center of the irregular field No. 2, was finished on the fourth day. A little later another strip was sown at the end of field No. 2.



When the grain was ready to cut, the second day's sowing, on field No. 1, was found to be nearly or quite worthless, enclosed in a clearly defined border of plump and perfect grain. Across the road the third day's work was defined equally by a border of smut enclosing a field of good oats, sown on the fourth day, and the annexed field was also good.

This illustration of the way in which delicate and uncontrollable conditions of heat and moisture may affect the development of epores attracted a good deal of attention. There is nothing mysterious about it, as every housekeeper knows, but the phenomena were unusually distinct and upon a larger scale.—JEANNE C. CARR.

## Electricity in Agriculture.

It is only fitting that agriculture should share in the present interest in electrical appliances and machinery, and that while the manufacturer is promised cheap power and the transportation companies cheap motore, the farmer should have some encouragement that perhaps some day he may plow and reap and thresh with lightning rather than horseflesh or steam. Such indeed is the present promise, and it adds interest to the promise to know that he who makes it, Dr. Siemens the leading English electrician, is in fact a country gentleman and is actually training his newly contrived devices to do horticultural and agricultural work.

The last official announcement of what Dr. Siemens has accomplished and hopes yet to attain is found in an address he delivered last month before the Royal British Association for the Advancement of Science, of which reports come in our last London exchanges. His experiments and their results are too extended for us to reproduce them in detail, but we shall endeavor to catch a few of the leading conclusions and achievements which will show the direction of progress in this field.

First, we may remark that Dr. Siemens has experimented in two main lines at least. One is to test the effect of the electric light upon the growth of plants; the other is to make the motive power of electricity available for ordinary farm work. In the first attempt that of growing plants quite remarkable results have been attained; in the second there are some satisfactory results and some splendid promises. In growing plants by the electric light, Dr. Siemens met with some failures at first, for he soon found that there must be some rules observed in the manner of admitting the light, etc. His arrangements and appliances consisted of a high pressure steam engine of six-horse power nominal, which gave motion to two dynamo machines connected separately to two electric lamps, each capable of emitting a light of about 4,000-candle power. One of these lamps was placed inside a glass house of 2,318 cubic ft. capacity, and the other was suspended in the open air at a height of 12 to 14 ft. over some sunk greenhouses. The waste steam of the engine was condensed in a heater, whence the greenhouses take their circulating supply of hot water, thus saving the fuel that would otherwise be required to heat the stoves. The experiments were commenced on October 23, 1880, and were continued till May 7, 1881. The general plan of operation consisted in lighting the electric lights at first at 6 o'clock, and during the short days at 5 o'clock, every evening except Sunday, continuing their action until dawn. The results of this treatment with different seeds and plants were as follows: Peas which had been sown at the end of October produced a harvest of ripe fruit on February 16th, under the influence, with the exception of Sunday nights, of continuous light. Raspberry stalks put into the house on December 16th produced ripe fruit on March 1st, and strawberry plants put in about the same time produced ripe fruit of excellent flavor and color on February 14th. Vines which broke on December 26th produced ripe grapes of stronger flavor than usual on March 10th. Wheat, barley and oats sown on the 10th, with the exception of Sunday nights, of continuous light, but did not arrive at maturity; their growth having been too rapid for their strength caused them to fall to the ground after having attained the



height of about 12 inches. Seeds of wheat, barley, and oats planted in the open air and grown under the influence of the external electric light produced, however, more satisfactory results; having been sown in rows on January 6th, they germinated with difficulty on account of frost and snow on the ground, but developed rapidly when milder weather set in, and showed ripe grain by the end of June, having been aided in their growth by the electric light until the beginning of May. Doubts have been expressed by some botanists whether plants grown and brought to maturity under the influence of continuous light would produce fruit capable of reproduction; and in order to test this question, the peas gathered on February 16th from the plants which had been grown under almost continuous light action were replanted February 18th. They vegetated in a few days, showing every appearance of healthy growth.

The effect of the electric light upon the size and quality of the fruit produced is striking. Dr. Siemens describes especially the beneficial influence of the electric light has been very manifest upon a banana plant, which at two periods of its existence—viz: during its early growth and at the time of the fruit development—was placed (in February and March of 1880 and 1881) under the night action of one of the electric lights, set behind glass at a distance not exceeding two yards from the plant. The result was a bunch of fruit weighing 75 lbs., each banana being of unusual size, and pronounced by competent judges to be unsurpassed in flavor. Melons, also, remarkable for size and aromatic flavor, have been produced under the influence of continuous light in the early spring of 1880 and 1881, and Dr. Siemens is confident that still better results may be realized when the best conditions of temperature and of proximity to the electric light have been thoroughly investigated. His object hitherto has rather been to ascertain the general conditions necessary to promote growth by the aid of electric light than the production of quantitative results; but he is disposed to think that the time is not far distant when the electric light will be found a valuable adjunct to the means at the disposal of the horticulturist in making him really independent of climate and season, and furnishing him with a power of producing new varieties.

During the day-time Dr. Siemens was obliged to keep up the fires under his boilers to secure steam, to maintain the temperature in the greenhouses. He saw that he could then use the energy to produce electrical power for work, when it was not needed for light. In order to utilize this power he devised means of working the dynamo machine also during the daytime, and of transmitting the electric energy thus produced by means of wires to different points of the farm where such operations as chaff cutting, swede slicing, timber sawing and water pumping have to be performed. These objects are accomplished by means of small dynamo machines, placed at the points where power is required for these various purposes, and which are in metallic connection with the current-generating dynamo machine near the engine. The connecting wires employed consist each of a naked strand of copper wire, supported on wooden poles, or on trees, without the use of insulators, while the return circuit is effected through the park railing or wire fencing of the place, which is connected with both transmitting and working machines by means of short pieces of connecting wire.

All these details of work with the electric apparatus, Dr. Siemens says were under the charge of his head gardener, assisted by the ordinary staff of under gardeners and field laborers, who probably never before heard of the power of electricity. Electric transmission of power may eventually be applied also to threshing, reaping and plowing. These objects are at the present time accomplished to a large extent by means of portable steam engines, a class of engine which has attained a high degree of perfection, but the electric motor presents the great advantage of lightness, its weight per horse power being only 2 cwt., while the weight of a portable engine with its boiler filled with water may be taken at 15 cwt. per horse power. Moreover, the portable engine requires a continuous supply of water and fuel, and involves skilled labor in the field, while the electrical engine receives its food through the wire (or a light rail upon which it may be made to move about) from the central station, where power can be produced at a cheaper rate of expenditure for fuel and labor than in the field.

**SHEEP AND CATTLE VACCINATION.**—M. Pasteur, who has been patiently continuing his experiments in sheep and cattle vaccination, has now announced the complete success of the work, which he has been carrying on on a large scale at a farm near Melun, France; and he believes that he has obtained a process by means of which sheep and cattle can be made wholly secure against some of the most dangerous and destructive class of maladies to which they are subject.

The superintendent of the Mint at Philadelphia has been authorized to strike off memorial medals having heads of Lincoln and Garfield on opposite sides. Similar medals are also authorized, containing the head of Garfield on one side and a wreath on the other.

**CHIEF ENGINEER Osgood** of the California Southern Railroad, says that the 116 miles of road, beginning at San Diego, would be completed by the 1st of January next.

## Meeting of the State Horticultural Society.

The last meeting of the California State Horticultural Society was held at the Academy of Sciences on Friday, Sept. 30th, the Vice-President occupying the chair until the arrival of the President. The meeting was large and much interest manifested in the proceedings. The following were elected regular members: C. H. Cooley, Cloverdale; H. K. Carter, East Oakland; E. Kimball, Hayward; Wm. Knox, Haywards. A number of names were proposed for election next month.

### Dried Fruit Boxes.

The committee on boxes for dried fruit reported as follows:

To the President and members of the State Horticultural Society: We your committee, appointed to report uniform packages for dried fruit, would most respectfully report as follows:

1st, 15 in. x 9 1/4 in. x 9 in.  
2d, 15 in. x 9 1/4 in. x 5 in.  
3d, 15 in. x 9 1/4 in. x 2 1/2 in.  
4th, 9 1/2 in. x 5 in. x 4 1/2 in.

This last to be made of this material and outside measure.

The first, size will hold if well pressed 50 lbs. of dried plums, prunes, apricots, peeled peaches or sliced peaches, or 40 lbs. of unpeeled peaches, or 30 lbs. dried apples.

The 2d size will hold 25 lbs. of dried plums, prunes, apricots, peeled peaches or sliced peaches, or 20 lbs. of unpeeled peaches.

The 3d size will hold 12 1/2 lbs. of dried plums, prunes, apricots, peeled peaches or sliced peaches, or 10 lbs. of unpeeled peaches.

The 4th size will hold 5 lbs. of dried plums, prunes, apricots, peeled peaches or sliced peaches. This size is intended as a size to crate (six together) occupying the same space as one of the first size, and for very choice fruits.

These sizes are selected so that lumber will cut to the best advantage, or in other words, the less lumber in a box the less you have to pay—10 and 12 inch lumber will cut for these without any waste.

Your committee has conversed with several of the box makers, all of whom favor the adoption of a uniform size of packages, as it would enable them to carry a stock of prepared lumber without the risk of loss, and they could then always be prepared to fill orders on short notice. Under the present system they cannot prudently carry a large stock of any one style of boxes, and they often meet with loss in making the odd sizes now used, because parties often fail to take what they order. This must all come out of the consumer as well as the loss in lumber, for the manufacturer must carry this to his profit and loss account, and we must, and do, pay for it in the higher prices we have to pay for our boxes.—A. T. HATCH, WM. H. JESSUP.

The report was received on motion of Mr. Trumbull, and afterward adopted on motion of Mr. Lewelling.

Mr. Shinn spoke against the size No. 3, as it was so shallow, and the fruit would be apt to dry out. Others thought the objection a good one, and supposed this size would be little used.

Mr. Blackwood asked if any of the committee had ever tried to get 50 lbs. of fruit in the box they called No. 1. Mr. Hatch said that he had; he had put 50 lbs. of peeled peaches in a box of that size; in fact, it is the size he uses in his packing generally.

Mr. Jessup remarked that he had seen several tons of Mr. Hatch's dried fruit, and he considered it well packed. Mr. Hatch uses a lever 14 ft. long and has a follower which works through an upper false box which is just the size of the finished package. He weighs out the amount he desires to go in a box and presses it at a single operation. Mr. Jessup said also that he had put 40 lbs. of fruit in No. 1 and 20 lbs. in No. 2 by hand pressure, and he was convinced that it is advisable to use more force and put more weight in the box. He thinks that insects do not have as good a chance to grow and increase in densely packed fruit as in loose.

Dr. Chapin also mentioned the advantage of close packing in retaining moisture and flavor in the fruit.

### Committees.

The committee appointed to prepare information from the society's circulars for publication, asked more time, which was granted.

Mr. Trumbull, for the committee on fruit for the Chicago fair, reported that the committee had progressed well toward securing fruit to send, when it was found that the railway companies would not forward it free because they had learned that the Chicago fair is a private enterprise and profitable to those who get it up; also that if it were worth while to show California fruit the opportunity would be seized upon by the Chicago fruit dealers who import fruit from this State. The report of the committee was received and the committee discharged.

The committee on sending a delegate to the Washington meetings of agriculturists called by the Commissioner of Agriculture, asked for more time, which was granted.

W. G. Klee and H. Behr, committee on "plants worth trying in California" submitted another installment of their report which will be published in next week's PRESS.

### Officers Nominated.

The following nominations were made for officers to be elected at the next meeting: President, Prof. E. W. Hilgard; Vice-Presidents, J. V. Webster, R. J. Trumbull, A. T. Hatch and James Shinn; Secretary, E. J. Wickson; Treasurer, R. J. Trumbull; Directors, John Rock, J. Lewelling, A. T. Hatch, W. C. Blackwood, James Shinn, J. V. Webster, W. H. Jessup, E. H. Rixford, Matthew Cooke, C. H. Dwinelle, B. B. Redding and J. Strentzel.

### Grape Growing.

An essay on table and raisin grapes was read by Leonard Coates, of Yountville, which may be found on page 226 of this issue.

W. G. Klee, gardener of the Agricultural College at Berkeley, made a report showing the results attained in grafting upon small seedlings of the *Vitis Californica* and other varieties believed to be phylloxera proof. It was shown that there was quite a difference in the success with which different varieties of the vinifera "took" upon the wild stocks, as we shall show hereafter.

### Resisting Vines.

There was some general discussion on the subject of resisting stocks. Mr. Webster spoke of the advisability of using two-year-old seedlings, which could be grafted higher from the ground than yearlings, and in this way there would be no danger of the scion rooting on its own account. A graft can be made on the older stock and the ground banked up around the graft until it unites, and the earth afterward leveled down.

Mr. E. H. Rixford asked for the present standing of the Clinton as a resisting stock. Mr. Coates said that Mr. Dresel's objection to the Clinton was its suckering. It roots easily and grows fast, but is apt to sucker. This can be obviated by removing the eyes from the lower part of the cutting.

Prof. Hilgard said that French experience had shown that some stocks which usually resisted might be overcome by overwhelming disadvantages. The vine had been grown in the midst of a phylloxera patch, with the insects on every side of it, and in such situations, 10% of the Clinton had been overcome. There is analogy in the behavior of animals toward disease. Some systems are strong enough to withstand ordinary exposure to disease or conditions favoring disease, but yield when the influences are overwhelmingly against them. There are stocks which seem wholly and others partially resisting. Different conditions may call for the use of different stocks. For example, a sandy soil is not favorable to the phylloxera. In such a soil the less resisting stocks may be used. Stock must also be chosen with reference to the manner of growth of the vine to be grafted on it. The *Vitis Californica* is a rapidly growing stock. Some vines will require this; some the *Riparia*, which is slower in its growth. There are many things in connection with treatment of phylloxera, which must be determined by local conditions. Even flooding is not a universal panacea, for it is well nigh impracticable to kill the insect by flooding in deep soil where he may be six ft. under ground.

Prof. Hilgard also alluded to some recent publications of matters brought before the Academy of Sciences on the use of bisulphide for the phylloxera. He stated that the point in the claims of M. Cornu with reference to the ill effects of the bisulphide on the vines was merely precautionary against the unwise use of the substance. It has long been known that vines could be killed by its improper use. But even if the effects were as evil as is claimed by some it would still be a valuable substance, for in the phylloxera spots we could well afford to sacrifice the vines if the spread of the insect can be thereby prevented. Prof. Hilgard also alluded to the statement of Dr. Behr that the bisulphide was "insidious" in its effect upon plants. He had seen no experiments which would lead him to regard it as insidious—it acted rapidly and killed at once.

Dr. Behr recited some of the points made in a recent communication of his to the Academy of Sciences on the subject. He had made tests which led him to regard it as insidious, for he had plants which grew sick and died after an interval of more than five days following the application. His experiments had been made upon fuchsias and roses in pots, as he had no vines to experiment upon. Dr. Behr also cited his experiments with bisulphide upon insects, which led him to believe that its effects upon them was not so efficient as is generally claimed, as some resisted it for a long time, and some revived after the vapor had dissipated. Dr. Behr's experiments with insects had been by enclosing insects with some of the bisulphide in pill boxes.

Prof. Hilgard cited the recent French experience with the use of bisulphide in the vineyards, showing that more and more of the substance was being used, and the official report says that where accidents have happened the soil has been very shallow and the dose was consequently too great.

### Exhibits.

There were several interesting exhibits of fruit made. Briggs Bros., of Winters, sent a fine box of their new crop of raisins, also samples of Muscatel and Cannon Hall Muscat grapes in different stages of curing. Mr. A. E. Briggs was present and gave interesting facts concerning these grapes. The Cannon Hall Muscat gives a very large berry but the bunch is straggling and the vine is not a heavy bearer.

Mr. Cooke showed two of the Dana's Hovey pears grown by Mr. Thurber, of Vacaville. It is sometimes wrongly called the "Winter Seckel" which is another pear. This fruit holds its quality a long time and has sold at very high prices at Christmas. It is as yet but very little grown. James Shinn, of Niles and W. E. Klee, of the University, also showed handsome pears. Dr. Strentzel sent his compliments to the meeting in the form of a box of very fine assorted table grapes, grown in his Alhambra vineyard; they were greatly admired and enjoyed.

### Closing Matters.

Mr. Blackwood remarked that he thought the society should put itself on record on the question of Chinese emigration, as the Board of

Trade had asked for the sentiments of all bodies of producers. Mr. Dwinelle protested against the introduction of this mooted question as likely to distract the society from the matters it had properly in hand. Remarks were made by Mr. Hatch, Mr. Wilcox, Mr. Jessup, and others. Mr. Blackwood's motion for a committee to report to the society on the matter was carried, but when the Vice-President named the committee most of those named declined to serve. The discussion then began to grow warm, and the Chairman ruled the whole question as out of order.

On motion of Mr. Wilcox a committee was appointed to draft a resolution defining the policy of the society on such matters in future. The following resolution was presented and adopted:

Resolved, That it is not in accordance with the purposes for which this society was organized, to discuss outside questions.

The subject of "Pear Growing," by Mr. Smith, of Vacaville, was continued until the next meeting, owing to the absence of Mr. Smith. "The Fruit Shipping Interest of California" was also chosen for discussion, and M. F. Brewer, of Sacramento, invited to address the society on this subject. On motion, the meeting adjourned.

## The State Bag Factory.

The State enterprise looking toward the cheap production of grain bags by the labor of convicts at San Quentin is progressing, and Gov. Perkins' proposition to cheapen burlaps, employ convicts, and still not come into competition with legitimate local manufacturing enterprise, will soon be put to a practical test. Those who have the enterprise in hand are quite confident that the convicts can be made self-supporting, and at the same time bagging material cheapened, which will be a merited boon to our grain growers. If everything succeeds as now anticipated, we may ere long be growing jute, and then the great drain for hags and burlaps paid to the manufacturers at Dundee and Calcutta will be stopped.

For the jute-making effort it was necessary to build new buildings, and the main part of the work was done by the convicts. A reporter for the *Chronicle*, who lately visited the prison, gives a description of the new jute factory, from which we shall take the leading points: The building is of enormous proportions, and is designed from the latest approved plans submitted as best adapted for heavy machinery running with strong vibratory motion. Its ground plan is a parallelogram for the main building, which is 265 ft. long, extreme length, and 153 ft. wide, extreme width. The floor in preparation is solidly packed and tamped with the best quality of gravel and sand, between closely-laid heavy timbers of redwood, and then cemented into a smooth, heavy concrete with Portland cement, making it as solid as if of stone foundation. The building is of one story, with 16 ft. in the clear; from the floor to the bottom of the joists above is a succession of eight-gable roofs, each of the same width and running laterally the full width of the building.

Each roof is covered with tin, and has on top a gable line of ventilators 3 ft. high by 5 ft. wide, running the entire width of the building. On the north side of each roof from the bottom of the ventilators runs a sky-light 5 ft. wide throughout the entire length of the roof. The building to begin with is framed from selected pine and redwood, and so braced and trussed according to the latest accepted plans from Dundee, Scotland, as to destroy the tendency of the machinery to vibratory motion. There are within the building, as supports, 126 massive uprights of pine, each properly fitted to cross pieces, besides being fastened firmly within the concrete, and all to be covered with tin to guard against fire.

The machines—manufactured in Leeds, England, and embracing a complete system of 100 looms, with softening, breaking, damping, twisting, warp and cop winding, splicing, dressing, measuring, sack-cutting and calender machines, total 148—are all at San Quentin in perfect order, even to minute details of extras belonging to such thorough and complicated machinery. Although the building, as just described, is independent in itself, constructed with a view to its being entirely free from vibration, it is inclosed by massive brick walls, 25 ft. in height, and with piers at each 15 ft. supporting lateral heavy timbers holding the line shafting, thus adding to the solid character of the structure. A belt chamber, to regulate the revolutions of the various lines of shafting from which the different machines are run, starts from the fly-wheel on the west side and runs the full length of the building, having a full width of 7 1/2 ft. within the building.

In addition to the main building an engine and boiler-room is being erected adjoining, with a length of 60 ft. by 40 ft. wide. The ground for the same has been excavated to a depth of 12 ft., and is being filled in with solid masonry to form a thorough support for the engine and boilers, which are of massive pattern. The motive power for this vast structure consists of four steel boilers, each 16 ft. long by 53 inches wide; a low pressure engine of 480 horse-power, having a 30-inch cylinder with a 60-inch stroke. The fly wheel drives the main belt, which has a width of 42 inches. The wheel itself is 18 ft. in diameter and has a full weight of 20 tons. The factory is expected to be in complete working order by January 1, 1882.



## NEW IMPROVED ALTHOUSE VANELESS WIND MILL.

MANUFACTURED EXPRESSLY FOR  
PACIFIC COAST TRADE.

It combines every essential to make it a First-class  
WIND MILL.

Being Perfect in Self-Regulation,

**STRONG,  
DURABLE  
and CHEAP.**

During the past two years there have been many im-  
provements made, simplifying its machinery, strength-  
ening every weak point; using only the best selected ma-  
terial and employing none but competent workmen, a

### WIND MILL

Of unquestionable superiority has been produced, SUIT-  
ABLE FOR ALL PURPOSES.

It is especially adapted to the wants of

Farmers, Stockmen, Railroads,

And all who desire a CHEAP and EFFICIENT WATER  
SUPPLY for PRIVATE RESIDENCES, FOUNTAINS,  
IRRIGATING LAWNS, GARDENS, etc

We keep constantly on hand a full stock of 10, 12, 14  
and 16 foot

VANELESS WIND MILLS

AND MAKE TO ORDER

LARGE GEARED MILLS.

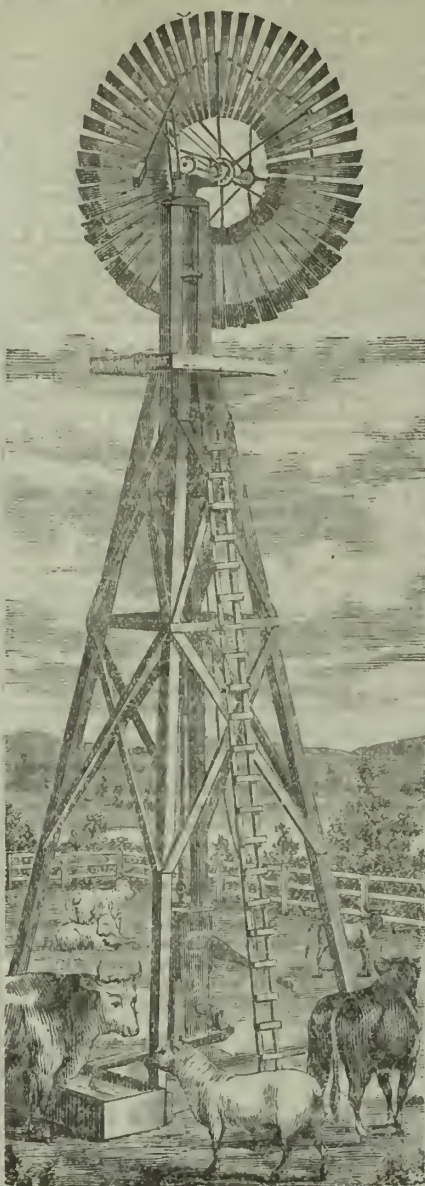
Those who are unable to erect a tank should put up a  
mill on an ordinary stock frame (as shown in the an-  
nexed cut), and by making a few troughs, an abundant  
supply of water can always be had for stock. Why  
pump water by hand, when nature has provided you  
with abundance of power to do the work? Save your strength—you can apply it  
more profitably. Buy one of our new Vaneless Wind-  
mills, and let the wind do your pumping.

We are prepared to furnish Windmills, Pumps, Pipe,  
Pipe Fittings, Hose, Tanks and Tank Frames. For full  
particulars call on or address,

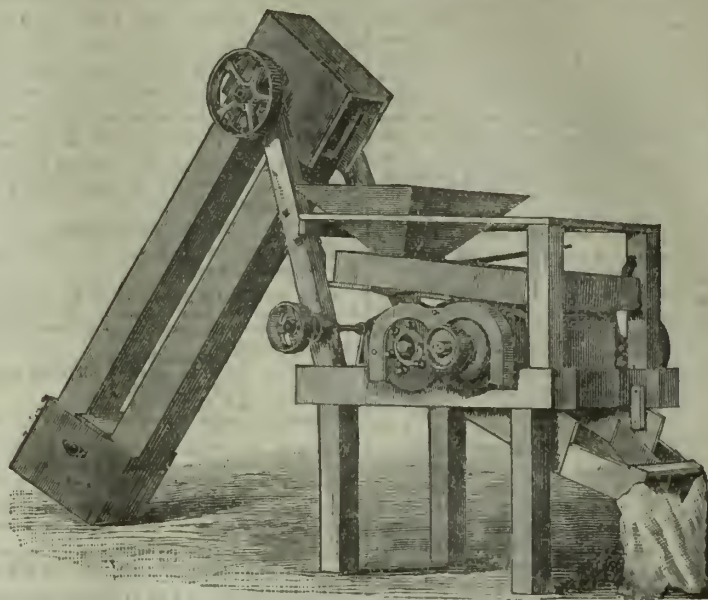
**WOODIN & LITTLE,**

No. 109 Pine St., S. F.

Catalogue sent free upon application. Write for  
Prices.



## RUSBY & MERY'S IMPROVED FEED MILL, Using the Benoit Corrugated Rollers.



RUSBY & MERY'S BARLEY CRUSHER.

More durable, crushes more grain. No danger of grain heating. It is used by the leading grain raisers in  
preference to feed ground with hurs. Sole Agents and Manufacturers for the Pacific Coast, Chico, Cal.

**H. P. GREGORY & CO.,**

2 & 4 California Street, San Francisco.

Sole Agents for the Pacific Coast for

**GOULD'S SPRAYING PUMP.**

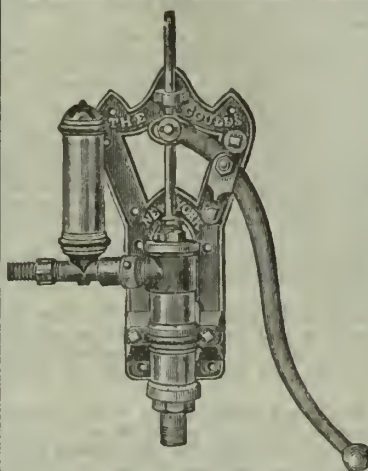
Used by Orchardists for Spraying Fruit Trees with

INSECT EXTERMINATING LIQUIDS.

This Pump has been gotten up expressly for the purpose noted.  
The working parts are constructed entirely of Brass and are not  
affected by the corrosive solutions used in them. The sale of over  
100 of these Pumps last year—principally in the Santa Clara val-  
ley is strong testimony as to their merit. Further information  
can be obtained by addressing the Agents,

**H. P. GREGORY & CO.,**

SAN FRANCISCO, CAL.



**THE LIGHT RUNNING**

**IT STANDS AT THE HEAD**

**DOMESTIC**

**THE MODEL MACHINE**

**NO. 4. FAMILY**

**OF THE AGE EXAMINE IT**

**J. W. EVANS, General Agent,**

**NO. 29 Post Street,**

**SAN FRANCISCO.**

**M. J. PAILLARD & CO.,**

Manufacturers and Importers of all Kinds of

**MUSICAL BOXES**

Of Standard Reputation. The largest and finest assortment in the city. Musical  
Boxes with changeable cylinders always on hand at low figures. The latest style  
patented, "THE INTERCHANGEABLE," patented February 11, 1879.

Repairing Musical Boxes and Furnishing Material a Specialty.

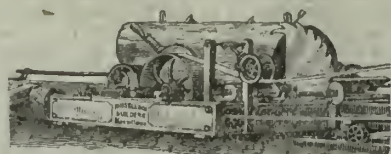
23 DUPONT STREET, SAN FRANCISCO.

A. E. JUILLERAT, Sole Agent for Pacific Coast. (Branch House of 680 Broadway, N. Y.)

**Grangers' Business Association of Cali-**  
fornia. Principal place of business, No. 38 California  
Street, San Francisco, State of California.  
Notice is hereby given that, at a meeting of the Directors  
of said corporation, held on Monday, the 27th day of June,  
A. D. 1881, an assessment has been levied of ten per cent  
upon the capital stock of said corporation, amounting to the  
sum of two and one-half (\$2.50) dollars upon each and every  
share of said capital stock, payable July 23, 1881, to Amos  
Adams, the Secretary of said corporation, at his office, No.  
38 California Street, in the city and county of San Francisco,  
State of California. Any stock upon which this assessment  
shall remain unpaid on the 24th day of October, A. D. 1881,  
will be delinquent, and advertised for sale at public auction,  
and, unless payment is made before, will be sold on Monday,  
the 21st day of November, A. D. 1881, to pay the delinquent  
assessment, together with costs of advertising and expenses  
of sale.  
AMOS ADAMS,  
Secretary of Grangers' Business Association of California.  
Office—No 38, California Street, San Francisco.

This paper is printed with Ink furnished  
by Chas Ene Johnson & Co., 509 South  
10th St., Philadelphia, and 59 Gold St., N. Y.  
Agent for Pacific Coast—Joseph H. Dorety,  
527 Commercial St., S. F.

**THE MASSILLON PONY MILL**  
STRICTLY PORTABLE.

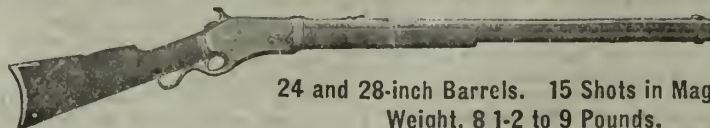


Supplies a long felt want. 100 Sold in  
Ninety Days.

Every owner of a Farm Engine located in moderately  
timbered country can find profitable employment the  
year round by purchasing one of these Mills.  
Every owner of a timbered lot is interested in having  
one of these Mills in his neighborhood. No more haul-  
ing logs to mill. All the waste saved.  
Write for Circulars and Price Lists, and addresses of  
nearest Agent.

**RUSSELL & CO., Massillon, O.**

## THE KENNEDY REPEATING RIFLE.



24 and 28-inch Barrels. 15 Shots in Magazine.  
Weight, 8 1-2 to 9 Pounds.

USES THE WINCHESTER MODEL 1873 CARTRIDGE, 44 CALIBRE, 40 GRAINS, CENTER FIRE.  
Out of 500 Glass Balls thrown from a trap, 479 were broken with this Rifle. Prices Low. Circulars on application to

**E. T. ALLEN, Pacific Coast Agent,**

416 Market St., San Francisco.

**"NEW"**

**HYDRAULIC RAM!**

The only Horizontal Ram made. Will do  
good work on light fall. Send for Circular  
**H. F. MORROW, Chester, Pa.**

**To Fish Raisers.**

I am now ready to sell Carp which were imported from  
Germany in 1872, in lots to suit. Address

**J. A. POPPE, Sonoma, Cal.**

50 All Gold, Chromo and Lithograph Cards. (No two  
alike). Name on, 10c, Clinton Bros., Clintonville, Con.

**JOSEPH F. HILL,**

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons,

OF ALL DESCRIPTIONS.

Cor Thirteenth and J Sts., Sacramento, Cal.

Repairing promptly attended to.

**Strong's Excelsior Gate.**

This Gate has taken State and National First Premiums  
wherever exhibited. Does not swing but has an end-  
ward movement, and can be opened or shut from a ve-  
hicle. Cheap, Durable and can be made of boards, pick-  
ets or wire. County or farm rights for sale. Manufac-  
tured at Mechanics' Mills, Cor. Fifth and M Sts., Sacra-  
mento. Address HENRY BRIGHTMAN, Proprietor,  
Placerville.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

COL. C. YOUNGER, Forest Home Herd, San Jose, Cal. Breeder of Short-Horn Durhams, and pure bred Cotswold Sheep. Young Bulls and Bucks always for sale. Herd took Gold Medal, 1881.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

HENRY PIERCE, 728 Montgomery Street, S. F. Jersey Cattle, bred from importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted butter strains on the Island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound butter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

PETER SAKS & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

M. WICK, Oroville, Butte County, Cal. Breeder of Thoroughbred Cattle, Short-Horns. Young Bulls and Heifers for sale at all times of the year.

R. J. MERKELEY, Sacramento, Cal. Breeder of Short-Horn Durhams and Norman-Percheron horses.

GEO BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

R. NOELL, Grass Valley, Nevada Co., Cal. Breeder and Importer of Thoroughbred Jerseys.

R. McENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

## HORSES.

HENRY MILLER, San Francisco, Cal. Breeder of Thoroughbred Norman Horses of the Stock Imported by Mr. Perry, of Illinois, took First Premium at San Jose Fair, 1880.

P. J. SHAFTER, Olema, Marin Co., Cal. Breeder of choice Jerseys, bred from better strains. Hambletonian horses by the Silver Gray Stallion, "Rustic," remarkable for size, speed, and kind disposition.

J. R. ROSE, Lakeville, Sonoma Co., Cal. Breeder of Thoroughbred Devons, roadster horses and Percheron draft horses.

E. A. SACKRIDER, 325 Eleventh St., Oakland, Cal. Importer of Norman-Percheron horses. Horses on hand and for sale at reasonable terms.

W. A. MUNNION, Dixon, Solano Co., Cal. Owner and Breeder of the celebrated Jack, "John Henry." Took First Premium State Fair, 1881, also Percheron Half breeds.

## SHEEP AND GOATS.

JOHN S. HARRIS, Hollister, Cal. Breeder of Thoroughbred registered Goats. Took Eight Premiums at the State Fair of 1880. I had one Buck at the State Fair with staple 16 inches long. Correspondence solicited.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

F. FULLARD, Woodland, Yolo Co., Cal. Breeder of Thoroughbred Spanish Merino Sheep.

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MRS. L. J. WATKINS, San Jose, Cal. Premium Poultry, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rock, Pekin Ducks.

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ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. WAITE, Brighton, Sacramento Co. Breeder of Thoroughbred Berkshire Hogs and choice Imported Poultry. Took Premium State Fair, 1880 and 1881 of Leghorns (brown and white), Speckled Hamburgs, Plymouth Rocks and Pekin Ducks.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

ELIAS GALLUP, Hanford, Cal., Breeder of Poland China Swine. Stock recorded in American Poland China Record. Are descendants of the celebrated McCrary-Bismarck, bred by D. M. Magie, Oxford, Ohio. Took five First Premiums at State Fair in 1880.

50 Lovely Floral, motto, hand and bouquet chromo cards. beautiful colors, name 10c, Chas Kay, New Haven, Ct.

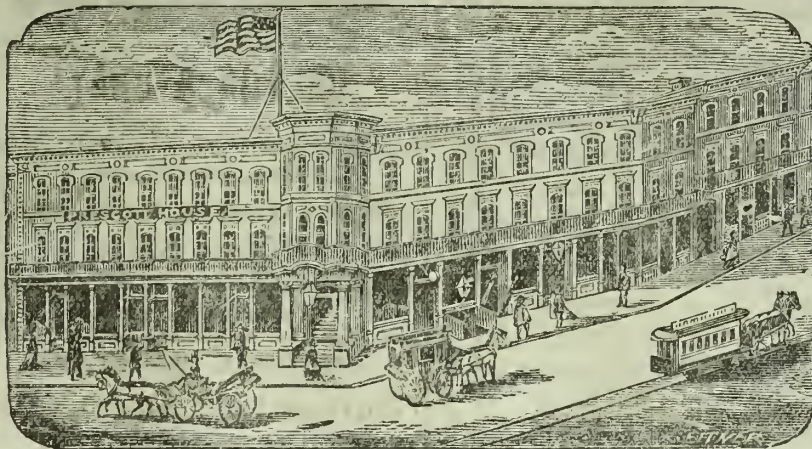
50 Landscape, Chromo Cards, etc., name on, 10c. 20 Gilt Edged Cards, 10c. Clinton & Co., North Haven, Ct.

## The Fresno Colony,

On the line of the Southern Pacific Railroad and adjoining Fresno City and the Central Colony. Has the most favorable location of any Colony, as well as other superior advantages. Abundant water secured. Land unsurpassed for Vine Raising and Fruit Culture. Send for Map and Circular, or come and examine. Address

THOMAS E. HUGHES & SONS, Fresno City, Cal.

## PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House.

O. F. BECKER, Proprietor

## HEALD'S PATENT PORTABLE STRAW-BURNING ENGINES.

The above Engine is the safest and most powerful in the market, lighter than other Engines, and no danger of explosions. An explosion of Heald's boiler has never occurred. Two sizes are made; either size will run the largest separator. All the latest improvements have been added to the boiler and engine. Is ready to stand a test any time. Is guaranteed perfect in all its parts, and will do the same work with less water and fuel than any other engine in the market. With one of

## HEALD'S BARLEY MILLS,

It will thresh and grind at the same time, all the separator can thresh. For further particulars, Address

J. L. HEALD, Vallejo, Cal.

Engine can be seen at D. M. OSBORNE & CO., 33 Market St., S. F.

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## ALTA SOAP CO.

MANUFACTURERS OF

## TOILET &amp; LAUNDRY SOAP

OF EVERY DESCRIPTION.

Office and Factory 109 & 111 Oregon St., below Front, between Washington & Jackson, S. F.

## WASHINGTON COLLEGE.

Washington Corners, Alameda County, Cal.

THE FALL TERM WILL BEGIN

Thursday,.....July 28th.

Catalogues can be had at the Bookstores of A. L. Bancroft & Co., San Francisco, and W. B. Hardy, Oakland.

For Catalogues or other particulars, address

S. S. HARMON, Principal,

Washington Corners, Alameda County, Cal.

## YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE.

JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

## GOLDEN GATE SEPARATOR.

CAPACITY—Hand-power, 15 to 20 tons; Horse-power, 50 tons per day. The Separator will remove all foul seeds and grade the wheat. For particulars address the Proprietor and Patentee,

J. C. BOWDEN, Stockton Cal.

## CAMPTON'S PATENT SINGLE FARM GATE.

Iron or Wood self-opening and shutting. No stock can unlatch. This gate always opens from you. Iron, \$10; Iron and Wood, \$30; Wood, \$20. Send for circulars to A. P. CAMPTON, Rohnerville, Humboldt Co. Fam., County and State rights for sale. Took First Premium State Fair, 1881.

## GOLDEN GATE WASHING MACHINES.

The principle used attacks every spot and place in the fabric with force, and will cleanse the most delicate fabrics without injury. The rocking motion used takes but small power, so that a youth can do a washing. Strong, Durable and Ornamental. Agents Wanted on Liberal Terms. Address JOHN D. WINTERS, Davisville, Cal.

## GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000, In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

Reserve Fund and Paid up Stock, 25,760.

## OFFICERS:

G. W. COLBY.....President  
JOHN LEWELLING.....Vice-President  
ALBERT MONTPELLIER.....Cashier and Manager  
FRANK McMULLEN.....Secretary

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JOHN LEWELLING, President.....Napa Co  
J. H. GARDNER.....Stanislaus Co  
T. E. TYNAN.....Santa Clara Co  
URIAH WOOD.....Solano Co  
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SENECA EWER.....Napa Co  
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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received.

CERTIFICATES OF DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 3 months; 5% per annum if left for 6 months; 6% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER  
Cashier and Manager.

San Francisco, Jan. 15, 1881.

## Woolsey's Steam Generator and Power and Steam Cheese Vat for Ranchmen and Dairies.

This is the Cheapest and best Steam Generator ever invented; and the cheese vat is so constructed that the temperature can be kept even and steady.

WOOLSEY'S TARPOLA GOPHER TRAP, never fails to kill all varmints when properly set. Price \$2.50. WOOLSEY'S IMPROVED LAWN SPRINKLER, Cheapest and Best in use. Price, \$6, Address JOHN S. WOOLSEY, Inventor and Manufacturer, Gilroy, Cal.

## Nash Bros.' Pulverizing Harrow and Clod Crusher.

The Best Implement for Pulverizing, Harrowing, Cultivating; using steel curved teeth, and can be regulated to any depth.

GARDNER'S HAY ELEVATOR AND CARRIER. This is Automatic and Self-regulating, raising hay or straw to any height, and carries to any desired point. It will pay for itself in one season. L. D. BURGESS, Agent, Rio Vista, Cal.

52 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet, 10c. Clinton Bros., Clintonville, Co

## Agricultural Articles.

## THE CALIFORNIA ADJUSTABLE Spring Tooth Harrow CULTIVATOR &amp; SEEDER.



As IMPROVED and PERFECTED for 1881 will work equally as well on loose or wet land as in hard or dry soil, and are what every farmer needs to destroy vegetation on the summer fallow. Will save reaping and put the land in the best possible condition for early sowing.

## LOOK TO YOUR INTERESTS

And make money by saving time and working your fallows before harvest. Our new size six-foot ORCHARD or VINEYARD HARROWS are provided with handles, rendering them as easily controlled as the Cultivators. These implements are acknowledged by all who are familiar with their work, to be the most practical for general use in the orchard or vineyard of any yet offered to the public. Manufactured only by

## BATCHELOR, VAN GELDER &amp; CO.,

Nos. 900 & 902 K Street, Sacramento, Cal

Under the original patents now owned by

D. C. & H. C. REED & CO., Kalamazoo, Michigan.

Beware of Infringements.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in

Stockton, in 1870. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to MATTESON & WILLIAMSON, Stockton, Cal.

## PLOWS! PLOWS! GANGS! GANGS!

JOHN CAINE, Sole Proprietor, Gang Plow and Manufacturing Works AND GLOBE FOUNDRY.

Improved Stockton Gangs and Reversible Molds, wholesale and retail, at reduced prices. Every one warranted. Shipments made to all ports with promptness. Iron and Brass Castings. Agent Holt & Young's Combined Header and Thresher. Address,

JOHN CAINE, Globe Iron Works, P. O. Box 95, Stockton, Cal.

## THE DAVIS IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

## The La France Steam Fire Engine.

Circulars furnished on application.

## TO BEE FANCIERS.

I am now ready to furnish PURE ITALIAN QUEENS, Colours, Nuclei, Comb Foundation, Vell, Smokers, Knives, Bee Books, etc. SAMPLE HIVE. Address for Circular

JOS. D. ENAS,

Sunnyside, Napa P. O., Cal.

## Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



## GUNS. Lowest prices ever known on Breech-Loaders, Rifles, and Revolvers. OUR \$15 SHOT-GUN at greatly reduced price. Send stamp for our New Illustrated Catalogue (B) P. POWELL &amp; SON 238 Main Street, CINCINNATI, O.



# S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 5, 1881.

The upward motion in Wheat and Barley continue. About 5c per cwt has been gained by each grain during the week, and the outlook tends toward firm views on the part of holders. There are more ships, and the freight rate is weakening, being now about 77s 6d.

### Eastern Wool Markets.

Boston, Sept. 22.—The Wool trade has been quiet, owing to the holiday on Monday, but prices are very firm, and the outlook continues encouraging. The demand continues to run largely in fine fleeces, and it is evident that at the present rate of consumption the stock of fine fleeces will run short later in the season. Medium grades are in demand. Fine declines and desirable lots of washed and combed are sought after, sales of Ohio and Pennsylvania fleeces being 35¢ for X and XX, and no wools in good condition can now be bought under these figures. Wisconsin and Michigan X fleeces have been sold at 41¢ and 42¢. Desirable lots of Michigan are generally held at 42¢ and 43¢. Medium and No. 1 fleeces are in demand, with firm sales, prices ranging from 45¢ to 47¢. Unwashed fleeces continue in demand. All grades are sought after, from carpet stock to the fine and choice medium. Sales range from 19¢ to 24¢ for low and coarse, 25¢ to 32¢ for fine, and 27¢ to 35¢ for medium, including choice lots at 33¢ to 35¢. In combed and delaine fleeces, sales ranged from 45¢ to 49¢ for fine delaine, 46¢ to 50¢ for medium and choice combed, and 40¢ to 42¢ for coarse. California wool is in request, and has been holding more freely than for some time past; pulled wools are firm and in demand, with sales low; superfine, 30¢ to 35¢; good and choice, 40¢ to 45¢; fancy lots, 47¢ to 50¢. In foreign wools there has been no movement of any importance within the last few days. Stocks of both carpet and clothing wools are considerably reduced, and small stocks now on hand have held firm.

PHILADELPHIA, Sept. 29.—Wool is firm and in demand for nearly all grades.

### The Foreign Review.

LONDON, Oct. 4.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Since Monday the weather has been mild and autumnal, and much progress has been made with late crops, but the condition in which grain is being stacked is very different. In the lower districts of Scotland and in the northern and some midland counties of England there are still some green crops, and it is not probable that these can mature. As threshing progresses the damage becomes more apparent. The offerings of native wheat are increasing, and the latest samples show occasional better condition; but the bulk is much sprouted and discolored and fetches disappointing prices. Of the foreign about one-half of the week's supply was American. The spot trade is improved in tone. White wheats command more attention than red, being scarce on the spot, and they improved a shilling on Friday, while red descriptions were only 6d dearer. Millers, however, buy within the smallest limit with increased caution. cargoes on passage are quiet and easier. The floating supply has decreased on the week. Flour is firm and coming forward more freely. Foreign is 6d to 1s dearer.

BAGS—Bags are unchanged.

BARLEY—The demand for the best for export is sharp, and heavy Bright Brewing has sold up to \$1.60.

BEANS—Red and Pink are a shade lower; other kinds firm.

CORN—Unchanged.

DAIRY PRODUCE—Fancy Butter has gone to 42¢ per lb.

CHEESE—Unchanged.

FEED—Best Wheat has reached 91¢ per ton.

FRESH MEAT—The best Beef, Pork and Mutton are higher.

FRUIT—We quoted Oranges too high last week by oversight; the rate is now \$2.50 to \$3.00 per box.

HOPS—Unchanged.

OATS—Quiet, and few sales.

ONIONS—Unchanged.

POTATOES—Slightly advanced and firm.

PROVISIONS—Active and rates advanced about 1¢ per lb on Bacon and Hams.

VEGETABLES—Green Corn and Artichokes are higher.

WHEAT—Market is active and firm. We note sales: 1,000 tons choice shipping, storage paid for the season \$1.82½, equivalent to \$1.77½ without the storage; 1,100 tons No. 1, alongside, \$1.76½; 1,000 tons do, and 15,000 sks do, Port Costs, \$1.75; 2,300 tons Nos 1 and 2, \$1.71½ to \$1.75, and 6,500 sks No. 2, \$1.67½.

WOOL—Unchanged and sales few. There is a good deal of Wool now accumulating in this city.

## Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., October 5, 1881.

FRUIT MARKET.	
Apples, bx.....	30 @ 1 00
Bananas, bch.....	2 50 @ 1 00
Cantaloupes, crb.....	4 @ 1 00
Cocanuts, 100.....	6 @ 7 00
Cash Apples.....	— @ —
Cranberries, bbl.....	12 @ 15 00
Figs, bx.....	50 @ 75
Grapes.....	50 @ 85
Limes, Mex.....	10 @ 12 00
do, Cal, box.....	— @ —
Lemons, Cal, bx.....	2 50 @ 4 00
Sicily, box.....	10 @ 12 00
Australian.....	— @ —
Nectarines.....	— @ —
Oranges, Cal, bx.....	2 50 @ 3 00
do, Tahiti.....	— @ —
do, Mexico.....	— @ —
do, Loreto.....	— @ —
Peaches, bak.....	— @ —
do, Mount'n, bx.....	— @ —
Pears, bx.....	50 @ 1 00
do, Bartlett, bx.....	— @ —
Pineapples, doz.....	7 00 @ 8 00
Plums, bx.....	50 @ 75
Prunes, German.....	75 @ 90
Quinces, bx.....	— @ —
Blackberries, ckt.....	— @ —
Raspberries, ckt.....	— @ —
Strawberries, ckt.....	4 00 @ 6 00
Sugar Cane, bbl.....	— @ —
Watermelons, 100.....	4 00 @ 8 00
DRIED FRUIT.	
Apples, sliced, lb.....	5 @ 50
do, quartered.....	4 @ 50
Apricots.....	14 @ 16
Blackberries.....	10 @ 11
Citron.....	23 @ 30
Dates.....	9 @ 10
Figs, pressed.....	5 @ 7
do, loose.....	4 @ 5
Nectarines.....	14 @ 15
Peaches.....	12 @ 14
do, pared.....	16 @ 18
Pears, sliced.....	8 @ 9
do whole.....	7 @ 8
Plums.....	3 @ 6
Pitted.....	11 @ 12½
Prunes, Cal, bx.....	9 @ 10
Raisins, Cal, bx.....	2 @ 25
do, Halves.....	— @ 25
do, Quarters.....	— @ 25
do, Eighths.....	— @ 30
Zante Currants.....	8 @ 10
VEGETABLES.	
Asparagus, bx.....	— @ —
Artichokes, doz.....	— @ 25
Beets, ckt.....	— @ 65
Beans, Lima, lb.....	— @ 5
do, String.....	1 @ 1½
do, Wax.....	— @ —
do, Fountain.....	1 @ 2
Cabbage, 100 lbs.....	75 @ 1 00
Carrots, sk.....	40 @ 50
Cauliflower, doz.....	60 @ 63
Cucumbers, bx.....	25 @ 35
Egg Plant, bx.....	— @ 50
Garlic, lb.....	3 @ 1
Greene Corn, doz.....	12 @ 18
Greene Peas, lb.....	— @ —
do Sweet.....	2 @ 2½
Gr'n Pepp'rs, bx.....	— @ 50
do, Cille, bx.....	50 @ 75
do, Lettuce, doz.....	10 @ —
Mushrooms, lb.....	— @ —
Okra, lb.....	2 @ 3
Parsnips, lb.....	— @ —
Horseradish.....	— @ —
Rhubarb, box.....	50 @ 75
do, chest.....	— @ —
Squash, Marrow.....	— @ —
fat, ton.....	8 00 @ 10 00
do Summer, bx.....	— @ —
Sprouts, lb.....	— @ —
Tomatoes.....	45 @ 50
Turnips, ckt.....	— @ 40

## Domestic Produce.

WHOLESALE.

WEDNESDAY M., October 5, 1881.

BEANS & PEAS.	
Bayo, ctt.....	25 @ 25
Castor.....	30 @ 40
Pea.....	30 @ 35
Red.....	20 @ 25
Pink.....	20 @ 25
Small White.....	30 @ 35
Lima.....	5 @ 12½
Field Peas, Vt cwt.....	50 @ 75
do, green.....	175 @ 90
BROOM CORN.	
Southern.....	3 @ 31
Northern.....	4 @ 36
CHICKEN.	
California.....	6 @ 41
German.....	6 @ 7
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb.....	39 @ 40
do Fancy Brands.....	— @ 42
Pickle Roll.....	— @ 22½
Firkin, new.....	27½ @ 30
Eastern.....	20 @ 25
New York.....	— @ —
CHEESE.	
Cheese, Cal, lb.....	13 @ 14
Cal. Fresh, doz.....	35 @ 38
Ducks.....	— @ 25
Oregon.....	30 @ 32
Eastern, by exprs.....	20 @ 27½
Pickled here.....	— @ —
Utah.....	22 @ 25
EGG.	
Bran, ton.....	— @ 20 00
Corn Meal.....	— @ 34 00
Hay.....	7 00 @ 13 00
Middlings.....	— @ 27 50
Oil Cake Meal.....	— @ 20 00
Straw, bale.....	42½ @ 45
FLOUR.	
Extra, City Mills.....	5 25 @ 5 75
do, Country Mills.....	4 75 @ 5 25
do, Oregon.....	4 50 @ 5 00
do, Walla Walla.....	4 50 @ 5 00
Superfine.....	2 75 @ 3 50
FRESH MEAT.	
Beef, 1st quality, lb.....	5½ @ 7
Second.....	4 @ 5
Third.....	— @ —
Mutton.....	3 @ 4
Spring Lamb.....	4 @ 5
Pork, undressed.....	5½ @ 6
Dressed.....	8 @ 8½
Venison.....	6½ @ 7½
Milk Calves.....	7½ @ 8
do, choice.....	— @ 8½
GRAIN, ETC.	
Barley, feed, ctt.....	1 35 @ 1 42
do, Brewing.....	1 47½ @ 1 60
Chevalier.....	1 50 @ 1 55
do, Coast.....	1 40 @ 1 45
Buckwheat.....	— @ 75
Corn, White.....	1 50 @ 1 52½
Yellow.....	1 50 @ 1 55
Small Round.....	1 50 @ 1 55
Oats.....	1 30 @ 1 35
Milling.....	1 65 @ 1 75
Rye.....	1 70 @ 1 80
Wheat, No. 1.....	1 75 @ 1 77½
do, No. 2.....	1 67½ @ 1 72½
do, No. 3.....	1 40 @ 1 50
Choice Milling.....	— @ 72½
HIDES.	
Hides, dry.....	19 @ 19½
Wet salted.....	10 @ 11
HONEY, ETC.	
Beeeswax, lb.....	23 @ 25
Honey in comb.....	14 @ 20
Extracted, light.....	10 @ 11
do, dark.....	8 @ 8½
HOPS.	
Oregon.....	— @ —
California, new.....	17 @ 21
Wash. Terr.....	— @ —
Old Hops.....	— @ —
NITS—Jobbing.	
Walnuts, Cal.....	8 @ 9
do, Chile.....	7½ @ 8
Almonds, hd shd lb.....	12 @ 14
Soft shell.....	10 @ 12
Brazil.....	12 @ 14
Pecans.....	16 @ 17
Peanuts.....	4 @ 5
Pilberta.....	14 @ 15
ONIONS.	
Red.....	— @ 75
POTATOES.	
Silver Skin.....	— @ 85
Oregon.....	— @ —
POTATON.	
Early Rose.....	75 @ 1 00
Petaluma, ctt.....	1 15 @ 1 30
Tomatoes.....	1 15 @ 1 30
Humboldt.....	— @ —
Kidney.....	— @ 1 00
Peasblow.....	— @ —
Jersey Blue.....	— @ 1 25
Cuffey Cove.....	1 25 @ 1 30
River, red.....	— @ 1 25
Chile.....	— @ —
Sweet.....	90 @ 1 00
POULTRY & GAME.	
Hens, doz.....	8 00 @ 8 50
Roosters.....	5 00 @ 6 00
Broilers.....	3 00 @ 4 25
Ducks, tame, doz.....	5 00 @ 6 00
Mallard.....	3 25 @ 3 50
Sprig.....	1 50 @ 1 75
Teal.....	1 50 @ 1 75
Widgeon.....	— @ 1 25
Geese, pair.....	1 50 @ 1 75
Wild Gray, doz.....	— @ —
White do.....	— @ —
Turkeys.....	14 @ 16
do, Dressed.....	— @ 15
Sope, Ene.....	2 50 @ 3 00
do, Common.....	1 00 @ 1 25
Quail, doz.....	1 00 @ 1 25
Rabbits.....	75 @ 1 00
Hare.....	1 00 @ 1 50
Venison.....	6 @ 8
PROVISIONS.	
Cal. Bacon, extra.....	15½ @ 16
clear, lb.....	15 @ 15½
Medium.....	15 @ 16
Light.....	16 @ 16½
Lard.....	15 @ 17½
Cal. Smoked Beef.....	14 @ 16
Shoulders.....	8½ @ 9½
Hams, Cal.....	13 @ 14
Dupees.....	17 @ 19
Whittaker.....	— @ 18
Royal.....	17 @ 19
Stewart.....	17 @ 19
Golden Eagle.....	16½ @ 18
SEEDS.	
Alfalfa.....	15 @ 17
do Chile.....	— @ —
Canary.....	4 @ 5
Clover, Red.....	14 @ 15
Pork.....	45 @ 50
Cotton.....	— @ 20
Flaxseed.....	2½ @ 3
Illemp.....	7 @ 8
Italian Rye Grass.....	25 @ 26
Perennial.....	25 @ 26
Millet, German.....	10 @ 12
do, Common.....	7 @ 10
Mustard, White.....	3 @ 4
Brown.....	1½ @ 2
Rape.....	3 @ 8
Ky Blue Grass.....	20 @ 25
2d quality.....	16 @ 18
Sweet V Grass.....	10 @ 10
Orchard.....	20 @ 25
Red Top.....	— @ 15
Hungarian.....	8 @ 10
Lawn.....	30 @ 40
Mesquit.....	10 @ 12
Timothy.....	10 @ 11
TALLOW.	
Crude, lb.....	6½ @ 7
Refined.....	9 @ 10
WOOL, ETC.	
SPRING—1880.	
Oregon, Eastern.....	24 @ 26
do fine, heavy.....	21 @ 23
do Valley.....	27 @ 30
SPRING—1881.	
San Joaquin, choice.....	17 @ 18
do fair.....	14 @ 16
Southern Coast.....	17 @ 18
Silvado Burry.....	15 @ 16
Burry and Seedy.....	15 @ 16
Northern choice.....	25 @ 26
Burry or Seedy.....	20 @ 22
Sonoma, Mendocino, Humboldt, fancy.....	23 @ 30
FALL—1881.	
San Joaquin.....	11 @ 14
do, Lamb.....	13 @ 15
Southern Fall.....	11 @ 13
Northern, free.....	17 @ 20
do, defective.....	14 @ 16

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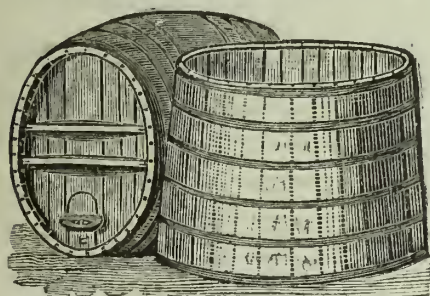
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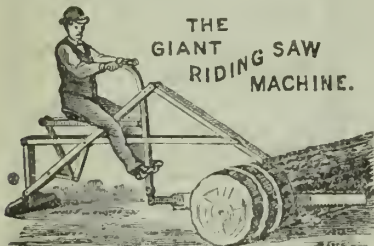
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Extract of tobacco, free from poison. Prepared by the Italian Government Co. Cures thoroughly THE SCAB OF THE SHEEP.

And is an excellent Sheep Dip. The best and cheapest remedy known for curing the Scab.



SAN FRANCISCO, May 24, 1881. MESSRS. CHAS. DUISENBERG & CO., San Francisco: I have used one can of the Italian Sheep Wash, as a test on my ranch in Stanislaus county, according to directions, and find it to be a sure cure for scab, and shall continue to use it in future, so long as I find it to come up to sample, for the reason I find it cheaper than other preparations; no trouble nor expense in preparing it for use. The principal ingredients being tobacco, it gives greater growth to wool than other dips, and I find it to be all that is claimed for it. Where sheep are passed through the vat in the usual speedy way, I suggest the use of tepid or warm water but am of opinion that if allowed to remain in longer, cold water will do as well.

WM. L. DICKENSON.

CHAS. DUISENBERG & CO., Sole Agents. 314 Sacramento Street, San Francisco.

## ERADICATE NOXIOUS INSECTS.

Lewis's Exterminator is efficient in mixing and applying any solution. London Purple, Paris Green and Blue Stone are the safe, sure and leading remedies for the eradication of insects and fungus.

Lewis's Hand Force Pump throws spray or a solid stream of water over and into foliage, and cleanses from Plant Lice, Scale-Bug and Insect life, leaving the foliage brilliant in color and healthy in tone.

It is an excellent Greenhouse Syringe to drive minute insects from Strawberry and Pot Plants. As a Fire Extinguisher it is ever ready, successful, simple, cheap, durable. Satisfactory trial sought. Orders solicited by D. N. DILLA.

825, Twenty-Ninth Street, Oakland.

## LAUREL RANCH!

Thoroughbred

## Spanish Merino SHEEP.

We offer for sale 400 HEAD OF YOUNG EWES AND RAMS. Prices always reasonable and terms liberal. Quality and condition superior to any flock in this State.

J. H. STROBRIDGE, Hayward, Alameda Co.

E. W. PEET, Agent.

## Harvey's Hot-Water Radiator

For Warming and Ventilating Private Residences and Public Buildings.

Introduced into TEN PUBLIC BUILDINGS and over FORTY PRIVATE RESIDENCES the past year with satisfactory results. Less attention and less fuel required to heat 4 rooms with this system than would warm 1 room with the open grate. Highest testimonials. Address

C. D. HARVEY,

213 Mission St., bet. Main and Beale, S. F. Residence, 1227 Eleventh Avenue, East Oakland.

**JAMES T. MURPHY,**

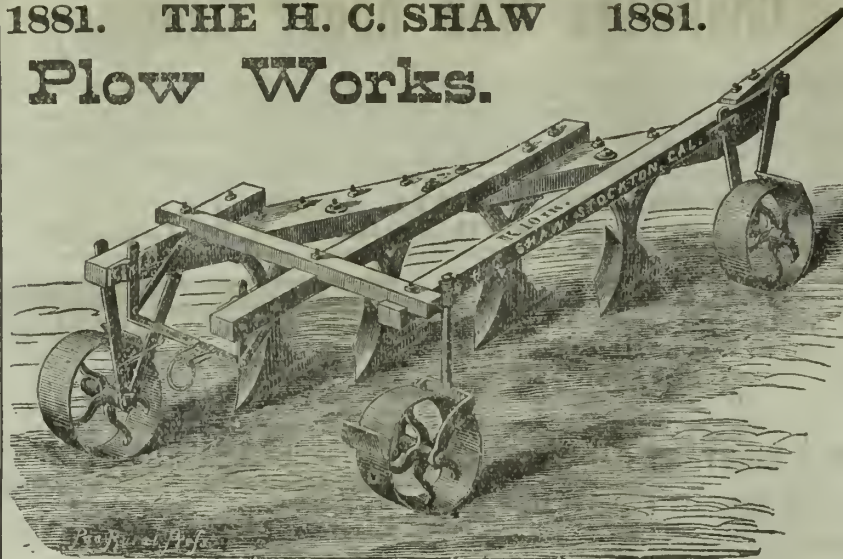
Jefferson Block - - - San Jose, Cal.

## Grain Bought and Sold.

**MONEY** To Any Amount **LOANED** On Grain Receipts.

# 1881. THE H. C. SHAW 1881.

## Plow Works.



## GANG PLOWS AND EXTRAS.

No. 201 and 203 El Dorado street, - - - - - Stockton.

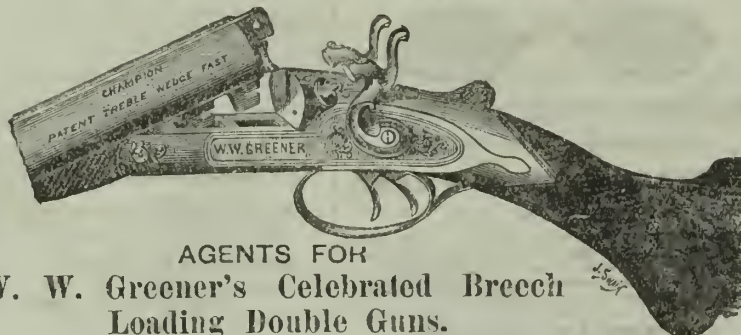
## THE STOCKTON GANG PLOW,

Over 2,000 of H. C. Shaw's Improved Patent Stockton Gang Plows Sold in Five Years

Cahoon and Gem Seed Sowers, Harrows, Etc. Extras for all Plows and Machines I have sold for the past TWENTY YEARS in this valley. Send for Circular and price list. Always on hand a full stock of Single Plows. Have used these Gangs for over 15 years. Now using 70. Adapted to all soils.—JOHN W. JONES, Atlanta, San Joaquin Co., Cal.

# Nathaniel Curry & Bro.,

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## W. W. Greener's Celebrated Breech Loading Double Guns.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.

Ammunition in quantities to suit A liberal discount to the trade. Price List on Application

## C. D. LADD,

821 Kearny Street, - - - - - San Francisco, Cal.

SOLE AGENT FOR THE PACIFIC COAST FOR

## THE BALLARD RIFLE, AND MARLIN'S NEW BALLARD REPEATER.



A FULL LINE OF WINCHESTER and KENNEDY, SHARPS, BALLARD, and REMINGTON RIFLES.

Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to suit. Liberal discount to the trade. Send for Special Price List for Marlin's New Repeater and Ladd's Improvement on the Kennedy Rifles.

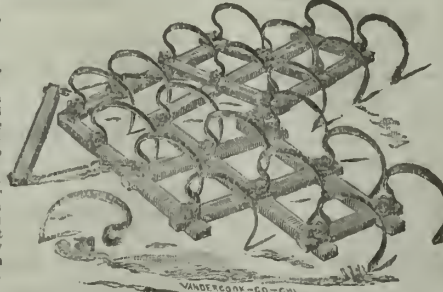
SEND FOR 1881 PRICE LIST.

## THE PATENT IMPROVED SPRING-TOOTH HARROW!

The Best Harrow Ever Put in the Field!

The accompanying cut represents our Improved Adjustable Spring-Tooth Harrow

—the Latest and Best in the Market. It has all the good points and none of the defects of other Harrows. It is Very Easy to Adjust. It does not "Tear". The strain is taken on a spring tooth which is often very great. If a tooth is stuck in a Wooden chair or seat it will soon wear the work loose; it cannot be used in place very long. This tooth rests in an iron chair and cannot wear nor move sideways.



It does not Clog. The Teeth are Made of the Best of Spring Steel and Tempered in Oil. The Draft is Lighter than any other Spring-Tooth Harrow.

The Spring-Tooth Harrow Pulverizes and works up the ground in a wonderful manner, and prepares the soil admirably for a crop, better than any other tool.

We also furnish, at small cost, an adjustable Steel Shoe which can be readily attached, without any extra bolts, by using two or more of which the Harrow will be prevented from imbedding itself into the softest, dry, or wet land.

Send for Circulars and Price List.

J. A. MILLER & CO., Agents for Pacific Coast, 201 Market St., San Francisco, Cal.

**Mason and Hamlin Organs.**

Wholesale and Retail Agents

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Post Street, near Dupont, - - - SAN FRANCISCO

**Silos, Reservoirs, Head Gates Etc.**

E. L. RANSOME, 402 Montgomery St., S. F.

ARTIFICIAL STONE.

Send for Circular

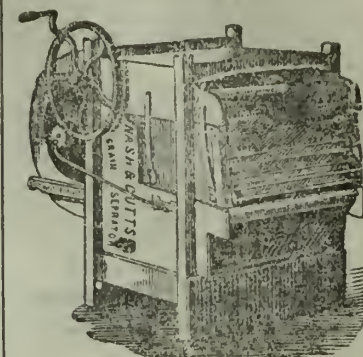
And Still We Take the Lead.

—THE—

## Nash & Cutts' Grain Cleaner

Improved Again for 1881.

Five sizes, warranted to clean from 50 to 200 bushels per hour, perfectly. The fact that we have taken EVERY Diploma that has been offered by the State Agricultural Society for 11 years proves that we have the best.



THE IMPROVED NASH & CUTTS' GRAIN CLEANER. (TRADE MARK.)

OUR NEW WHEAT GANG,

Composed of perforated zinc and patent rolled wire. The zinc is not punched as of old, with all holes of a size, but they grow gradually larger as they reach the lower or out end of the Gang, thus allowing the wheat to pass through more readily. The patent rolled wire that we use is more instrumental to the efficiency of the cleaner than one would at first suppose; being rolled after it is wove, it is perfectly smooth, thus allowing Barley and Oats to run over more rapidly, while the Wheat being smooth will pass through readily, thus increasing the capacity both in speed and quality. Notwithstanding the extra expense incurred by the purchase of this patent Wire and Zinc, the prices are reduced this season, thus giving the farmers the benefit of this new combination.

Farmers and Dealers are particularly cautioned against spurious imitations. Be sure that the one you buy bears this Trade-Mark: "THE IMPROVED NASH & CUTTS' GRAIN CLEANER." All others are frauds. See that it is manufactured by "H. D. NASH & CO., Sacramento, Cal."

We mention the above for the protection of our customers who want the GENUINE. Every Cleaner fully warranted. Prices at Factory:—No. 1, \$30; No. 2, \$40; No. 3, \$50. For further particulars address

H. D. NASH & CO.,

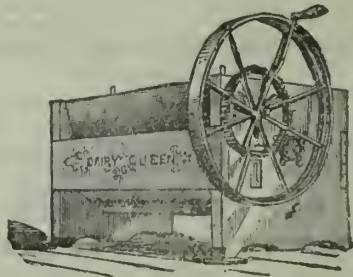
906 K Street, Sacramento, Cal.

Sole manufacturers of "The Improved Nash & Cutts' Grain Cleaner" on the Pacific Coast. We also make a Cleaner to attach to Threshing Machines that will clean ALL any machine can thresh.

## "THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars, address the Inventor and Sole Patentee,

GEO. W. FREEMAN,

Rocky Point, Sierra Co., Cal.

Or Jas. L. Haly, Janesville, Lassen Co., Cal.

## Holstein Cattle.

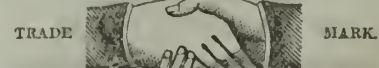
CLYDESDALE AND HAMBLETONIAN HORSES.

The largest and deepest milking herd of Holsteins in the world. 225 head, pure bred, mostly imported, males and females of different ages.

A Large and elegant stud of imported Clydesdale Stallions and Mares of all ages. Hambletonian Stallions and Mares of superior breeding. Personal inspection invited. Separate catalogues of each class, and milk records of cows mailed free on application. All inquiries promptly answered. State that you saw this advertisement in the PACIFIC RURAL PRESS.

**SMITHS & POWELL,**

Lakeide Stock Farm, Syracuse, N. Y.



## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.60 per gallon. For directions and testimonials apply to **FALKNER, BELL & CO.,** Sole Agents, 430 California Street, S. F.

**POMONA NURSERY.** Oriental and Hybrid Pears, Manches'rr, Bidwell, and Mt. Vernon, Strawberries, Raspberries, Blackberries, Flowers and Fruit Trees. Catalogues free. WM. PARRY, Parry P. O. New Jersey.



## Seeds, Plants, Etc.

**R. J. TRUMBULL & CO.,**  
Growers, Importers, Wholesale and  
Retail Dealers in



FLOWERING PLANTS, BULBS, FRUIT AND OR-  
NAMENTAL TREES, ETC. FANCY WIRE DE-  
SIGN, GARDEN TRELLISES, SYRIN-  
GES, GARDEN HARDWARE, ETC.

FREE TO APPLICANTS.—OUR DESCRIPTIVE ILLUS-  
TRATED CATALOGUE OF SEEDS, TREES, PLANTS, ETC.

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**B. K. BLISS & SONS,**  
Importers, Growers and Dealers in Garden, Field and  
Flower Seeds, Dutch Bulbous Roots, Summer Flower-  
ing Bulbs and Garden Requisites of every description.  
Catalogues mailed to all applicants. Address  
B. K. BLISS & SONS, 34 Barclay Street, N. Y.

## PEPPER'S NURSERIES.

Established in 1858.

For sale, all kinds of Fruit Trees, Vines and Fruiting  
Shrubs raised without irrigation. Also, a general assort-  
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ding Plants in great variety. Send for Catalogue and  
List of Prices. Address **W. H. PEPPER,**  
Petaluma Sonoma County, Cal.

## BELLEVUE NURSERY,

LOS ANGELES, CAL.

20,000 Pear trees, mostly Bartlett. 15,000 June budded  
Apricot trees, 1 to 2 1/2 feet high. Also other fruit trees  
for sale.

Parties wanting trees would do well to engage them  
early. For Price and Particulars, Address

**MILTON THOMAS.**

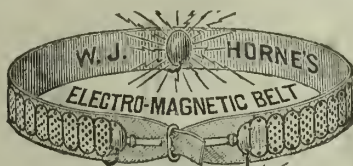
## TURNER'S NURSERY,

San Bernardino, Cal. - - - P. O. Box 275.

## 60,000 HALF-YEARLING TREES,

(or June Budded.)

For sale coming season, from one to three feet high, con-  
sisting of leading varieties of Peaches, Nectarines, and  
Apricots, also General Nursery Stock.  
My buds are taken from bearing trees and true to name.  
Prices on application to **DAVE TURNER,** or to **K. F. CUNNINGHAM,** Riverside, Cal.



Patent, Nov. 11, 1879.  
Patent, Nov. 9, 1880.  
Medical Electricity.

**HORNE'S ELECTRO-MAGNETIC BELT.**  
(The Only Genuine.) Received 1st Premium State Fair.  
Electro-Magnetic Belt, New Style, \$10. Electro-Magnetic Belts,  
Extra Appliances, \$15. Electro-Magnetic Belts, 9 Improvements, \$25.  
GUARANTEED ONE YEAR. BEST IN THE WORLD.

Will positively cure without medicine—Rheumatism, Paralysis,  
Neuralgia, Kidney Disease, Impotency, Rupture, Liver Disease,  
Nervousness, Dyspepsia, Spinal Disease, Ague, Piles and other  
diseases. Send for illustrated catalogue, free. Also,  
**RUPTURE GUARANTEED, RELIEVED,**  
or Cured. Send for Illustrated  
Catalogue. Hundreds of cures.  
**W. J. HORNE, Prop. and Manufr.**  
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FIRST PRIZE State Fair  
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Fair, awarded to the **CALIFORNIA ELASTIC TRUSS**  
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ES. Address or call on **CALIFORNIA ELASTIC TRUSS CO.,** 702  
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## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento  
ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

Communications Promptly Attended to.  
**COOKE & SONS** Successors to **COOKE & GREGORY**

## SHOPPING

Done in SAN FRANCISCO for Ladies and Gentlemen,  
and COMMISSIONS OF ALL KINDS EXECUTED with  
judgment and taste especially in

Dry Goods, Fancy Work and Music.

Samples sent free. Circular and references given on  
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1521 Washington St., S. F.

50 All Gold, Chromo and Lithograph Cards. (No 2  
alike) Namson, 10a. Clinton Bros., Clintonville, Con.

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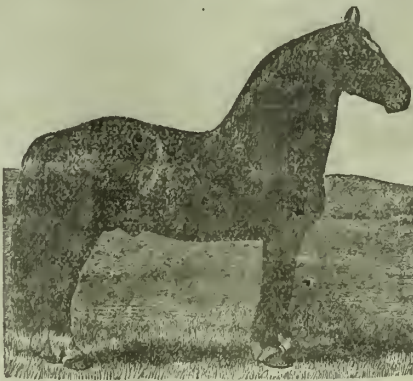
## H. H. H. Horse Liniment.

THE  
MOST EFFECTUAL!

As a Horse Medicine

It is Superior to any Liniment ever invented. For RINGBONE, SPRAIN, SWEENEY, CALLOUS LUMPS, And OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days if not cured repeat as at first.

SPRAINS, STIFF JOINTS, BRUISES, WIND GALLS, and all slight ailments, apply a small quantity so as not to blister. SADDLE SORES, CUTS, and all other sores where the skin is broken, mix the Liniment half and half with any kind of oil and apply in moderation.



THE BEST!

AS A  
FAMILY REMEDY.

We are safe in making the bold assertion that no Liniment exists that will compare with the H. H. H. in curing the following diseases: RHEUMATISM, Apply freely to the parts affected, and take internally from 10 to 20 drops in from 2 to 3 tablespoonfuls of water 3 times a day. DIARRHŒA, dose, as above. COLIC, same as above, repeated every half hour until relieved. TOOTHACHE, saturate a piece of cotton and put it in the tooth, repeat in 15 minutes if not relieved. All other aches and pains apply freely to the parts affected.

Price—small size, 50c.; Medium, \$1; Large, \$2.50.

**H. H. MOORE & SONS, Proprietors,**  
DRUGGISTS, - - - - - Stockton, Cal.

## CEO. F. SILVESTER,

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Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives. Green House Syringes, Etc.

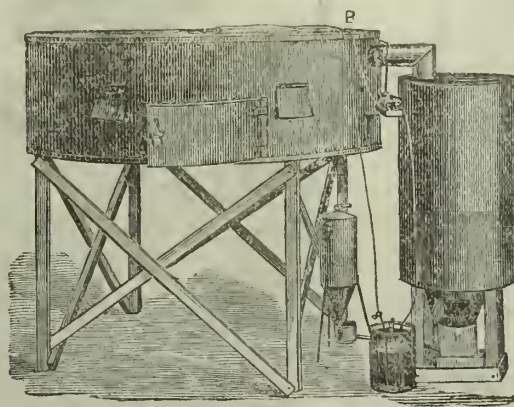
Seed Warehouse, 317 Washington St., San Francisco.

## SEEDS!

**ALBERT DICKINSON,**  
Dealer in Timothy, Clover, Flax, Hungarian, Millet, Red-Top, Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, etc.  
**POP CORN.**

WAREHOUSES:  
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Office: 115 Kinzie St.  
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Gold Medal Awarded  
**AXFORD'S**

## National Incubator.

AT TORONTO EXHIBITION, 1879.

Thirty-Two Public Exhibitions.  
Long Looked for, Come at Last!  
The Baby National Incubator  
Holds 100 Eggs and Costs

**ONLY \$25.**

Self Regulating, Durable, Practical and easily Understood. Will Hatch where none other will. Need not "Regulate" a room to insure success.

**AXFORD & BRO.,**  
45th St. & Langley Av., Chicago.  
ILLINOIS.

## GRANGERS'

## Business Association Warehouses

THE GRANGERS, CONTRA COSTA CO.

Principal Office—No. 38 California Street, San Francisco.

The Association is now prepared to receive Grain on consignment for sale and storage in its warehouses at Port Costa, on which advances will be made at a low rate of interest, and at the usual rates of storage. Cars can now be run on the wharf and the grain unloaded directly into warehouses. **AMOS ADAMS, Business Manager.**

## GRANGERS' BUSINESS ASSOCIATION

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No. 106 Davis Street, one Door from California, San Francisco.

Consignments of Grain, Wool, Dairy Products, Dried Fruits and other Produce solicited, and advances made on the same. Orders for the purchase of Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, Etc., solicited and promptly attended to.

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54 All Gold, Chromo and Lithograph Cards, no 2 alike.  
name on, 10 cts. C. DePuy, Syracuse, N. Y.

50 Lithographed Chromo Cards, no 2 alike 10c. Name  
in fancy type. Conn. Card Co., Northford, Ct.

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## FARMING LAND

For Sale in large or small tracts, on easy terms, in  
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Goods Crops every Season without Irrigation

Farms, Stock Ranches, Dairy Farms, Fruit Farms,  
Vineyards, Chicken Ranches and homesteads of every  
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sale or rent on reasonable terms. State requirements  
and obtain suitable particulars from the Real Estate

**EXCHANGE & MART,**  
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## The Famous "Enterprise,"

**PERKINS' PATENT**  
Self Regulating  
**WIND MILLS,**

Pumps & Fixtures.

These Mills and Pumps are  
reliable and always give sat-  
isfaction. Simple, strong and  
durable in all parts. Solid  
wrought iron crank shaft with  
double bearings for the crank  
to work in, all turned  
run in babbitted boxes.

Positively self regulating  
with no coil spring or springs  
of any kind. No little rods,  
joints, levers or balls to get  
out of order, as such things  
do. Mills in use six to nine years in good order now, that  
have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in  
use. All warranted. Address for circulars and infor-  
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**HORTON & KENNEDY,**  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.  
San Francisco Agency, **LINFORTH, RICE**  
& CO., 323 & 325 Market Street.

Price Reduced to \$1 Per Gallon.

## MOORE'S SULPHUR DIP,

THE BEST AND CHEAPEST PREPARATION FOR  
THE CURE OF SCAB.



The General Health and Condition of the  
Sheep Promoted by its Use.  
Non-Poisonous.

One Gallon (making 60 gallons of dip) is sufficient to  
dip 120 to 150 newly shorn sheep. Cost of dipping will  
not exceed one cent per sheep. Manufactured by

**C. E. WILLIAMS & CO., Stockton, Cal.**

Sold by all Wool Commission Merchants in San  
Francisco.

We call attention to following testimonial from **J. H. Kirkpatrick,** breeder of fine sheep:

**C. E. WILLIAMS & Co., Stockton, Cal., Aug 26, 1881.**  
I have used **Moore's Sulphur Dip** in dipping my band of thor-  
oughbred Merinos, which are admitted to be very hard  
to cure of scab, owing to the density of fleece, and I  
am free to say that the Sulphur Dip will certainly er-  
adicate the disease when properly applied. Moreover it is  
the cheapest of the prepared dips of which I have any  
knowledge, and being a certain cure it deserves to come  
into general use as the standard remedy.  
Yours Truly, **J. H. KIRKPATRICK.**

## Whitmore's Improved Gear,

ADAPTED TO

Buckwagons, Buggies and Light Business  
Wagons.

Weight carried to the extremities of the Axles. Long,  
soft, double sweep springs. No side sway or pitching  
motion. It is jointed, relieving all strain.

**E. WHITMORE, MAKER,**  
1507 Polk St., San Francisco, Or Charles Whitmore,  
Traveling Agent for the Pacific Coast.

GOLD MEDAL AWARDED

the Author. A new and great Medi-  
cal Work, warranted the best and  
cheapest, indispensable to every  
man, entitled the "Science of Life or  
Self-Preservation," bound in finest  
French muslin, embossed, full gilt,  
300 pp. Contains beautiful steel en-  
gravings; 125 prescriptions. Price,  
only \$1.25, sent by mail; illustrated  
sample, 6 cents. Send now. Address  
Peabody Medical Institute or Dr. W.  
**H. PARKER, No. 4 Bullfinch street**  
Boston.



## CERTIFICATE OF PARTNERSHIP.

We, the undersigned, hereby certify that we compose  
the partnership transacting business under the firm  
name of **Robinson & Hallidie.**

The principal place of business is the City of San Fran-  
cisco, in the State of California, and the full name and  
respective place of residence of the partners are signed  
hereto,  
**ANDREW J. ROBINSON,**  
**ANDREW S. HALLIDIE.**



# THE GORHAM SEEDER & CULTIVATOR COMBINED,

Is constructed upon the theory that by placing the seed-droppers the greatest practical distance apart, it not only increases the size of the seed-cups, which insures greater accuracy in measuring the seed, but also enlarges the passage through which the grain flows to the ground, thereby rendering the machine less liable to clog. The seeding device consists of a series of seed wheels, or droppers, placed two feet apart, and attached to a shaft that runs through the center of the box. To each of the seed-wheels five cups are attached; each wheel is enclosed by partitions on either side that are open at the bottom to admit the grain the grain from the seed-wheels, distributes it equally over every square foot of land, yet being so open in its throat as to pass straw and other foul substances without clogging.

The quantity sown is regulated by different sized gears, placed at the end of the box, which gives the seed-wheels different required motions. Grass seed, clover seed, and other small seeds are sown by inserting a supplemental cup in the grain cups closing the grain orifice, leaving an orifice proportionally large for the smaller seeds, when the same series of gears are used to regulate the quantity per acre. Thus it is the finest seeds as well as the coarsest grains are distributed with the greatest accuracy.

The Cultivator Attachment of our Seeder is on the independent slip-tooth principle, with a new device, very simple and effective, that eight years' use proved perfectly reliable. Our plan for attaching the cultivator beams to the draw-bar with wrought iron straps not only strengthens the beams, but prevents them from swinging sidewise, holding them steadily to the work.

The cultivators can almost instantly be detached if occasion requires. The weight of the combined machine is 500 lbs., and is the lightest draft machine in use, and all say is easily handled by any ordinary team in any kind of soil. We here append our price list.

8-ft. Single Gear, with two horses, will seed 8 acres per day. Weight, 580 lbs. ....	\$100.00	12-ft. Double Gear, with four horses, will seed 35 acres per day. Weight, 1,255 lbs. ....	\$160.00
8-ft. Double Gear, with two horses, will seed 15 acres per day. Weight, 730 lbs. ....	125.00	14-ft. Double Gear, with six horses, will seed 40 acres per day. Weight, 1,400 lbs. ....	175.00
10-ft. Double Gear, with four horses, will seed 25 acres per day. Weight, 1,010 lbs. ....	140.00		

## GORHAM COMBINED SEEDER AND CULTIVATOR.

to the wheel. Now, when the seed-wheels are caused to revolve, the cups are drawn upward through the grain, each taking a given quantity, and as it passes around pours it on the beveled surfaces in front of the cups, deflecting the seed into troughs on either side, where it runs in a continuous stream upon the scatterer below.

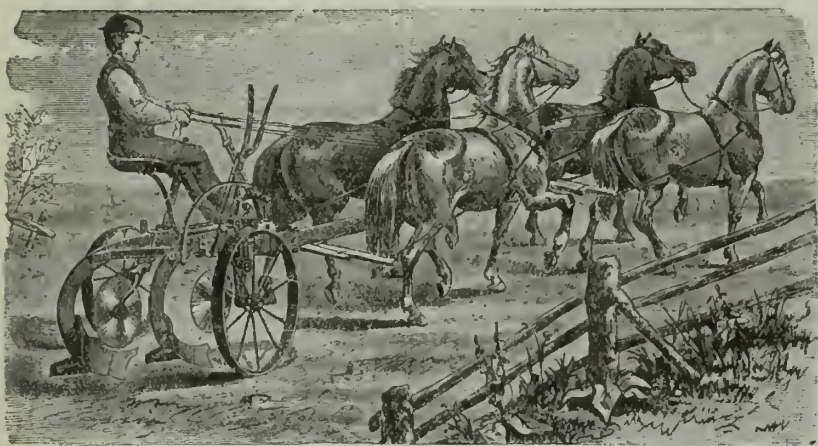
It will be readily understood by the above description that the essential principle is the *measuring and pouring* of the seeds, and that this result is produced by a device that cannot cut or injure seed in its passage to the ground.

The scatterer is a distinct fixture that receives



San Francisco. **BAKER & HAMILTON,** Sacramento.

## THE GARDEN CITY GANG PLOW.



THE ONLY SUCCESSFUL IMPORTED GANG PLOW

Ever Brought to the Pacific Coast.

Over 300 Sold in California in 1880.

We will put this Plow in the Field against any Gang Plow made. No Extra Charge for Leveling Lever or Tongue Shifter.

SEND FOR OUR NEW ILLUSTRATED PRICE LIST.

LIVE AGENTS WANTED in every Town, City, Village and Hamlet on the Pacific Coast. No Dead Men need apply.

OUR LIST COMPRISES:

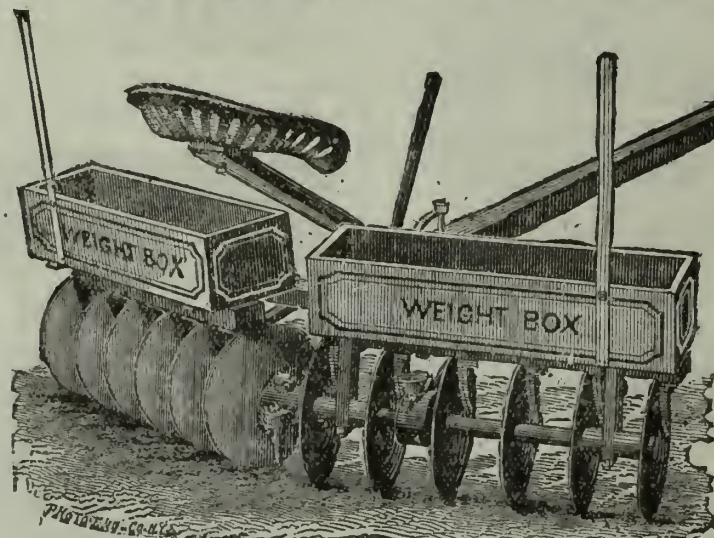
- The Garden City, 10 inch and 12 inch. Two Gang Plows.
- The Garden City, 14 inch and 16 inch. Single Sulky Plow.
- The Frust & Bradley 14 inch and 16 inch Friction Sulky Plows.
- The Garden City Steel. Hand or Walking Plows—all sizes.
- The Garden City Chilled Plows—all sizes.
- The Diamond Iron Plows—all sizes.

We carry a Greater Variety, and the Largest Stock of Plows on the Coast, Making Ours the

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It leaves no ridge at the center.  
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It has a wrought iron frame.  
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It is easier to ride.  
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It can be made rigid if desired.  
Its journals are protected from dirt.

**REMEMBER**

That this is the only Harrow that has the right to use a LEVER to Change the angle, or that has the Axles of the Gangs hinged together, or that has flexible joint bearings On The Axles. Use no other, as you can see at a glance that this Harrow has the Right Principle.  
Many Circulars the size of this could be filled with Testimonials from parties who have used this Harrow, but space allows the insertion of but few. ADDRESS

**GEO. A. DAVIS, 327 and 329 Market St., S. F.**



# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, OCTOBER 15, 1881.

Number 16

## Scale Insects in California.

We have received advance sheets of the report of Matthew Cooke of Sacramento, Chief Horticultural Officer, concerning certain insects injurious to orchards in this State, and various effectual ways of destroying them. This report of Mr. Cooke is a pamphlet of 72 pages, fully illustrated. It is straightforward in its style, the manifest intention of the author being to give necessary information for the detection of the pests by all who can read plain English, and then he names at once the treatment thus far found best to arrest and remove them. Many of the insects described are new to science, some having been gathered by Prof. Comstock during his visit last year, and others not yet specifically determined. Many things are yet to be learned of them. It is fortunate that the announcement of their evil deeds has been made thus early, for while the entomologist is studying, the orchardist can fight; and perchance, by the time the entomologist has encompassed the natural history of the pest, the orchardist will have him under foot. This will be a marked contrast to the usual course with insects, for in the older treatises on insects, one can learn almost everything about an insect except the way to kill it. Economic entomology is comparatively a recent achievement, and even in its youth it is laurel-crowned. We are glad that California is now pressing forward most vigorously in a practical use of entomological research, and if her amateur efforts should not fill all the conditions required by the highest science of insects, she is accomplishing wonders in the practical labor of checking their increase and devastation, and this is the more important industrial consideration at present. Mr. Cooke is the most important contribution ever made to the economic entomology of the State, and his long and patient investigations, both before and since he was clothed with official vestments, have been, and are, of incalculable value to our great horticultural interest.

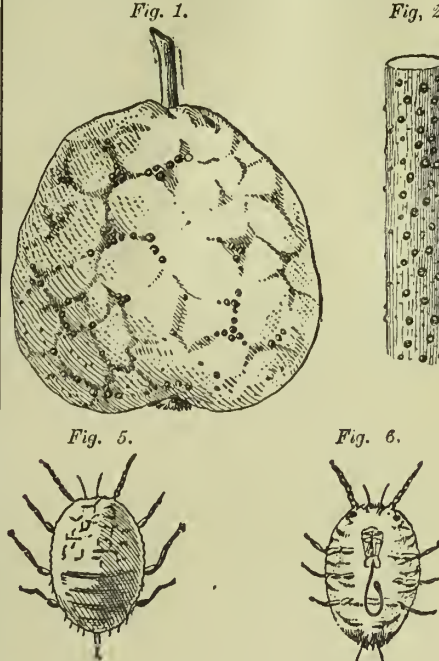
We shall from time to time present to our readers parts of the report of Mr. Cooke, until it shall be all laid before them. It would be well if every local journal in the fruit regions would do the same, for if the public is thoroughly aroused there is the more hope of a universal warfare against the pests, which alone can annihilate them. We chose at this time to reproduce the engravings and descriptions of a group of scale insects which have already proved grievous foes of the orchardist. The drawings were all made from specimens now in Mr. Cooke's collection:

**San Jose scale insect: *Aspidiotus perniciosus*, Comstock.**—This species of scale insect infests the apple, pear, peach and plum trees, and is found on the bark, foliage and fruit. It is very prolific and destructive. Fig. 1 shows the appearance of a pear infested by this species of insect. Fig. 2, the appearance of a branch infested by this species of scale insect. Fig. 3 represents the matured female. The females are wingless, and in their last state deposit their eggs and very soon perish, their dried up bodies serving as a covering to the eggs. In speaking of the female of the *Coccidae*, Westwood says:

"That, without referring to their singular habits, we find some of them, on arriving at their last state, are not only wingless, but also footless and antennæless, and in which even all appearance of annulo-e structure is lost—the creature in fact becoming an inert mass of animal matter. A slender setæ arising from the breast, and thrust into the stem, or leaf, or fruit on which the animal is fixed, being the only external appendage to the body."

Fig. 4, male insect (perfect) winged. Fig. 5, larva; Fig. 6, under side of larva. Description: Scale, about 1-16 of an inch in diameter (scale of male insect elongated); color, center yellow; margin, dark mottled gray; eggs, 30 to 50 produced by each female; color, yellow; form, ovate; larva, six legs; two antennæ, six-jointed; two anal setæ; body, color, yellow; form, oval. Male insect (perfect) winged—wings nearly transparent; body, color, light amber, with dark brownish markings; antennæ, ten jointed (hairy), and stylet nearly as long as body. Pupa: Figs. 7 and 8. Female (perfect), color, light amber-yellow (as seen under microscope).

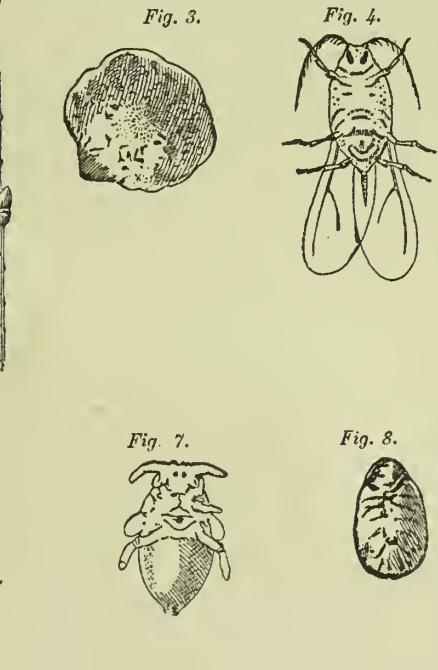
**Santa Cruz apple and pear scale: *Aspidiotus rapax*, Comstock.**—This species of scale insect can be found in Santa Cruz county, and also in some of the southern counties, on the apple and pear trees (Fig. 9) and their fruit, but is not



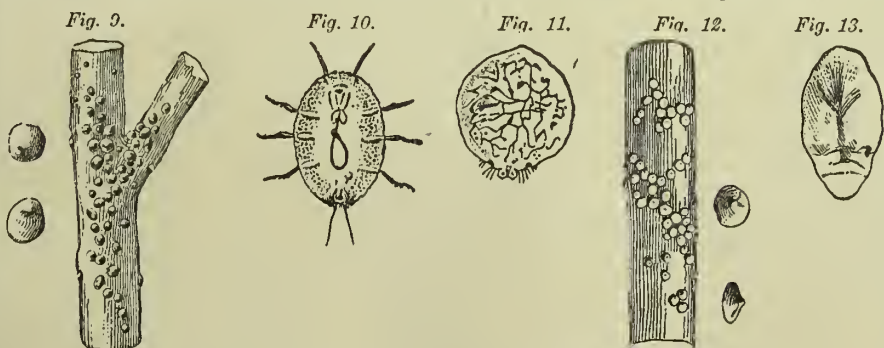
## THE SAN JOSE SCALE INSECT ON APPLE, PEAR, PEACH AND PLUM TREES.

considered so dangerous as some other species of the genus *Aspidiotus*. However, if we owned an orchard, their absence would be desirable to

solved in boiling water. Before pruning the trees, wash or spray them thoroughly with a solution, proportions as above, and if possible at a temperature of 130° Fahr. If the apple or pear trees are very badly infested, the solution may be used: one pound of concentrated lye, or one and one third pounds of commercial potash to each one

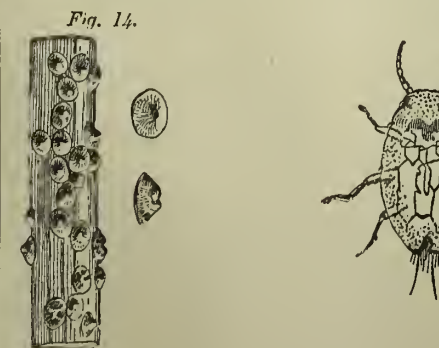


gallon of water. The limbs and branches should be thinned out sufficient to give free access of light and air to the foliage, etc., on all parts of the trees. The prunings should be burned



## SANTA CRUZ SCALE AND WHITE BERRY SCALE.

us. Description of scale and insect: Scale, about 1-16 of an inch in length; form, ovoid; color,



## BLACK SCALE OF FRUIT AND ORNAMENTAL TREES.

drab. Larva (see Fig. 10), less than 1-100 of an inch in length; two antennæ, six-jointed; two anal setæ. Female (Fig. 11). Male, winged.

Remedies for cleaning apple and pear trees infested by the two foregoing scale insects: Make a solution of one pound of commercial concentrated lye, or one and a third pounds of commercial potash to each one and a half gallons of water. The lye or potash should be melted or dis-

solved in boiling water. Before pruning the trees, wash or spray them thoroughly with a solution, proportions as above, and if possible at a temperature of 130° Fahr. If the trees are in bloom, wash or spray with a solution of sulphur and whale oil soap. If a summer washing is necessary, use the sulphur solution; it will not injure the foliage or fruit.

**White scale (or rose scale): *Diaspis rosæ* (or closely allied to it).**—This species can be found in many gardens in this State, and has shown a tendency to spread on vines in certain districts,

especially those of the raspberry and blackberry.

Description of scale and insect: Scale, 1-10 of an inch in diameter; form, irregularly round, slightly convex (Fig. 12); color, white. Larva, length, 1-100 of an inch; color, reddish. Eggs, 20 to 35 under each scale; color, yellowish red. Female (Fig. 13). Male winged.

To protect the raspberry and blackberry crop this pest must be exterminated.

To destroy the scale: Make a solution of one pound of commercial concentrated lye, or one and a third pounds of commercial potash to each two gallons of water. Wash or spray thoroughly with this solution before pruning. For second washing, if before the trees bloom, use same amount of lye or potash to three gallons of water. If in bloom, or bearing fruit, use whale oil soap and sulphur washes.

**Black Scale: *Lecanium oleæ*.**—This species of *Lecanium* is more generally found in the orchards and gardens of this State than any other species of the *Coccidae*. It can be found upon nearly every species of deciduous fruit trees, and every species of the citrus trees, and also upon many species of ornamental trees and shrubs, and is very prolific.

The foliage and fruit of trees infested by the black scale, *Lecanium oleæ*, are also infected by a black substance, said to be a fungus growth, which is generally formed on the upper part of the leaves and fruit as they hang upon the branches. It is claimed by some persons that this scale exudes a honey or dew, which falls upon the fruit and foliage, and coming in contact with matter in the air forms a fungus growth. Others claim that the attack or bite, made by the insects on the branches and leaves, causes the leaves to exude a honey or dew, which coming in contact with matter in the air, creates a fungus growth. However, it is generally conceded that this black matter is in some manner caused by the presence of this black scale insect. It certainly injures the tree by preventing free respiration, and injures the sale of citrus fruits on which it is found. It is also injurious to deciduous fruits for canning purposes.

Description: Scale (Fig. 14), length, from one-eighth of an inch to one-fifth of an inch; form, ovoid; color, at first formation, greenish brown; when half grown, reddish brown; and at maturity, black. Eggs, from 75 to 125 under each scale; color, when first formed, whitish; before hatching, a reddish yellow. Larva (Fig. 15), length, one-ninetieth of an inch; color, pale reddish yellow; form, ovoid. Antennæ (Figs. 15 and 16), seven-jointed, indentation on posterior end; two anal setæ on posterior angles of indentation, and two at inner angles of indentation.

To destroy the black scale use one pound of commercial concentrated lye, or one and one third pounds of commercial potash, dissolved in two gallons of water. Wash or spray with a solution of the above proportions before pruning. After pruning and before the tree puts forth the fruit blossoms, wash or spray with a solution, containing same amount of concentrated lye or potash as above, dissolved in three gallons of water. If a third washing is required during the summer, use whale oil soap and sulphur mixtures.

Ellwood, the residence of Ellwood Cooper, Esq., is situated about 14 miles north of Santa Barbara, in Santa Barbara county. This tract of land contains very fine orchards of almond, walnut and olive trees. The olive trees became infested with the black scale, *Lecanium oleæ*, and Mr. Cooper saw at once that if they were allowed to remain on the trees, making a choice oil would be impossible, so he began the work of extermination, and carried it on zealously until he was rewarded by complete success. In one small orchard, containing about 100 trees, he cut off the limbs and washed the trunks thoroughly with a solution of whale oil soap. The balance of the 3,500 bearing trees he washed with a decoction of tobacco, and in some instances, when necessary, he swabbed the part with pyrolyneous acid. Some of the trees were simply washed with whale oil soapsuds.

Mr. Cooper grows tobacco for this purpose, at a cost of 1½ to 2 cents per pound. Thirty pounds will wash 100 trees. Mr. Cooper applied the wash at a temperature of 130° Fahr., and found that it did not injure the foliage or blossoms. Let those who doubt that the black scales can be exterminated, examine the olive groves at Ellwood before they become grounded in opinion.

It is said that Teachers' Institutes throughout the State cost about \$60,000 per year.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eus.

### Tuolumne County Notes.

EDITORS PRESS:—In the years gone by, this county has made strenuous efforts to obtain railroad accommodation; hitherto, without avail. An effort is now being made to induce the Narrow Gauge railroad, now being commenced at Oakland, to penetrate Nevada, to make our county part of its thoroughfare. With what effect, the future will demonstrate. Forty thousand dollars is the bonus asked of our citizens for the privilege. Not a very large sum for some counties, but for this county the sum may be hard to realize. If the \$40,000 is not forthcoming, the road is to reach Nevada by Yosemite valley. What object the projectors of the road could have by crossing the backbone of the continent by such a wild, uninhabited region is hard to understand. No better business route for a railroad in the State than through the San Joaquin valley by Modesto, then to and through this county. We think it was only a scare to bleed the citizens of this county of \$40,000. Their own interests for business and easy grade is inducement enough, to ensure success. If we are fortunate enough to be brought within marketable distance of San Francisco, the fruit business would receive an impetus which would soon make this county second to none in amount, as she has already been in quality. We have been so often disappointed by railroad fevers, that we will not speculate too much until we see the iron pointing this way from Modesto. About that time we may be startled by the broad gauge at Oak Dale, shooting this way at the rate of a mile per day. That road is paying so well, that a successful opposition may not be tolerated by the railroad kings. For surely the road which would penetrate this county, would carry all of our freight to and from San Francisco. The narrow gauge would kill the Oak Dale and Stockton line, for it is our county freight which keeps it up. There is most as much going down as coming up. Such as fruit, marble, chrome ore, wool, hides, etc., and a thousand articles of less bulk, making the aggregate large for a small mining county.

We have been experiencing remarkably cold weather, averaging from 60° to 76° at noon. Mornings the glass is as low as 36°. Fires are comfortable morning and night. What makes our climate so very desirable is the absence of strong winds. The tornado is unknown amongst our foothills. We enjoy a gentle breeze; only enough to purify the atmosphere and make it pleasant.

Farmers are marketing their surplus of barley and wheat. Prices are ruling high for barley. Wheat, \$1.70 per cental; barley 2 cents per lb. in Sonora, so I am informed by residents and by farmers. Improvements amongst farmers are quite extensive, if the amount of lumber en route to the plains is any indication of thrift and prosperity. The rise of the price of land here made the farmers comparatively rich. Many are independently so, and all are comfortable and hopeful for the future. Nature yields her rich treasures year by year, supplying food for man and beast; not alone at home, but in Europe, China, and other distant nationalities, whose limited supply fails to satisfy daily wants. California has filled a niche in human progress which no other land has filled. Gold and silver, wheat and fruit, wool, and many wonders in productiveness which will require in the near future a network of railroads to carry our vast products to all business centers. Then will our foothills teem with a busy and prosperous population, enjoying all the adjuncts of a still higher civilization than the present pioneers enjoy. But stern facts face us to-day. Only small spots are reclaimed from the wilderness. Muscle must be exercised until the inventive genius of man supercedes labor by scientific contrivances. It is painful to eye and sense to witness the many beautiful locations reduced to bare rocks and tailings. It might never have been seen by white men if the gold had not been there but, in fact, the land was of more value than the gold extracted, and the valleys, once so beautiful in green and gold, look so woebegone, so useless to man, such an eyesore, that a regret arises for the vandalism. Never more will those rugged, bare, rocky ledges appear as in days of '49, before the miner's pick and sluice-box carried away the soil, worth more gold than the gold obtained. This decision will be confirmed as the years pass away, and the value of field and garden becomes more evident.

JOHN TAYLOR.

Chinese Camp, Cal.

### Our Dwindling Fairs.

EDITORS PRESS:—Our fairs, from one end of our State to the other, absorb much of the attention of our citizens. Signs of dwindling now seems to be a general complaint. This is not out of the usual order of things. The queer thing to me is, why this curative has not been applied before. How is the non-producing classes all over our State, working themselves

into an organized system to make capital out of the pride and industry of the producing classes, sending smooth-tongued canvassers hither and yonder, to induce the honest unassuming farmer to exert himself in this, that or the other undertaking, whilst the non-producers are systematically planning their harvest out of it? I say it is time the panacea be administered; to wit, hands off; just let those kid glove fellows run it!

Why sir, it has got to the pass that you will see a walking apothecary shop advising our frontiersmen on the article of diet; an editor of a one-horse county newspaper dictating as to the time and method of managing crops; professional men and schemers on financial matters, elbowing their way to the front, in the management of our county and district fairs. Financial schemers have steered to the front of every movement in Los Angeles county, from the Grange movement in 1873, down to the Horticultural fair. We have learned that there is a certain goal to be obtained out of every public spirited enterprise; hence, our proneness to "hands off." Now Mr. Editor, let me, inasmuch as I inadvertently have got home with my remarks, use a name or two connected with facts. In the Nietos exhibit, in our Horticultural pavilion of last year, the winning badge was tied on Muscat grapes grown by Mr. E. B. Grandin. Sequel: Of course our Nietos vineyardists felt elated; but National ranch, of San Diego county, got the full amount of praise as the winner of the prize, and the grapes of Nietos, notwithstanding the award was tied on their grapes, never got even an honorable mention. L. L. Begnette, another of our Nietos exhibitors, was treated in a like manner by those who have axes to grind, through the medium of our agricultural fairs. Nietos shows a live interest this year in anything, and everything connected in the legitimate line of agricultural industry at home on their farms; but they are a little sour on the subject of these advertising mediums called fairs. N. B. Grind your axes, that is all right, but we will turn if we feel like it.

GEO. KAY MILLER.

Los Nietos, Oct. 3d, 1881.

### The Bluestone Question.

EDITORS PRESS:—The PRESS of September 24th contained a communication on bluestoning wheat. The writer asks, why so many failures? I am of the opinion it is not thoroughly applied. Many persons simply sprinkle it on the wheat in bulk, consequently much of the grain fails to receive a sufficient amount to be of any benefit. I have been bluestoning wheat for a number of years, and have never seen smut on wheat I had bluestoned. My plan is to dissolve the bluestone in water in barrels, put the wheat in and let it remain until the grains are thoroughly soaked. On one occasion I permitted it to remain until it had long sprouts. I then sowed it. It produced a fine crop of good wheat. I am of the opinion that it is not only a preventive of smut, but is also beneficial to the growth of the grain. I have also used it on cabbage plants with marked benefit.

Your correspondent recommends sowing wheat in adjacent fields, one treated with bluestone and the other not. That has been done in this county with satisfactory results.

While I differ with your correspondent about bluestone, his piece contains one statement of very great importance, which I think is correct; that is in regard to lice on fowls. No fowl, if properly cared for, that is in good health, will breed lice. The same is true of animals. It is necessary to give animals a good supply of salt. I have never known one to be lousy thus cared for.

CHAS. A. ANDERSON.

Wash, Plumas Co., Cal.

### From Another Correspondent.

EDITORS PRESS:—Twelve years ago I commenced growing wheat in this State, and seeing all my neighbors bluestone, I asked the same question that Dr. Shulz asks in PRESS of September 24th. Here is the answer that I got: On 30 acres of summer-fallow sown to Australia wheat, 24 acres was bluestoned and 6 acres was not. On the 24 acres there was no smut; on the 6 very little. In January I sowed 20 acres in one day, bluestoning 15 acres, and sowing 5 acres without bluestone. The 15 acres had no smut; the 5 acres, by a careful count as it stood in the field, was one-sixth smut. I have experienced a little since with about the same result. We shall bluestone.

C. O. BUTLER.

Hanford, Cal.

### Thistles.

EDITORS PRESS:—Having traveled extensively through a large part of California and being a reader, though not a subscriber to your valuable agricultural paper, I consider it my duty to draw your attention to the following: If you make a trip to the Saucelito rancho, opposite San Francisco, from the landing to Bolinas bay you will observe all along the road large patches of a kind of thistle, which formerly was foreign to this State. Whether this is the much dreaded Scotch thistle or not, the same is apparently spreading all over, and has already taken hold of the foothills of the Sierra Nevada, for instance, in Amador county. Even in

towns, like San Rafael and Oakland, it shows itself everywhere. In Australia, the Scotch thistle has become a terrible scourge, and it is evident to the watchful observer that this will soon be the case in California, too. In my opinion, the thistle is destined to overgrow that immense portion of the State which might be termed the "natural meadows of California," or, in other words, all of the pastures in the State, viz., more than half the territory on the lower Pacific.

While now a few thousand dollars would easily eradicate the evil, I am convinced that in about five or ten years all the money in California will not be able to eradicate this terrible evil.

Americans, and especially Californians, live according to the maxim, "After me the deluge," and foreigners must therefore step in and try to save the State from destruction.

It is my earnest desire, though being a German, a bachelor and a monarchist, to see this splendid State preserved in its beauty, usefulness and fertility, and invoke therefore your powerful aid, to subdue this infamous nuisance. The State superintendent of public schools ought to send circulars to all the teachers of public schools, to warn the people of the imminent danger, and legislative action ought to be taken immediately to fight the evil while it is time. Hoping that you take a little more interest in the future of your own country, than the average worthy native, I am respectfully,

HENRY ANDREWS.

Big Trees, Sept. 26, 1881.

[We suppose our correspondent alludes to the so called Spanish thistle, with a large variegated leaf. It is not so bad a fellow as the Scotch thistle or the Canadian thistle, and is much more easily killed out. It is, however, taking up too much room and should be uprooted.—ED. PRESS.]

## THE DAIRY.

### The Dairy in Humboldt County—No. 2.

EDITORS PRESS:—It is only within the last few years that dairying has assumed anything like a business. As stated before, there was some butter made and beef sold; one was considered as essential as the other. A few years back we hardly made enough butter for home consumption; now we export a large surplus to San Francisco. We manufacture somewhere between 300 and 400 tons of butter every year, and are still increasing the quantity. Our strictly dairy region is not extensive, but is of a very superior quality. There are many dairy ranches that will keep a cow in good condition the year round to every four acres. The ranges, as a general thing, are well watered with the very purest and best of water. I do not hesitate in saying that the dairy region of Humboldt county will eventually become the Goshen of California. I do not say so because I am one of the fortunate ones who have secured a home here, but it is the general opinion of visitors from other parts of the State. The grazing land on Bear river, and parts of the Mettelle, produce as much grass to the acre as they did when first settled, and what has astonished me is that it does not make any difference how close it is fed off in the fall, in the spring there is just as thick a sward of grass as ever. Since my settlement here we have had three different kinds of grass appear. They all have had excellent milk, butter and beef qualities, which is enough to know about them, without giving the Latin name.

I think we can make as much butter to the cow from the natural grass as in any other part of the known world. We make from 150 to 205, and in one instance there was 280 lbs. made to the cow from a small lot. The former quantity is made from the natural grass, with the exception of a little hay in the spring; the latter quantity the cows were fed on beets, hay and mesquit grass. The cows were just common stock, and kept in fine condition the year round, which is evidence to me that it is more profitable to have a less number of cows and keep them in good order, than a greater number and not keep them so well. I suppose that is not much information to those engaged in the dairy business; but I think, as a general thing, dairymen keep too many head to the acre. I find that the great secret of success in dairying is to keep the right quantity and quality of dairy cows.

### Cattle and Feed.

Right here I would ask the readers of the PRESS to state the quantity of butter made from dairies of blooded or graded stock on the natural grass, and how long or how many months in the year they can dairy without feeding, and where they do feed, what kind of food makes the most butter.

I fed some last fall green corn, bran and chopped or cut hay. I made only about one-half of the butter to the cow; which, had not butter brought the price that it did, I would have come out in debt. This year I have commenced to feed corn, and after the corn is fed out I intend to feed beets and hay. As yet there is very little feeding done in the county, as it is supposed it will not pay to feed and milk in the winter. Perhaps it will not pay as well as when the cows gather their own food, but I think when a good crop of beets and corn can be

raised, it will pay to milk a few cows in the fall or winter.

### Our Dairy Season.

Does not commence here, or ought not to, in many places, until the first of March. We can milk twice a day on until the first or middle of September on the natural grass very profitably. From that time out the cows ought to be fed. We have no very large dairies in this county; The greatest number of cows kept on one ranch is 120, which, in my opinion, is enough, and indeed, I think 100 would do better, as they would not have so far to travel in the latter part of the season for food.

Our present dairy region extends along the coast a distance of some 25 miles, by from 1 to 8 miles wide. Any farther inland dairying is not profitable, on account of the grass drying up early, but is profitable to raise sheep and cattle for market. The Eel River valley is also well adapted to dairy farming. The land is very rich, and when properly cultivated and subdued and put down in tame grass and clover, will support a large number of dairy stock, which will add largely to our export trade of dairy produce, and it is only a question of time when the Eel River valley will be principally turned into dairy farms. Those who have tried it can make five dollars to one that is made by raising small grain or potatoes. In some instances the land will have to change hands, because we have not a few among us that think dairying too confining. Quite a number of that class are willing to sell out, and in fact, will soon be sold out. I know of several farms that can be bought now very reasonably, that a good energetic man could take hold of and in a few years get wealthy, or in very comfortable circumstances. There is one feature about the county which speaks well for it, and that is, there is hardly anyone leaves to better his circumstances in some other place but is glad to come back and say Humboldt county is good enough for him. As stated before, we need a quicker transit to market to make Humboldt one of, if not the foremost county in the State.

Now, in conclusion, I would simply ask the dairymen of the State why it is they do not combine together and form

### A Dairymen's Association

As in other States for the interchange of thought on the subject, and for marketing the dairy products of the State. It appears to me that the dairy interest of the State has assumed proportion enough to call for an effort on the part of those engaged in it to put it on the market under the most advantageous circumstances. At present the butter market is governed by a few men who call themselves commission men, but are virtually capitalists, or rather monopolists who, when they carry out their plans place the butter on the market so that they make money out of it, and to-day there are but few houses in San Francisco which do an exclusive commission business in the butter trade. There is hardly any article that fluctuates so much in price as butter, why? Because it has to go through the hands of such a variety of character as the commission man of San Francisco proves himself to be, yet at the same time they are at present a necessary evil, because butter cannot be sold in San Francisco market except through a commission man. A few years ago I tried it. I had a few boxes of fresh roll and I thought as I was in the city I might as well sell them and save the commission; but there I was mistaken. I tried for a couple of days but could not sell. At last I offered it to a groceryman, and told him I would like the most of it out in trade. At first he said he would, but when it came to the point he backed out. At last, tired and disgusted, I put it into a commission house, and that very evening they sold a part of it for four cents per lb. more than I had been offering it for. One reason that dealers prefer buying from commission houses is this: they buy from day to day, or nearly so, just as they want it, and make monthly settlements. I think this might all be changed if dairymen would form an exchange of their own and market their own butter, so that the bulk of the butter and cheese of the State would have to be bought at their place of business. The commission men just sell or put the price of butter to suit themselves. I never could see the necessity for having to sell butter in the spring at such low figures. If there were a surplus, then it would be different; but last spring the market kept well cleaned out, and until the dairymen began packing down solid or in rolls, it was sold at ruinous prices. When butter sells less than 25 cents a lb., there is not much in it after all expenses are paid in connection with it.

Butter might as well be sold at a more even rate the year round than it is. I do not see the necessity of selling it at such a low rate in the spring and such a high rate in the fall, and my opinion is, if dairymen would enter into an organization or association and sell their own productions, I think that prices could be regulated so that they would be more equal the year round. I, for one, advocate the principle of doing my own business. Why not have a butter mart in San Francisco, where dealers can be furnished as well as from the commission man and save the commission, or a part of it, for the producers. The expenses of running such an establishment could be very easily ascertained by finding out the amount of butter made in the different counties of the State and published in the PRESS. Humboldt county produces about 400 tons; every other county may state in the same way the amount made, and in



a short time, the expense of putting that amount of butter on the market could be found out, then we could see what we would save by doing our own business. It is to be hoped that every dairyman will respond through the PRESS, and if every one will do so promptly, we might organize this fall and make the necessary preparation for maturing our plans for next year, say some time next month, October or November at the farthest, and I have no doubt if a concert of action can be obtained by the dairymen of the State, that it will be a benefit to all concerned.

RICHARD JOHNSTON.

Bear River.

## HORTICULTURE.

### Plants Worth Trying in California.

The following is the concluding portion of the report concerning plants suitable for trial in this State, made by W. G. Klee and Dr. H. Behr, to the State Horticultural Society, at the September meeting:

#### Ornamental Plants.

*Alstroemeria pallida*: of Chile, a beautiful amaryllidaceous plant, well adapted to our climate, and deserving with *A. aurantiaca*, a place in the bulb garden.

*Araucaria Rulei*: from New Caledonia, a species according to the description, like the *A. Bidwelli* type, with large shining foliage, probably hardy in sheltered localities, where *A. Cookii* will thrive. All *araucarias* being highly ornamental, the various less-known species, *A. Muelleri*, *A. Balanxæ* and *A. montana*, also from New Caledonia, deserve trial.

*Amyris terebinthifolia*: from Brazil, is a beautiful little tree well adapted as a shade tree and ornamental planting; having proved hardy in Victoria, we may safely regard it so in all more or less sheltered localities in California.

*Boronia megastigma diosmeæ*: found on the margin of swamps in Western Australia, a shrub with almost black flowers, which as B. von Mueller remarks, makes it specially eligible for the decoration of the grave; the flowers are besides characterized by a powerful fragrance that may be extracted.

*Caesalpinia Gillesii*, or *Poincæana Gillesii*: as shrub from La Plata States, would be a valuable addition to our garden.

*Enryaleferox* (nymphææ): a beautiful water lily from Asia, growing as far as Japan, deserves a place in our ponds, where it would succeed as well as our nymphæ and naphar.

*Gordonia lasianthus* (Camelliaceæ): the Lob-bolly bay of the southern Atlantic States; is a shrub highly to be recommended for its beauty; it seems very rare in cultivation.

*Gunnera chilensis*: a native of Caracas, South America. As a foliage plant the *Gunnera* would be a valuable addition to our parks and large gardens, the enormous size of the leaves (sometimes 24 ft. in circumference,) and their shape, which bears some resemblance to the burdock, but a peculiar green (like that of *Vigandia*) make it a very fine contrast to a lawn. *Gunnera* is a small family variously placed under *Araliaceæ* or made a family by itself. *G. scabra*, a native of the Cape of Good Hope, is among the medicinal plants cultivated in Berkeley.

*Harina caryotoides*: from Assam, Chittagong and Darjuling, a dwarf palm recommended for decorative purposes.

*Hymenanthera Banksii*, *Polygalacæ*: South-east Australia, New Zealand and Norfolk island. Is a tall spring shrub, with beautifully fragrant flowers, recommended by Von Mueller as a desirable hedge plant where rapid growth is not required.

*Justicia Adhatoda*, *Acanthacæ*: is an elegant shrub, native of India, but has proved hardy in temperate climates.

*Kentia Baurii*: a fine palm from Norfolk island, growing 40 ft. high; deserves trial in well sheltered positions.

*Lapageria rosea*: this pretty evergreen climber seems to flourish among the sulphurous fumes of the smelting works of Chile; though well-known to florists it is regarded as a difficult greenhouse plant subject to many diseases; doubtless its power to endure the sulphurous fumes is a protection from the red spider and other insects that it falls a prey to in cultivation. Its native home suggests its hardiness.

*Leucandendron argenteum*; *Proteacæ*: a native of South Africa. The name of Silver tree is justly given to this beautiful little tree on account of its silky white foliage. It is, however, only in the mild and more humid part of California that we could expect success with this tree.

*Oreodax regia*: the palm royal of South America ascends in the Andes to an elevation of 8,500 ft., and has proved hardy in South Brazil. It would be one of the grandest acquisitions to our list of decorative plants.

*Panicum altissimum*: a tall almost tree-like grass, is highly ornamental for copses and foliage groups.

*Pappea capensis Rhamnacæ*: an evergreen shrub that produces an edible fruit.

*Peltophorum Linnaei* (*Caesalpinia Brasiliensis*): like all *Caesalpinia*, ornamental, while the wood is the orange colored *Brasileto* wood. Said to prefer calcareous soil and to have proved hardy in Carolina.

*Phyllocadus rhomboides*: the Celery pine of New Zealand is one of the most remarkable and

characteristic coniferous trees belonging to the group of conifers that were more fully represented in former periods of the earth.

*Pircunia dioica Phytolacææ*: is an arborescent Poke weed in South Europe called *Bella Umbra*, and there much liked for its rapid growth and large leaves.

*Podachænum alatum*: is a tall shrub from the high altitudes of Central America, recommended for its fine foliage.

*Pterocarya fraxinifolia*: from Siberia; a walnut-like tree, both valuable for ornament and timber.

*Ptycosperma Alexandræ*: the *Alexandra* is no doubt as Von Mueller says, "one of the noblest forms in the vegetable kingdom," growing to the height of 100 ft., its feathery leaves attaining an enormous size. No trouble should be spared to secure this magnificent palm, as it will no doubt be hardy in well sheltered localities.

*Quercus Castanea*: a Mexican chestnut oak, like a number of other Mexican oaks deserves cultivation, viz.: *Lanceolata*, *Chrysophylla*, *Reticulata*, *Lauria*, and *Skinnerii*, known by its extraordinary large acorns. As ornamental shrubs our California dwarf oaks are entirely overlooked, though they are as pretty as many shrubs cultivated, this is especially true with dwarf varieties of *Weslizeni* found in the neighborhood of Mt. Diablo.

*Quercus cerris*: of South Europe, is an oak recommended for its rapid growth, as also the *Q. toga* of the same nativity.

*Royena pseudobenuei Ehenacæ*: an evergreen highly ornamental tree, furnishing a very valuable ebony-like wood, a native of Cape of Good Hope.

*Sabal ambraculipera*: from West India, a large palm, which after all indications, is perfectly hardy, having proved more hardy even than the orange.

*Saxono Gothæa conspicua*: a coniferous Yew-like tree, native of Patagonia and Chile, in that country called *Mahen*; it is the source of a fine close grained wood.

*Sciadopitis verticellata*: is another conifer, remarkable for its whorled leaves; the branches are also whorled, and make a very striking effect, and justifies the name of *Umbrella* pine. In Japan this tree is regarded as holy and attains a great size and age. The Japan name is *Maki*. A tree deserving a place in any large garden.

#### Plants Useful on Tide Lands or Strongly Alkaline Lands.

*Aegiras majus, Myrsinæ*: a tree with habit of the mangrove, that might be utilized for consolidating muddy shores. For the same purpose, the *Avicenna officinalis* a small tree belonging to the family *Myoporeæ*, and found in South Asia, New Zealand and Victoria, is suggested.

*Batis maritima, Haloragæ*: a small shrub, native of American shores, is well adapted for reclamation of tidal lands.

For the binding of drift sand no grass has, in Northern Europe, been found as valuable as the *Elymus Arenarius*, preparing the land for shrubs and maritime trees.

*Carex arenarius*: a sedge, is also to be recommended in this connection.

*Frenela actonostrobus*: is a cypress-like little tree or bush, flourishing in the Australian salt marshes.

*Melaleuca parviflora* and *trichostachya*: both shrubs of sea coast of North Holland. They have been found hardy in Berkeley and should be tried in alkaline lands.

#### Forage Plants of Especial Adaptation.

*Anthistria cilata*: is the well-known Kangaroo grass of Australia, South Asia and Africa; deserves, as well the *Anthistria avenacea*, trial in California. The latter is especially thought very valuable in Australia as a fodder.

*Atriplex nummularia*, *Chenopodiaceæ*: from Queensland, through the desert tract to Victoria and South Australia. One of the tallest and most fattening of Australian salt bushes, and as Ferd. V. Mueller, adds, highly recommendable for artificial rearing. He himself has sent seed of this and a similar species, *A. vesicarium*, to California. Plants reared of this are growing on the experimental grounds in Berkeley. They seem well adapted to the climate there and will be distributed the coming season to anyone desirous of trying them. The young shoots grow readily as cuttings.

*Kochia villosa*, *Salsolacæ*: known in Australia by the name of cotton bush on account of its hairiness; is a dwarf bush resisting the extremes of the interior climate of Australia, deserving trial in our southern dry region, as it will give a very fair fodder.

*Jacksonia cupulifera*: from West Australia. A leguminous plant adapted for dry climates. Horses and cattle are very fond of the foliage. It grows to the size of a small tree.

*Lotus tetragonolobus*: another leguminous plant, native of South Europe. The pods are used as a substitute for asparagus. In Berkeley, it has been found to withstand frost better than any other forage plant, keeping green all winter, and as it is succulent and tender, it might be of great value.

*Medicago arborea* (*Leguminosæ*): a shrubby, yellow-flowering medick, said to promote the secretion of milk. Is a native of South Europe.

*Neurachne Mitchelliana*: the Mulga grass. In the desert interior of East and Southeast Australia, recommended together with *Neurachne Munroi*, for dry, sterile land. It is said to endure any amount of drouth, but requiring heavy rains to start anew.

*Penzia virgata* (*Compositæ*): of South Africa.

A small bush adapted for desert regions offering a fair sheep's fodder. It spreads very rapidly by means of the young branches taking root.

### Watering Trees.

EDITORS PRESS:—In the States East, trees seldom need artificial irrigation; but in California, water must be applied by hand, particularly in the summer time.

The quantity of water depends upon the kind of tree and the age. Some trees, like the locust, will grow even on the sand plains, almost without any irrigation, while others require daily attention.

The quality of the water is an important thing. Soft water is the best, but whether hard or soft, it should never be applied cold, from the tank, but should be left in the sun, or otherwise heated to blood-warm.

The mode of application is another important consideration. Water should never touch the trunk of the tree. If the trees are young, or yearlings, circular ditches should be dug one foot from the trunk of the tree, so that when the water sinks into the soil, it will come directly in contact with the fibrous roots. It is only the fine roots that supply moisture to the growing tree. If trees are two years old, the circular ditch should be at least two ft. from the tree. If three or four years old, the distance should be three or four ft. from the trunk.

Trees should be watered about once a week, care being taken to keep the surface well cultivated. The ground should be kept clear of all vegetable growth, and as loose as for corn.

If irrigation is done by subterranean pipes, the water should be so applied as to reach the small roots first, and be warmed by percolation before it reaches even these. And the water should be turned off, at least three days of each week, otherwise the ground may be kept too cold for rapid and wholesome growth.

Trees should be planted where the soil is deep. Some trees, particularly some evergreens, do not root deeply downward, but outward, and do not require deep soil, but most fruit and shade trees root deeply and should have deep soil. If it is designed to plant in rows, at equal distances, care should be taken that there is no hardpan underneath. If there is, it should be removed for 10 ft. around the place that is designed for the tree.

In planting trees some men dig a small, narrow aperture, and plant the tree, almost in hard ground. This is wrong. The soil should be loose and porous for six ft. around, and kept so by prizing it up occasionally.

Mulching is a good substitute for irrigation. If straw, half decomposed, is plentifully applied to the roots, or around the trunk, about the time that rain ceases to fall, the moisture in the earth can be retained during the entire summer. In thus mulching, do not let the straw press against the trunk of the tree.

It is difficult to give accurate directions for irrigation in one short paper. Indeed, to do this correctly, one should write about one tree, or species of trees, at a time.

I was pleased with a paper in the July 16th number of your *RURAL PRESS*, on the cherry tree, with the exception of one simile. The writer stated that a tree was like a river, and the branches were like rivulets. Water flows from rivulets to rivers, but sap flows from the trunks to the branches of trees. Otherwise the paper referred to was excellent, because the writer made but one species of tree the subject.

Not only should trees be separately considered, but soils should also be discussed separately, and the same might be said of climate. Cultivating trees is like studying grammar, or any other science; it is a life exercise. The oldest experimenter can still learn something by daily practice.

S. B. M'CORMICK.

Turlock, Stanislaus Co., Cal.

### Borax Again.

EDITORS PRESS:—In addition to the note on the use of borax against the dried fruit worm, in last week's *RURAL* allow me to suggest that perhaps a dressing with the preparation might protect packing boxes, wrapping papers, etc., from becoming a harbor for this and other pests. May it not be of use in disinfecting "return boxes." New York housekeepers fight the "croton bug," a species of cockroach (*Blatta Germanica*), by strewing borax in its run-ways, and great slaughter has been made among its relatives in San Francisco, by a similar course of treatment. The article is very cheap on this coast, and certainly deserves trial as a weapon in the insect war in its various phases.

C. H. DWINELLE.

University of California, Oct. 6, 1881.

### Propagation of the English Gooseberry

"Cuttings must be taken from the old bushes, not early in the winter nor through the winter, but right in the spring, and when the bushes are fully out and green with new leaves."

EDITORS PRESS:—This statement throughout is a gross mistake. No English nurseryman ever practiced such unphilosophical nonsense. The writer has struck thousands of gooseberry cuttings in his time in England, but never saw or heard of such a thing ever being done or attempted, and why? Because they know better.

But how are cuttings struck or rooted in England? Just the reverse of your correspondent's statement. Mr. Felix Gillet could never have seen such a method as he states practiced in England, unless on a trial scheme of some novice inclined to experiment. Sir, the propagation of gooseberries in England is one of the most simple of hard woods known. Take the cutting off early in winter with a little old wood (or as better understood there, "with a heel,") made a foot long, and insert in rows six inches deep and three or four inches apart, and there is an end of the operation. In this country put in cuttings as soon as the leaves are off, and as soon as the first rains will warrant moisture in the ground all the winter. Mind the heel or old wood.

Alameda Co.

HORTICULTURIST.

## THE STOCK YARD.

### Cattle at the San Jose Fair.

EDITORS PRESS:—The show of cattle at San Jose was tolerably good, and upon the whole better than we expected to find it, Short Horns, Ayrshires and Jerseys all being fairly represented.

There were four exhibitors of Short Horns, viz.: Messrs. Bradley, Younger, Quinn and Clark, who had, altogether, a larger number of the breed there than has been exhibited at any fair held in the State this season.

As the ribbons were not given out by the judges at the time they made the awards, all the exhibitors were in blissful ignorance of the premiums awarded them at the time I left the grounds.

There were only three yearling Short Horn bulls on the ground, all of which were sold, besides some heifers and bull calves; and others who intended to buy, had to go home without being able to find what they wanted in the way of bulls. The demand for good cattle is decidedly better than it has been for many years; there appears to be a general feeling amongst dairymen that they ought to use good bulls all the time for the improvement of their herds; and all cattle owners with whom we had any conversation seemed fully alive to the importance of the subject. One man who owns a large herd told us that he had come to the conclusion to use nothing but pure-bred Short Horn bulls. This is undoubtedly a wise course to pursue, and practically the only one, combined with the selection of the best and the weeding out of the poorest cows in our herds. If this was done by all dairymen, there would be in a very few years a wonderful improvement in the cattle of this country, such as would be much more noticed amongst herds of graded cattle than amongst herds of pure-bred Short Horns, for I am one of those who are inclined to the belief that the Short Horns of 30 years ago were as good cattle as the Short Horns of to-day. They have, as a breed, increased largely in numbers, and there are more herds with a large proportion of good animals, looked at with a view to the production of beef, than at that day; but looked at through dairymen's eyes, the improvement is questionable, excepting with those breeders, and they are comparatively few in number, who have made the breeding of Short Horns, adapted for the combined purposes of producing milk and meat, their especial object in breeding; and I can confidently say that for that purpose there is no other breed of cattle equal to the Short Horns.

But, to return to the fair, two premiums are given for "herds of cattle," one for beef, which includes, Durhams, Herefords and Holsteins, the other for dairy purposes, Jerseys, Ayrshires and Devons. A division of the several breeds to be exhibited for different purposes is no doubt the most satisfactory plan for exhibitors, but we would suggest that Holsteins, ranking high amongst the largest milking breeds in existence, but making a second-rate quality of beef only, be substituted in the dairy class for Devons, a breed that produces a medium quantity of milk only, but a first-rate quality of beef, for that reason they ought not to be classed with dairy cattle in preference to the Holstein breed.

Judging by the class of horses on exhibition, Santa Clara valley keeps up her reputation for breeding good horses for general purposes. There were on exhibition two imported Norman horses and several of their produce, which were looked upon with favor by those who are interested in breeding useful horses. There were also some good draft mares and stallions on exhibition, that were bred in the valley, but as I had not time to take particulars as to owners, etc., I must refer to the list of awards for particulars, which you will no doubt print, as to prizes, which, as in the cattle classes, would remain unknown to the last hour.

The only sheep on the ground were a few Cotswolds, belonging to Col. Younger and Wm. Quinn, besides which a few choice Berkshires, ended the list of live stock on exhibition interesting to a

FARMER.

THE New York *Spirit of the Times* announces the determination of August Belmont to retire from the turf. It is Belmont's intention to devote himself to the breeding of race horses and have annual sales.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Annual Session of the State Grange of California. P. of H.

At Santa Rosa, Oct. 4th to 9th.

(Continued from last week.)

[Our report presents all the essential information of the session in brief and convenient form for the reader. In stead of in the formal order in which it occurred.—Eds. PRESS.]

#### Roll of Officers.

Master, E. R. Spilman; Overseer, S. T. Coulter; Lecturer, Wm. Johnston; Steward, T. T. Hooper; Assistant Steward, E. W. Davis, (pro tem); Chaplain, H. W. Johnson, (pro tem); Treasurer, J. V. Webster; Secretary, Amos Adams; Gate Keeper, W. L. Hancock; Ceres, Mrs. C. A. Hull, (pro tem); Pomona, Mrs. P. H. McGrew, Alameda Co.; Flora, Miss Hattie E. Sprague; L. A. Stewart, Mrs. T. T. Hooper, Executive Committee—C. Grattan, Geo. W. Hancock, P. H. McGrew.

#### Patrons Present.

No full record having been entered of Past Masters and their wives, (who are honorary members) we can only insert now a partial list of the representatives, Past Masters and their wives and visiting Fourth Degree members, but shall be pleased, on receiving further names to add them to the following list of those present:

Antelope, Yolo Co., H. A. Logan; Bennett Valley, Nelson Carr and wife; Ceres, Stanislaus Co., H. W. Brown and wife; Eden, Haywards, O. Dennis and wife; Enterprise, Brighton, C. Beckley; Elliott, Wm. Ennis and wife; Franklin, Sacramento Co., Wm. Johnston and wife; Florin, C. Towle; Healdsburg, W. N. Gladden; Lodi, J. D. Huffman; Montezuma, T. T. Hooper and wife; North Butte, W. T. Lam and wife; New Castle, G. L. Threlkel; Pescadero, L. C. Steele and wife; Plymouth, S. C. Wheeler and wife; Point of Timber, A. Richardson and wife; Potter Valley, W. Eddie; Roseville, V. M. Leonard and wife; Rio Vista, J. H. Gardner; S. Helena, D. Edwards; Stockton, C. Grattan and wife; Summit, A. B. Huntley; Sutter Creek, J. Milliken and wife; Sutter Mill, J. J. O'Brien; Sacramento, C. A. Hull and wife; Santa Rosa, Theo. Staley; Santa Cruz, G. C. Wardwell; Suisun, R. C. Hailie; Temescal, Oakland, C. Bage; Vallejo, J. F. Deming and wife; Washington, Comanche, San Joaquin county, S. C. Waters; Watsonville, Alex. Kerr; Wheatland, Mrs. Lily G. Jasper; Woodbridge, W. B. White and wife; Yuba City, G. L. Douglass.

Sister M. B. Landers, Mrs. R. M. Jones, H. Rapp and wife, Jas. Kelley and wife, Martinez; I. De Turk, G. N. Whitaker and wife, S. T. Coulter and wife, Geo. W. Davis and wife, John Adams and wife, and many other 5th and 4th Degree members from the local Granges of Santa Rosa and Bennett valley; Bro. Alexander and wife, Bro. Heald and wife, Bro. Moore and wife, and Bro. Morrill, Healdsburg; Sister Post, R. Pixey and wife, Gortie De Force Cluff, Lodi; N. Mertes and wife, Roseville; W. L. Overhiser and wife, Wm. G. Phelps, Thos. E. Ketchum and wife, Sister W. D. Ashley, Sister A. Wolfe, Stockton; Nellie G. Babcock, Temescal; P. H. McGrew and wife, A. T. Dewey and wife, J. V. Webster and wife, L. Frink and wife, Oakland; N. Jones and wife, Lafayette; Bro. Cox, Watsonville; S. Woodruff and Sister J. J. Emmer, Woodbridge; Moses Sprague, L. W. Johnson and wife, Hattie E. Sprague, Bro. Jassett, Daniel Flint, Sacramento; Chas. G. Deming and wife, S. S. Drake and wife; John F. Deming and wife, Vall Jo; Freeman Parker, Petaluma; Franklin Ritter, Elliott; C. H. Cooley and wife, Cloverdale; J. L. Crawford, Newcastle; Mattie Harelson, Katie Harper, J. Marsh, Stockton; O. Ingersoll, Elk Grove; L. Giles, Comanche; S. R. Chandler, Yuba City; J. F. Cross and wife, Antelope; T. K. Stewart, Fresno; Wm. Eddie, Potter Valley; L. T. Hooper, Bird's Landing; Wm. Peterson and wife, S. Helena; A. D. Nelson, Butte county; Alex. Boss and wife, Pacheco; Wm. Elliott and wife, Lockford.

The following local committee acted on the part of Santa Rosa Grange as a Committee of Arrangements for the State Grange meeting: E. W. Davis, S. T. Coulter, T. Staley, G. W. Davis and Sister Mills.

#### Lecturer's Annual Report.

Worthy Master, officers and members of the State Grange, P. of H., of California:

Another Grange year having passed, we are called upon to give an account of our stewardship; and I am happy to be able to report that through the able administration of our Worthy Master, the noble efforts of the Executive Committee, together with the invaluable assistance of the Grange press, the Grange is in a better condition than it was when we met one year ago.

As your Lecturer, I have little to report. I have visited subordinate Granges in six counties, conferred 52 degrees, delivered 10 lectures, exemplified the unwritten work when called upon to do so, and imparted such information as was required. This may have the appearance of a very small amount of work done. It is only a tithe of what ought to be done, but when we take into consideration my other public duties, as well as my private business, and this has been done without fee or charge to any one, but entirely at my own expense—I simply say I have done what I could. The winds of adversity have blown all the chaff away, and all the sound, plump kernels alone are left. I believe we have reached the foot of our Grange hill, and we are now on the up-grade. Our progress may be slow, but it is sure.

Too much cannot be said in praise of our Worthy Master for the good work he has done in the past year for our noble Order. The work of the Executive Committee has also contributed largely to the advancement of our cause. Bro. Webster has been untiring in his efforts to build up the Grange; and in this connection I desire to say there is no better way to promote the interests of the agriculturalists of this State than by assisting and encouraging the California Patron; and I hope this State Grange will not close its labors until it has settled upon some plan by which this organ of the California State Grange shall be placed, beyond the possibility of doubt, on a permanent foundation.

We need more teaching in the Grange; we must make the Grange more attractive to the young, and they will soon learn to love and revere its teachings, follow its precepts, and to honor the farmer's vocation. This material must be had to build up and perpetuate the Grange edifice. The places we now fill they will soon be called upon to occupy. The destiny of our Order and of our country is to be placed in their hands, and we are responsible to a great degree for the manner in which they will discharge their duties, not only as Patrons of Husbandry, but also as citizens of the Republic. The Grange press has already done a great amount of work in this direction. Too much cannot be said in praise of the *Agricultural Press*, the regular issues of the *California Patron* and *Rural Press*, and other excellent newspapers have rendered invaluable aid to our cause. The so-called admission into families where no other paper has been taken, and have incited a spirit and a desire for information and investigation hitherto unknown in rural circles.

The Grange press has made the farmer a thinker; it makes him a man demanding his rights; it has enlarged his views; it has developed his talents; aroused his social nature; made him better morally; brightened his life; ennobled his home; increased his income; kept his boys

and girls on the farm; given him an honored place among men, and is fast securing him his just rights everywhere.

That the demands of the farmer are just and proper must be apparent, and that they will be complied with is just as certain as that the Government will endure, and the farmers of the country continue to appreciate the justice of their claims and their undoubted power to enforce them.

The question has been asked "What shall we substitute for our district deputy?" I would recommend that a system of district lecturers be substituted therefor. This may be done by dividing the State into as many lecturer's districts as there are deputy districts under the deputy system. Elect or appoint a lecturer for each district, making it their duty to visit each subordinate Grange within their respective districts at least once in each year. All of which is respectfully submitted.

Wm. Johnston, Lecturer,  
State Grange, P. of H., Cal.

#### Standing Committees.

GOOD OF THE ORDER.—J. C. Steele, N. Mertes, H. W. Johnson, Sisters C. A. Hull and S. C. Wheeler.

APPEALS.—A. D. Nelson, J. Milliken and Sister Nellie G. Babcock.

LEGISLATION.—G. W. Hancock, W. L. Overhiser, W. T. Lam, Thos. Stewart.

FINANCE.—L. G. Douglas, Wm. Ennis, M. Sprague, Sisters N. Mertes and J. Milliken.

CO-OPERATION.—B. Pilkington, G. W. Cone, John Adams, Sisters W. L. Overhiser and Boss.

RESOLUTIONS.—E. W. Davis, Jos. Marsh, Sisters S. T. Coulter and Hattie E. Sprague.

OFFICERS KNOWN.—R. A. Temple, G. W. Davis, Thos. E. Ketchum, Sisters W. D. Ashley and H. W. Johnson.

CONSTITUTION AND BY-LAWS.—G. W. Phelps, Wm. Eddy, C. H. Cooley, Sisters C. Grattan and Wm. Ennis.

#### Special Committees.

ORDER OF BUSINESS.—J. F. Deming, B. Pilkington, and Sisters C. A. Hull, Wm. Johnston and A. T. Dewey.

ON DEATH OF OUR LATE PRESIDENT, JAS. A. GARFIELD.—Thos. E. Ketchum, D. A. Ostrom, I. C. Steele, S. T. Coulter and Sister W. D. Ashley.

ON DEATH OF BRO. G. W. COLBY.—I. C. Steele, Amos Adams, Sister W. D. Ashley.

ON DEATH OF SISTER G. W. HANCOCK.—Daniel Flint, Sisters C. A. Hull and H. W. Johnson.

FEAST OF POMONA.—G. N. Whitaker, S. T. Coulter, Wm. Gladden, G. W. Hancock, N. Mertes, and Sisters N. Mertes, S. T. Coulter, Hoover, G. N. Whitaker, R. A. Temple and H. J. Hawkins.

#### OFFICERS ELECTED FOR 1881-2

Master—Daniel Flint, Sacramento.

Overseer—S. T. Coulter, Santa Rosa.

Lecturer—E. W. Davis, Santa Rosa.

Steward—Nelson Carr, Bennett valley. (Santa Rosa P.O.)

Assistant Steward—T. T. Hooper, Rio Vista.

Chaplain—G. L. Douglas, Yuba City.

Treasurer—J. C. Steele, Pescadero, (official address, S. F.)

Secretary—J. V. Webster, East Oakland, (official address, S. F.)

Gate Keeper—Wm. H. Johnston, Richmond, Sacramento county.

Ceres—Mrs. Hattie Deming, Vallejo.

Pomona—Miss Hattie E. Sprague, Sacramento.

Flora—Mrs. Lily G. Jasper, Wheatland.

Lady Assistant Steward—Mrs. Nellie G. Babcock, Temescal, (via Oakland).

Executive Committee—C. Grattan, Stockton; G. W. Hancock, Sacramento; P. H. McGrew, East Oakland.

#### Annunciations of Purposes.

The following resolutions from the Committee on Co-operation were unanimously adopted.

1st. Enforcement of the laws against pooling and combinations.

2d. Equitable taxation and encroachment in public expenditures.

3d. No discrimination against any citizen or class of citizens, or public highways.

4th. Laws making it the duty of public officers to defend a citizen's rights against injustice practiced by corporations.

5th. The public lands are prone to be of the people, and should be exclusively held for actual settlers, whether it be farming or timber lands.

6th. Laws providing for the restriction, within proper limits, of corporate powers and privileges generally, and for the protection, education and elevation of the masses.

7th. Enforcement of all laws against bribery, including the entire prohibition of free passes to State County or Municipal officers, their subordinates or families.

8th. Laws compelling transportation companies to base their charges upon "costs and risks of service" instead of the new theory enunciated by them, "what traffic will bear."

9th. We advocate the establishment by the United States Government of a national postal telegraph system throughout the entire country, subject to and under the control of the Government.

10th. Land monopoly in this State is a bar to its settlement, and consequently should be discouraged by compelling large land holders to pay the same rate of taxes per acre when of like quality and similarly situated, as that imposed on the poor man's homestead.

11th. That in order to give effect to and enforce the observances of these principles and objects, that organization of the farmers on a non-partisan basis is absolutely necessary.

12th. That we recognize and will defend the principles that every one should so use his property as not to injure the property of another, and upon this common ground of equality and justice, we demand that the debris of hydraulic mining be confined and controlled outside of the river channels, by and at the expense of the mine owners, or that hydraulic mining shall cease.

13th. That we make no war upon corporations as such, nor upon any legitimate interest or industry; but experience has shown that organization is necessary to resist the aggressions of corporate monopolies to maintain public rights, as expressed in the Constitution, and interpreted by the Supreme Court of the United States; and for this object we pledge our earnest efforts, regardless of party affiliations.

14th. That the State, having delegated to railroad and telegraph corporations its duty of maintaining public highways and inter-communication among the people, is bound to control said corporations in the interest of the public or resume the functions so delegated; that the direct tendency of the abuses in our transportation system are to nullify the principle upon which our Government is founded. Instead of the distribution of wealth, they tend to make a few very rich and the many poor; the feudalistic tendencies of the age are very marked, and prompt and vigorous efforts are necessary to check this rapidly growing evil.

15th. That the American public, and especially the farmers of this State, are not yet ready to acknowledge that there is a dominant and privileged class to which all the rest of the community must pay tribute; that every barrel of flour, every sack of wheat, every ton of coal and other necessities of life, must be depreciated to the producer, or unduly enhanced in cost to the consumer in order that the few may live in undue luxury at the expense of the many.

We have faith that the intelligence and patriotism of the American people will be equal to the emergency of controlling the creatures of their creation; and, invoking the influence of every good citizen, we will organize and work to this end.

#### Resolutions Adopted.

##### MINING DEBRIS.

Offered by D. A. Ostrom:

WHEREAS, A great controversy relative to the continuance or suppression of hydraulic mining, as it is now prosecuted, is agitating great numbers of our people; and demanding it the duty of this body, as the great representative of the agricultural interest, to express our sentiments on this very important and, to agriculture, vital question. Therefore be it

Resolved, By this, the State Grange of California, that we look upon the present practice of dumping the debris from

hydraulic mining operations into the water courses of this State as an act destructive to the better interests of the whole State. It is obliterating the channels of our navigable rivers; it is threatening the harbor of San Francisco, the only one of capacity on our coast, and the permanent injury of which would be disastrous. It is threatening the existence of towns and cities. It has already destroyed tens of thousands of acres of our best land. It has now so filled the channels of our streams of the great Sacramento valley as to convince any impartial observer that unless soon stayed, it will convert most of that large region into a waste of sand and silt. It has driven from their homes and rendered valueless the property of a large number of our best citizens, reducing them from comfortable, and in many instances affluent circumstances, to absolute poverty, many of them in their old age.

Resolved, That no gain of gold can compensate for the evils already consummated, some of which are enumerated in the foregoing; that all alike should so use their own as not to injure or despoil another, which we believe is not only correct as a truism, but is good law and equity.

Resolved, That we denounce as absurd the proposition that farming has in a great degree contributed to bring about the condition complained of; but, on the contrary, those who are conversant with farming operations where the injury is greatest, know and affirm that to any appreciable extent such is not the case, and as proof positive, in streams in the same locality on which hydraulic mining has never been in operation, the water is clear and their channels have not been filled to any extent whatever.

Resolved, That we urge the efforts of our fellow citizens and brothers of the Grange in the various counties, have done the right thing in the right way. In their appeal to the courts of our country, although suffering long before taking such action.

We believe that the law properly enforced should and will suppress this monstrous evil, and that we pledge ourselves as Patrons of Husbandry to stand to our suffering brethren and fellow-citizens a cordial sympathy and support in securing so desirable and necessary a consummation.

Resolved, That we applaud the action of our Supreme Court in throwing overboard the iniquitous Debris act, it being simply a semi-license for the practice and perpetuation of hydraulic mining at the expense of the people of this whole State.

#### Offered by Dr. S. R. Chandler:

WHEREAS, There are a few men engaged in the business known as hydraulic mining in the mountains of this State, from the result of which business the property of thousands of citizens has been destroyed, and in many cases entirely destroyed; that by this means whole communities have been blotted out of existence; that, from the effects of this mode of mining the watercourses of the entire Sacramento valley have been rendered almost valueless for the purposes for which they were adapted by nature and nature's God; that the continuance of this mode of mining must and will, so far as agriculture, commerce and manufactures are concerned, blot from the map of the State the entire Sacramento valley, with its homes, its farms, its towns and cities, and render the hays of Suisun, San Pablo and San Francisco a succession of mud or sand-flats; and

WHEREAS, In all civilized communities and States, since history began, the laws of the State have been enacted for the protection of their own property and aggrandizement have destroyed the possessions, the property and the lives of their fellow men, have been considered and treated as felons and outlaws; and

WHEREAS, From the commencement of mining in this State until the present time, the local mining laws of this State have not permitted one miner, or class of miners, to interfere with or trample upon the rights of any other miner or class of miners, but require that each shall use his property in such a way as not to injure that of his fellow;

Now, believing these premises to be incontrovertibly true, we, the State Grange of California, do claim it to be the duty of our next Legislature to enact such laws, the enforcement of which will forever prevent the further use of the watercourses of the State from being used as places of deposit for debris from hydraulic mines, and do pledge ourselves, each to the other, that we will use all proper means at our command to induce our legislators to enact such laws, and that we will not vote for any man for a legislator whose past life, present pledges, ability and general integrity do not justify us in believing that he will carry out these, our just demands.

#### Offered by S. T. Coulter:

Resolved, That we hail with satisfaction and delight the announcement that the most iniquitous folly that ever was enacted in the name of legislation has been declared void, by the highest judicial tribunal in the State; and we regard this decision as a harbinger of a return to the policy of requiring every one to so use his own, as to inflict no injury on his neighbor.

#### REPRESENTATION IN STATE GRANGE.

##### Offered by N. Jones:

WHEREAS, Representation is one of the fundamental principles not only of the Grange, but of Government itself, as well as one of the main principles contained in our Declaration of Purposes, viz: "To maintain, inviolate our laws;" and

WHEREAS, This we cannot do if we surrender our right of representation; and

WHEREAS, There are several counties of this State with as many as four active subordinate Granges, without representation in this session of the State Grange; therefore,

Resolved, That the Worthy Master of the California State Grange be, and he is hereby requested to use all his influence to have the Constitution of the National Grange so amended that each State Grange of California may regulate for itself the basis of representation from subordinate Granges.

#### CO-OPERATION.

##### Offered by A. D. Nelson:

Resolved, That this State Grange recommend subordinate Granges to organize co-operative societies for the purpose of hauling and selling wheat.

#### Report of Committee and Amendment to By-Laws Adopted.

The committee to whom was referred the resolution that was adopted by this Grange, offered by Bro. ———, in regard to abolishing the office of District Deputies and substituting in their place District Lecturers, with instructions to report a substitute therefor, would respectfully report that they have attended to the duties assigned them, and recommend the following amendment, viz: Strike out all of Art. 5 in the by-laws, and insert the following:

#### Art. 5.—District Lecturers.

The Master of the State Grange shall appoint a Lecturer for each county, upon a recommendation of a majority of the Masters of the subordinate Granges in the county, who is a Master or Past Master, whose duty shall be to organize Granges, upon application being made to him by proper persons residing in his county; to install officers of Granges when the same shall have been elected, and to be vigilant that no disorder shall obtain in the Granges under his jurisdiction, and promptly report such disorder to the Master of the subordinate Grange where the same shall have occurred, or to the Master of the State Grange; they shall receive for organizing new Granges their necessary expenses; they shall be appointed for one year, subject to removal for cause by the Master of the State Grange; they shall visit each subordinate Grange within their jurisdiction at least once each year; they shall be authorized to call joint meetings of all the Granges in their jurisdiction, and shall notify the Lecturer of the State Grange of the time and place of such meeting; they shall report to the Master of the State Grange on or before the 10th day of September of each year.

#### Memorial Resolutions Adopted.

Resolutions of respect offered on the death of Sister Julianna Hancock, of Sacramento Grange, No. 12:

WHEREAS, Since a meeting of the last State Grange, Sister Hancock has passed from earth to spirit life. Therefore, be it

Resolved, That while we deeply feel her loss, we know that she is not dead, but gone before.

Resolved, That in the death of Sister Hancock, the Grange has lost one of its most valuable members, her husband a devoted and accomplished wife, and all that knew her a true friend.

Resolved, That we deeply sympathize with Brother Han-

cock in his bereavement, and trust he will find consolation in the beautiful faith that sustained his beloved wife in earth life.

Not dead, but gone before,  
Not dead, only waiting on the other shore.  
Only passed from earth to spirit life,  
Beyond all earthly care and strife.

DEE. D. HULL,  
DANIEL FLINT,  
SISTER H. W. JOHNSON. } Committee.

The committee recommend that these resolutions be spread upon the minutes of this Grange, also a copy sent to the bereaved husband and family, and also sent to the *Patron* and *Rural Press* for publication.

#### Expression of Gratitude.

The following, offered by Dr. C. Grattan, was unanimously adopted:

Resolved, That this State Grange has the fullest appreciation and admiration for the faithfulness, vigilance and ability which our Brother, Past Master, B. R. Spilman, has shown for the past two years in his work for the advancement of our Order and its noble purposes.

Resolved, That the members of this State Grange tender their heartfelt thanks for Bro. Spilman's noble efforts, and earnestly desire God's blessing that our Brother may be restored to health and long enjoy the fruits of his Grange work, namely, the restoration of active Grange laborers in our field in such numbers that they shall, by united and intelligent action, successfully demand their rights.

#### Amendments to Constitution and By-laws Proposed.

The Committee on Constitutions and By-laws report the following proposed amendments, notice of which is to be sent by the Executive Committee to each subordinate Grange, under the provisions of the Constitutions, at least three months previous to the next State Grange session, in order that action can be taken on the same, viz:

Article 2d, section 3d of the Constitution—strike out the word six (6) in the fifth line, after the word "of," and insert ten (10). In Article 12th, section 2d, strike out all between words "meeting" and "receive" in the second and third lines.

In the by-laws in Article 1, section 9, strike out the word "six" in the fifth line between the words "of" and "cents" and insert "ten."

Bro. Amos Adams, who has served ably as Secretary since 1875, was relieved from further service at his own request, on account of his pressing duties as manager of the Grangers' Business Association.

#### Feast of Pomona.

The eighth degree (Pomona) was conferred in an impressive manner upon a class of 50 Past Masters and Matrons, who were new representatives to the State Grange and subordinate degree members. The sisters outnumbered the brothers who were candidates by two.

As usual, this was the most attractive feature of the session. The committee of preparation did their work well. The generous Patrons of Santa Rosa valley poured forth the rarest and most bountiful supply of fruits, nuts, etc., that has been presented at any of our ten feasts in this State. The most delightful and rarest feature was the freshness and beauty of the display. There were no ordinary contributions. All were excellent. The "bloom," as it were, remained perfect on every specimen, and one could not but realize, in partaking of Pomona's treasures, the extra delight one enjoys when plucking the choicest gems of nature's graceful offerings, direct from the body that bears them. Although an immense number of Patrons and friends feasted sumptuously, it seemed as if more than one-half of the fair feast remained at the closing hour—near midnight.

The floral decorations were a beautiful feature. We never saw a finer display of fruit, and we expect to mention the contributions more particularly hereafter.

#### The Next Session

Will be held in Stockton, on the first Tuesday in Oct. 1882. Votes were cast for holding it in Vallejo, Oakland, Sacramento and Santa Rosa, but Stockton had a large majority over all. Sister Hull favored Stockton humorously, saying that Sacramento's, with Artemus Ward's fondness of sacrificing his wife's relations, were in favor of Stockton and the saving of several days hard work of entertaining the State Grange.

#### Miscellaneous.

Santa Rosa Grange and its Committee, supported by members of Bennett Valley Grange, won the gratitude of the entire State Grange for their generous and considerate treatment.

At their first session Bro. Theo. Staley, W. M. of Santa Rosa Grange, bid the members and visiting brothers and sisters a pleasant welcome from Santa Rosa and Bennett Valley Granges. This was happily responded to in as eloquent terms on behalf of the State Grange by Bro. B. Pilkington, Past Lecturer.

Worthy Master Spilman not feeling well, his annual address was ably read by Bro. I. C. Steele, P. M., on Tuesday.

Well received and encouraging speeches were made Tuesday by visiting Patrons, Judge Jones, of Ohio, and Ex-Gov. Furnas of Nebraska, who have visited this coast as Arid Land Commissioners for the U. S. Agriculture Bureau, at Washington. We regret that we cannot report the names and good words of all who took part in the meetings.

Official reports and statements concerning the *California Patron* and its publication received a large share of attention, and the procuring of subscriptions and donations, for the continued support of the same, from individual Patrons present and from the Granges represented, was urged with enthusiasm and success to the amount of \$566.

The sentiments of the Grange concerning the anti-debris resolutions adopted showed a wonderful unanimity of feeling on that subject.

Free tickets were furnished to Patrons on their return to San Francisco by the railroad company, through E. W. Davis, of the Santa Rosa Committee.

The election of officers for the ensuing two years, in most part gives real satisfaction, and Patrons look forward in confidence for the future



welfare of the Order in this State. In our next we shall give our readers who are unacquainted with the new officers elect some interesting information concerning them.

The session was largely attended by members past masters, matrons and 4th degree members, and is considered the best State meeting of any held for many years.

Thursday evening was mostly spent in a profitable manner in the exemplification of the secret work, by Bro. I. C. Steele, P. M., by request.

On the roll of Granges being called, each representative present responded in a five minutes statement of the condition and prospects of their Grange, giving much information of interest for our future publication.

Memorial resolutions on the death of our late President Garfield and Bro. G. W. Colby will appear hereafter.

On motion of Lecturer, E. W. Davis, subordinate Granges are recommended to incorporate co-operative associations.

Bro. C. H. Cooley's resolution for legislative action requiring work on our highways to be let to the highest bidders was adopted.

A resolution by Geo. Rich, of Sacramento Grange, asking for a State law for closing drinking saloons on Sundays, was passed.

Thanks of the State Grange were tendered to Mark L. McDonald for a ride over his street railway and a visit through his fine suburban residence and ornamental grounds; also to Santa Rosa and Bennett Valley Granges for their generous and self-sacrificing attention to the wants and comforts of the State Grange and its visitors; to the local press for its courteous publications.

#### Closing "Love Feast."

The "love feast" on Saturday evening, before the final closing of the Grange, was greatly enjoyed by the brothers and sisters who were so fortunate as to be present. No other organization affords a truer or more hearty fraternal intercourse, or more kind and enduring regards among its members than the Grange as exemplified at these social reunions. Worthy Master Flint called upon all to feel at home, without restraint to give expression to their thoughts and feelings. Past Master Steele led off with excellent words on the aims and fraternal features of the Order. Himself and Past Master Spilman both gave praise to the elevating work and influences of the National Grange and the higher degrees of the Order. Many of the following named gave briefly but well rendered hints and ideas, that it would be for the pleasure and good of every Patron in this State if carried home and repeated in every subordinate Grange in the land: A. D. Nelson, G. W. Hancock, A. T. Dewey, W. L. Overhiser, W. G. Davis, S. T. Coulter, G. L. Douglas, Daniel Flint, W. M. I. De Turk, Moore, J. V. Webster, G. W. Whittaker, J. Milliken, Wm. Ennis, Heald, H. A. Logan, E. W. Davis, Fulton, S. C. Wheeler, J. F. Deming, T. T. Hooper, Dr. Chandler, and Sisters I. C. Steele, J. F. Deming, S. C. Wheeler, S. T. Coulter, S. H. Dewey, W. L. Overhiser, Nellie G. Babcock, J. V. Webster.

We have this week devoted our space largely to reporting the principal action had by the Grange in plain and condensed manner as possible. Hereafter, we propose to sketch some of its, perhaps, more pleasing and interesting features in continuation of our report.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### CONTRA COSTA.

**IMPROVED SWINE.**—*Gazette*: Mr. James O. Boone, of Danville, who is engaged in business of purchasing marketable hogs in the county and their shipment for sale in San Francisco, sent down a fine drove of about 150 head last Thursday, ranging in weight from 150 lbs. to 430 lbs. each, all of Berkshire, Poland China, and other strains of approved breeds. The fine grade and condition of this lot of hogs, made up from purchases here and there about the county, attests the very great improvement which has been effected in this department of our domestic stock interests within a few years past.

#### LOS ANGELES.

**THE SIXTH DISTRICT FAIR.**—*Express*: The fair to be given this year at Agricultural park by the District Agricultural Association promises to be the most attractive exhibition we have ever had here. The fair will commence on Monday the 31st of October, and last during the entire week. The list of premiums includes liberal awards, not only to live-stock and the products of the soil, but to every range of industry and handicraft flourishing in southern California. Not less than \$3,000 will pay the aggregate awards offered. The association is under the direction of a board of able and active men, who have the affairs of the society on a solvent financial footing. The stock exhibitions at the park will surpass any ever before made there, for the choicest breeds both of cattle, of the pen and of the stable will be represented there.

#### PLACER.

**RAIN.**—*Auburn Herald*: Auburn was visited by another rain storm last Monday that lasted from early in the morning until late at night. From all indications the storm was general. These early rains, besides leaving the roads in good condition, help to dissolve the clouds on

summer fallowed ground and make the work of seeding such ground much easier. They, however, injure the dry feed, and unless the new grass shall make a fair growth before cold weather, the season, in consequence of the early rains, will be worse on stock.

#### SANTA CLARA.

**FRUIT SHIPPING.**—*Mercury*: The Golden Gate Fruit Packing company are loading 10 cars with canned fruit for London. The fruit will be shipped from New York by steamer. The shipment of fruit from San Jose to Europe overland via New York is a new feature in our fruit industry.

**HORTICULTURAL SOCIETY.**—The regular monthly meeting of the Horticultural Society was held Saturday afternoon at their rooms in Martin's block, Vice-President D. C. Vestal in the chair, and S. F. Chapin, Secretary. On motion of F. T. Holland, a vote of thanks was tendered the Committee on Orchard Pests and Remedies for their report on scale insects, presented at their last meeting. It was stated that the white dorthesia, a most destructive insect, not only to fruit trees but to shade and ornamental trees and shrubbery of all kinds, was widely distributed in this county. The name of the society was changed from "The Horticultural and Viticultural Society of Santa Clara county" to "The Horticultural Society of Santa Clara county," striking out the word "viticultural," another society having been organized, known as the Viticultural Society, whose object is to look after that especial interest of the county. Dr. Chapin reported that the commissioners had visited officially, this week, the Santa Cruz mountain district, and found in almost every orchard one or more of the insect pest. The small round Black scale *Aspidiotus perniciosus* was found in the orchards of Philbrick & Baker and Presho. It was also found in two orchards on the summit of the mountains. The red spider was found in most every orchard. The codling moth was found in Mr. Collins' orchard near Forest House. The finding of this red scale in the mountains shows the necessity of nurserymen disinfecting their trees before sending them away. Dr. Chapin said that he had found the *Aspidiotus perniciosus* in young orchards from every nursery in the county. In 19 orchards the woolly aphid was found—in every orchard where there was an apple tree. The scale bug was also found at Los Gatos. Mr. Vestal desired to call attention to his remedy for any old apple tree that is badly infested with woolly aphid: To dig a hole 5 ft. in diameter, take up the tree and burn it. Dr. Chapin was requested to prepare a paper on insecticides and modes of applying the same, to be read at the next meeting. The meeting then adjourned.

#### SANTA CRUZ.

**OUR TIMBER INTERESTS.**—*Courier*: But few of our people have any idea of the amount of work that has been done in our redwoods during the past summer, and what a source of revenue our timber interests are to the county. On a recent trip up the line of the South Pacific Coast railroad, we chanced to drop in on L. D. Gardner & Co., near Glenwood. We found these gentlemen as busy as bees, and everything in their vicinity having the appearance of real life and activity. They have now in their employ about 25 men. We are informed that they had cut over 2,000 cords of wood from one of their tracts of 160 acres, and yet the supply seemed to be unlimited, and the amount of timber cut out would hardly be missed. There is a good demand for labor at fair wages. No need of any man being idle who wants work.

#### SACRAMENTO

**MOUND BUILDERS.**—The farmers living immediately below Sacramento City are discussing the necessity of adopting the mound system. There are 3,600 acres of tillable land in the district and it is said the real estate is not worth enough to carry the burden of supporting 12 miles of levee. The people say that with no levees at all there will be entailed but a loss of the use of the land of from four to six weeks each rainy season, and that is not as bad as their recent experience. If they adopt the mound system the farmers will move their fences and other personal property liable to float away, raise their houses, place their stock and feed upon their mounds, and await the subsidence of the floods. So much for hydraulic mining in one little neighborhood.

#### SONOMA.

**FLEECES.**—*Petaluma Courier*, Oct. 5: Mr. Wm. McDowell, Superintendent of the Cotate ranch, has sheared the ten Spanish Merino sheep exhibited at the last Petaluma fair. Five of them were rams and five ewes. They had 11 months' fleece on them. The ewes sheared from 20 to 22 lbs. each, and the rams from 24 to 31 lbs. each.

**FARM OUTLOOK.**—The farmers between Petaluma and the coast have finished threshing, and some of them commenced digging their potatoes—those early planted. There was not as much ground planted in potatoes this year as last, and owing to too much hot weather and less fog than usual, the crop will be light as compared with former years. Sheep shearing is about over. The fall clip, owing to the good condition of the sheep, has been very fine. Stock of all kinds is in splendid condition for the winter. Good dairy cows are in demand and at prices higher than usual. From \$28 to \$35 can be readily obtained, but they are scarce. Fresh milk cows average from \$35 to \$40. Fat hogs are scarce, and so are good beef cattle, and both bring fair prices. If half the grain raised

in this county last year had been fed to good stock, farmers would have had more of them for sale and realized a fair profit on their year's work and investment. The dairy season has been one of the best we have had for years. The fruit crop has been good, and the market for all kinds better than usual. Fruit driers and canning establishments have worked a revolution in the fruit business. There will always be a market for good dried or canned fruit, more especially for certain varieties. Grapes are ripe and owners of vineyards busy making wine. This is a most profitable industry and rapidly increasing every year. Nurserymen tell us, that for certain varieties of fruit trees, they cannot possibly fill the orders now already in. We have an abundance of hay, plenty of grain for home consumption and some to spare, plenty of fruit, potatoes, corn, wine, butter, cheese, vegetable produce, and on the whole, old Sonoma is in as sound a condition, agriculturally speaking, as her most favored sister county.

**SMALL ORCHARDS.**—To beginners in fruit raising, I would say, that if you want to be successful with a small orchard in connection with farming, you should plant such trees as Bartlett pears, Lemon Cling, Strawberry Cling, Early Crawford and the Late Green Valley seedling peaches; the Columbia, Yellow Egg and Petit Prun de Agen plums. These are varieties that a farmer can take care of, for this reason: The pears and peaches and some of the plums can be sold to canneries, and the balance dried, yielding a profit greater than farming. Besides, the handling of this fruit comes in when the days are long and work can be done to the best advantage. Now do not jump at the conclusion that all the varieties enumerated will grow equally well on all kinds of soil and in every climate. While the pears and plums will do well on adobe soil, peaches will not. In these matters good judgment must be used, and this can best be acquired by investigation. To succeed it requires attention to the business, just the same as with hay, grain or any other farming industry. For information how to pick, when and how to dry your fruit, you should go to successful horticulturists, who have made this matter a study by practical tests. Information is what is most needed. And above all things keep your orchards free from weeds, and let the ground be well pulverized. Pursue this course and you will be on the sure road to success.—A. CADWELL.

#### The Mussel Slough Celebration.

According to all accounts, the celebration at Hanford last week over the return of the settlers confined in the San Jose jail, was a notable success and an occasion never to be forgotten by the participants. Upwards of 2,000 persons were present. Speeches were made by Hon. E. C. Marshall and Carl Browne. Letters were read from 40 to 50 prominent men in various parts of the State, who sympathized with the people in their important struggle.

A committee—F. J. Clark, Judge John Clark, Major J. J. McQuiddy, W. W. Barnes and C. C. Robinson—next presented a set of ringing resolutions showing up the harsh and corrupt course of the railroad management about its land matters; its vindictive persecution of the prisoners; the biased and unjust findings and sentence of the court; reiterating the steadfast friendship and sympathy of the vast gathering for the five men and their associates, and declaring it to be a greater honor to be such wronged "felons" than to be a corrupt Judge. The meeting adopted them unanimously.

The released prisoners feelingly returned thanks for their overwhelming welcome, J. J. Doyle and J. N. Patterson speaking at considerable length. Eight months' imprisonment seems not to have dampened the zeal of the wronged men for their cause and their determination to contend for their rights as in the past.

After the exercises a sumptuous basket dinner was spread on impromptu tables, and there was abundance for all.

The day's proceedings were closed by the promised trial of the James single-track railway, which was highly satisfactory. A full account of the celebration may be found in the *Visalia Delta* of last week.

**TAMALPAIS HOTEL.**—This most delightful and healthy resort has this summer been re-furnished and painted throughout. The proprietor, Mr. W. G. Grabam, formerly of Congress springs and other leading country hotels, is well known throughout the Pacific coast for his kindness and attention to his guests. As a caterer he is unrivaled. The beauty of the country around and the mild and salubrious climate render it a most desirable residence during the fall and winter months.

**Mr. Cooke's Report.**—The report of Mr. Cooke, to which extended allusion is made elsewhere will be ready for distribution about Oct. 15th, in counties where Horticultural boards have been appointed by the supervisors. Residents of these counties should apply to their local commissioners for copies. Those living in counties where no commissioners have been appointed may obtain the report by addressing M. Cooke, Chief Horticultural Officer, Sacramento, Cal., and enclosing a 2c. stamp for postage.

### News in Brief.

THERE is danger of a water famine in New York City.

MICHAEL DAVITT, the imprisoned agitator, is soon to be released.

THE Mexican Government is about to colonize 200 Italian families.

A STATE Greenback camp-meeting is in progress at Jackson, Mich.

ANDREW NUNAN was killed by a fall in the Savage mine, Sunday.

THE Garfield fund has reached \$339,898, and the Michigan fund \$94,258.

REV. THOMAS HARRISON is striving to get up a revival in San Francisco.

AN Italian named Tanzi was shot by a night watchman at Sonora, Sunday last.

IN the Insane Asylum at Stockton, there are 786 male patients and 325 female.

A CIGAR factory employing 200 persons has been destroyed by fire in New York.

WASHOUTS are causing great trouble on the Atchison, Topeka and Santa Fe railroad.

DURING the past seven days 110 business failures have occurred throughout the country.

BANDON, Coos county, Oregon, people, make a good margin by selling their salmon at \$10 a ton.

SOME large plate glass windows have been cracked in this city, by absorption of the sun's rays.

THE headquarters of the Russian Nihilists has been discovered, and 60 arrests have been made.

THE tobacco crop in the vicinity of Raleigh, N. C., is reported badly injured by the first frost.

CERTAIN Texas banks advertise to take all the Confederate bonds they can get at \$2.50 per \$1,000.

FEVER is epidemic in the Punjab, Hindoostan, the deaths at Unnivisir averaging 200 to 300 daily.

AT Las Lunas, N. M., Friday night, three Mexican murderers were taken from jail by a mob and hanged.

IT is announced that it will require \$1,000,000 to make good the losses caused by the Michigan forest fire.

A Boy named Floyd was thrown from a horse on the race track at Reno, Nev., and probably fatally injured.

BARON VON HAMERLE, Austro-Hungarian Minister of Foreign Affairs, died suddenly at Vienna, of heart disease.

THE overland stage from Oregon was robbed near Redding, Shasta county, Saturday night, by a solitary highwayman.

THE San Louis Rey Star suggests that a "quail cannery" be established there and the Eastern markets supplied.

**A PERCHERON VICTORY.**—In the great draft-horse contest between the Clydesdales and the French Percherons, at the great Chicago fair, 1881, the latter were victorious. Mr. M. W. Dunham, of Wayne, Dupage Co., Ill., whose stud of famous horses has elicited the universal admiration of all persons who have visited the Chicago fair, has won the great sweepstakes prize \$1,000 and the grand gold medal for the best herd of draft horses, over the magnificent herd of Clydesdales owned by Colonel Robert Holloway, beyond doubt the finest collection of Clydesdales ever shown, consisting of the prize winners at the great shows of Scotland and England. For the best draft mare Mr. M. W. Dunham's renowned mare Mignonette took the sweepstakes prize of \$500 and grand gold medal. She has been the winner at nearly all the great shows of France; also taking the highest honors at our own Centennial, and now makes her grandest victory over the finest collection of mares ever exhibited. She stands the unapproachable draft mare of the world, invincible. The committee on best draft stallions, in a ring of 49 stallions, recommended a special gold medal struck for Mr. Dunham's stallion Vidocq. Mr. Dunham has taken besides these sweepstakes prizes a large percentage of the class prizes. The fine display of stock and the liberal and tasty manner in which everything connected with his exhibit has been conducted, has made him hosts of friends, besides adding greatly to the laurels of the Percheron race, the greatest of all draft breeds. Mr. Dunham has made sales during this fair week aggregating in all \$17,000. He has the largest importing and breeding establishment in the world, at Wayne, Ill., where he keeps open house to all; and anyone visiting his farm will always be sure of a hearty welcome.—*Chicago Inter-Ocean*.

**DAIRY QUEEN CHURN.**—The Dairy Queen Improved Churn and Butter Worker was shown by the inventor, Geo. W. Freeman (of Rocky Point, Sierra county), at the State fair and San Joaquin district fair. It was shown in actual operation, and attracted much attention and many favorable comments concerning its excellent work. Several orders were taken from leading dairymen in different parts of the State. We understand that Mr. Freeman intends to make a canvass of the State this coming winter and spring.

**FRUIT LAND AT AUCTION.**—We would call attention again to the advertisement of orchard and vineyard land in the La Jota ranch, near St. Helena, Napa county, which will be sold at auction, at St. Helena, October 15th, at 2 p. m. We understand that the land must be sold, and it may be an opportunity for good bargains.





### Broken Toys.

I found my baby girl to-day  
Asleep upon the floor,  
The space around her little form  
With playthings scattered o'er.

Her hands were nestled 'neath her chin,  
And one still firmly held  
A broken toy, whose novel charm  
As yet was undisputed.

There lingered still about the mouth  
And on the brow a trace  
Of thought, half-grieved and half-perplexed,  
As if the tiny face

Already had begun to learn  
The look it was to wear  
In years to come. I stooped to kiss  
Away the mimic care;

And as I laid her still asleep,  
Within her nest-like bed,  
And smoothed the cradle's pillow for  
The weary little head,

I thought how we of larger growth,  
When tired of pains and joys,  
With that same look, fall fast asleep  
Amid our broken toys!

And then the Father, stooping, takes  
The tired head to his breast,  
And smooths the furrow from the brow,  
And bears us to our rest.

—Howard Glyndon.

### Crawl Contentedly.

[Written for RURAL PRESS by EDWARD BERWICK.]

What a terribly hard and blind and cold world this is! So hard to convince, dear reader, of your unutterable merits and of mine; so blind to the radiance of our particular stars, and so cold that the ardor of our self-love is wholly unreflected.

Ay! and what pranks mortals have played, and will play, to combat this world's indifference, from the time when some hankerer after notoriety fired the temple of Diana at Ephesus to the other day when another self-important maniac shot poor Garfield! The fact that we can't all be distinguished, is so very obvious, that acquiescence therein should be easy, one would suppose. But, somehow, we all seem fashioned after the model of that hero, immortalized by Lowell, "Birdofredum Sawin," of Mexican war renown. We think with him: "There's glory to be had."

And in case, dear readers, you never heard Mr. Sawin's experiences, I must quote them, just for their fun and sparkle. Enduring war's hardships, he thus ruminates:

"But then, thinks I, at any rate there's glory to be had; 'Tbet's an investment, arter all, thet mayn't turn out so bad;  
But somehow, wen we'd fit an' licked, I offers found the thanks  
Gut kin' o' lodged afore they came ez low down ez the ranks;  
The gin'ra's gut the biggest sheer, the cornules next, an' so on.  
We never gut a blasted mite o' glory ez I know on;  
An' s'pose we hed, I wonder how you're goin' to contrive its  
Division so's to give a picee to twenty thousand privates.  
Ef you should multiply by ten the portion o' the brat's at oue,  
You wouldn't git more'n half enough to speak of on a gravestun;  
We git the ticks—we're jest the grist thet's put into war's hoppers;  
Leftenants is the lowest grade thet helps pick up the coppers.  
It may suit folks thet go agin a body with a soul in't,  
An' ain't contented with a hide without a baynet hole in't;  
But glory is a kin' o' thing I shan't pursue no farder,  
Coz thet's the officers' parquise—yourn's ou'y jest thet murder."

If then the bubble reputation be so hard to obtain by those who seek it "e'en at the cannon's mouth," what chance is there, dear reader, for such humdrum individuals as our poor selves to swiftly grasp the ever-vanishing toy? Why not make sweet content our life's object? That, *all* may enjoy! Its possession none need envy! No hubbie that to be pricked by to-morrow's eclipsing rivalry!

"What do you say, no ambition in life?" Ambition to get my head a little above my fellow's?—ambition to show myself more insolently luxurious, or more ostentatiously idle than my millionaire neighbor? No! No such ambition. Ambition to make myself and fellows wiser, happier, better? Oh, yes! Any quantity of it! Such ambition goes hand in hand with sweet content.

There are so many millions in this world soured and rendered good for nothing, because the world can't be persuaded to estimate them at their own valuation, that it lately gave me much pleasure, on reading his memoir, to find such a man as Sydney Smith, philosopher, philanthropist and wit, thus writing to Lady Holland:

"I hear you laugh at me for being happy in the country. I am not leading precisely the life I should choose, but that which (all things considered as well as I could consider them) appeared to me to be the most eligible. I am resolved, therefore, to like it, and to recon-

cile myself to it, which is more manly than to feign myself above it, and to send up complaints by post of being thrown away, and being desolate, and such like trash. I am prepared, therefore, either way. If the chances of life ever enable me to emerge, I will show you that I have not been wholly occupied with small and sordid pursuits. If (as the greater probability is) I am come to the end of my career, I give myself quietly up to horticulture, etc. In short, if it be my lot to crawl, I will crawl contentedly; if to fly, I will fly with alacrity; but as long as I can possibly avoid it, I will never be unhappy. If, with a pleasant wife, three children, a good house and farm, many books, and many friends, who wish me well, I cannot be happy, I am a very silly, foolish fellow, and what becomes of me is of very little consequence."

And this man, dear reader, was no ordinary Johnny Whopstraw, but priest and poet, the idol of London society, and the founder of the celebrated *Edinburgh Review*; compelled, by a sense of duty, to farm his own 300 acres of glebe land in the Yorkshire clays, when a journey from London to Yorkshire was about as serious a job as a trip from London to New York nowadays.

I read an instance lately in the *London Times* of this desire for distinction gone to seed. In the army of the Venezuelan Republic there are 32,222 *generals*, while the whole number of privates is something less, so that there is a general for every fraction of a common soldier. Such childish futility could hardly be carried farther. The distinction fails to distinguish. Surely, such nominal exaltation is really profoundest abasement. And yet mankind will for the most part sacrifice all the joys of sweet content for some such tawdry foolery.

Truly, to understand fully the art and joy of humble life, is at present of "all arts or sciences the one most needing study." "Humble life—that is to say, proposing to itself no future exaltation but only a sweet continuance; not excluding the idea of foresight, but wholly foregoing, and taking no troublous thought for coming days; so, also, not excluding the idea of providence or provision, but wholly of accumulation; the life of domestic affection and domestic peace, full of sensitiveness to all elements of costless and kind pleasure; therefore, chiefly to the loveliness of the natural world.

"What length and severity of labor may be ultimately found necessary for the procuring of the due comforts of life, I do not know; neither what degree of refinement it is possible to unite with the so-called servile occupations of life; but this I know, that right economy of labor will, as it is understood, assign to each man as much as will be healthy for him, and no more; and that no refinements are desirable which can not be connected with toil."

Hurrah for the man who so preaches,  
"Which his name is" John Ruskin.

Carmel, Monterey, Cal.

THE FUTURE.—There is probably very little, if any land in this county which may not, by proper and careful culture, be made to produce some kind of fruit or grapes. The product would then be increased from \$10 to \$15 per acre to \$100 and upwards. This change of product, of course, will require small farms, more work, more owners of the soil, obliteration of all princely domains in land, more tax-payers and lighter rate of taxation, largely increased population, more schools, more intelligence, fewer tramps, and work for every person, man, woman and child. Aside from those engaged in fruit raising, raisin and wine making, there would be required large numbers to manufacture fruit boxes, raisin boxes, wine tanks, wine cellars, tin cans for canned fruits, large numbers of workers of both sexes in the greatly increased numbers of canneries. Where now thousands of dollars are brought into our valley for our present products, then hundreds of thousands of dollars would be paid to our producers. The valley and hillsides will be one vast succession of orchards and vineyards. Picture to yourself then, if you can, the transcendent beauty and loveliness of this, to be, the garden spot of the world! Go with us to mountain summit on either side the valley and view the grand panorama spread before your eyes. In February or March you see one vast succession of orchards, the trees covered with beautiful flowers, the air redolent with perfume. Later the valley becomes one dense mass of dark green foliage beautiful to look upon. Later still the purple prune, the yellow peach, the crimson apple, the white and purple grape, mingle their variegated colors with the beautiful green foliage, and there is a picture too exquisite, almost, for mortal eye to appreciate. Mingled with all this variety and beauty of scenery is the song of birds, the happy laugh of joyous childhood and the busy hum of industry.—*San Jose Mercury*.

MAKING THEMSELVES AT HOME.—Some of the customs out on the stock ranges would be rather surprising to people in more settled communities. One of the customs is for the men when out gathering up stock to go to the nearest camp, or house, at night. What this may involve will be understood from a recent case at Mr. Jacob McKissicks camp, in Lassen county. He had just got there with a load of provisions, when 53 vaqueros came in to supper; they remained in the neighborhood three days, and in that time ate up his entire load. No charges are ever made. The men ride up, pull the saddles off their horses, turn them to a haystack, and then go into the house expecting to find food; after eating, they tumble into the hay. In the morning they are up, eat breakfast, and off by daybreak.—*Greenville Bulletin*.

A VOLUME of Oscar Wilde's poems has been sent to the Czar of Russia and the Nihilists are awaiting results with feverish anxiety.

### An Example for Young Men.

The life of the late President of the United States, James Abram Garfield, stands out prominently as a shining example to all young men, no matter what may be their condition. It strikingly illustrates that the accident of humble birth is no bar to advancement, and that what may seem to be insuperable obstacles to win recognition and gain the plaudits of the world, can be overcome by a persistent and intelligent endeavor to gain the end sought for. Here we have a poor, humble boy, whose early youth was spent in the backwoods of Amherst. He was then without friends, and had no counselors except the fond mother who watched over him and guided his immature years in the path of sobriety and honor. But the unconquerable desire to win distinction early took possession of him, and from the log cabin of that pioneer Western home he came a man who stood pre-eminently on an equal plane with the most intelligent of the land.

It must not be thought that the ability to worthily occupy the positions held by our late lamented President, was acquired without an effort. Of course, he must have been greatly endowed with a large amount of natural talent, and so have a great many young men who are frittering away their lives in the pursuit of what they call a "good time." It might never fall to their lot to occupy the positions held by President Garfield, but they can surely benefit their condition in life by an earnest endeavor to strive to gain all the knowledge possible. Knowledge is never lost. There comes a time in the lives of men when the learning they have gained will stand them in good need. This is the "luck" which we hear so much about. The opportunity came for advancement, and it found them in a measure prepared to embrace it.

It needs such a life as Garfield's to bring before the minds of our young men the honors that lie before them if they are only possessed of that ambition which seeks to win recognition by making themselves worthy of it. It may seem a toilsome journey; the briars that beset the path may be sharp and stick with merciless severity he who chooses to win distinction or occupy a position of honor among men. It must necessarily be so, but out of the crucible of trial and privation will come a man who will be an honor to himself and a credit to his country.

### What the "Rural Press" has Done in Colorado.

EDITORS PRESS:—Inclosed please find one year's subscription price for your paper. Owing to my being busy gathering, marketing and shipping fruit, I had overlooked the fact that my year was up. We would sooner do without coffee for breakfast than do without the RURAL PRESS. It may seem strange, but the facts remain the same, and I can tell you, when I commenced to read the RURAL PRESS I had not a fruit tree nor a vine on the ranch, nor a hive of bees; and now, what a change! The RURAL awoke all of my energies, and they now all run in that direction. My house is covered with vines and surrounded with as fine an orchard as one can find in this latitude.

We all shall miss our old friend, Mrs. Locke, and your issue of the 24th will be carefully laid away. What a year of mourning this is. Long may the RURAL live.

E. R. SIZER.

West Las Animas, Colorado.

THE COMING GLORY OF SCIENCE.—Edward Atkinson indulges in a vision to this effect: If we can send thought and light over a wire; and if we can attach to the same post another wire by which to transmit electric power, so that every farmer may keep a small thunder-storm on tap in his barn to cut his fodder, milk his cows, and churn his butter, split his kindling-wood, and do all the heavy work and choring about the house; in short, if we are to accomplish here what is now being done in France, that is, operate an electrical machine by a small water-power on the farm, and run the plows, harrows, harvesters and threshers by electricity—if these things begin to be apparent, that are so bewildering that one even gets considerably mixed up in attempting to describe them, and is not quite sure what relation his parts of speech bear to each other—why, then, perhaps the millennium of the economist is nearer at hand than it has been supposed to be; "the time when intelligence and integrity and a very moderate amount of labor will insure so good a subsistence that it will not pay to be rich."

HOME, love, duty worthily accomplished, work, learning—these are the true perennials of life and sweeten what they adorn. In youth it is perhaps natural that there would be a certain restlessness and eagerness for novelty, a certain impatience under monotony, and a feeling that to lead a quiet life without pleasure or its fatigues is to "bury one's days" in a most unprofitable manner. This is only right, and what we must expect and allow for. Still, even youth, with all its eager desire for movement and excitement, cannot do without love and duty, without home and work; and to lead a life all of pleasure only, devoid of emotion or conscience, is to live on sweets alone, whereby comes nausea and disablement instead of nourishment and strength.

### The Boys—The Farms.

The boys are leaving the farms—to their own disadvantage, and that of the country. Statistics tell us that only about three merchants in a hundred are successful; the others fail, or die bankrupt. We need no figures to show that the farmers do better than that. I have run over in mind 25 farmers living side by side. Almost without exception they have good farms and good homes. Of this number it is estimated that 15 own, after paying all debts, property valued at from \$3,000 to \$15,000 each. These men are not specialists; nor are they "thrice or four times happily located," being ordinary "broadcast" farmers, and distant from market. It speaks well for farming that men turn to it when other means of obtaining a livelihood fail. During the last decade this county, of Aroostook, strictly an agricultural county, increased in population from 29,000 to 41,000, while a large portion of the State decreased in population. This increase nearly all occurred during the "hard times," when there was a rush of Maine men to Aroostook. After prosperity returned immigration almost ceased. What is proved by the statement that 64 of 88 business men of one city are farmers' sons? It simply shows, what it was intended to show, that farm-bred boys stand as good a chance as city-bred boys of making good business men. It does not prove that a large proportion of business men are successful. A young man whose ability and industry offer him a chance of success by trade can certainly secure a good farm and home. The question for a young man to decide is whether he will accept this certainty, or take three chances of becoming rich by trade against 97 of dying bankrupt. I would not make farmers of boys who obviously have special talent fitting them for other pursuits; and there is little danger that genius will be hidden away on the farm, which is needed elsewhere. It is not desirable to bind boys to the farm against their will; but it is important that they understand the comparative advantages of farming and other pursuits, and that they should not be driven from the farm by harsh treatment.—*Cor. N. Y. Tribune*.

### Women as Doctors.

At the recent commencement of the Women's Medical College in Philadelphia, some interesting facts were stated concerning the career of the graduates of that institution, which have a direct bearing on the success of women in this field of professional labor. The following are the more important of these statements: Of the 276 women who had graduated from the college in the past 30 years, 32 had died, 31 had given up their profession, and 151 were then practicing. Of the 151 in practice, the incomes of 24 were between \$1,000 and \$2,000; the incomes of 20 were between \$2,000 and \$3,000; of 10, between \$4,000 and \$5,000; of 3, between \$5,000 and \$15,000; of 4, between \$15,000 and \$20,000; and of 10, less than \$1,000. The average income from practice was about \$3,000. Sixty-six were members of medical societies; 51 were married after studying medicine, and 61 before; of 50 who were married, 43 reported that the practice of medicine had no unfavorable effect on their domestic life; with 6 the effect was not entirely favorable; with 1 it was unfavorable; 3 were prevented by practice from marrying, and 5 gave up practice on account of marriage.

These facts make an exceedingly favorable showing for the women doctors, and should be a convincing argument in favor of the practice of medicine by the sex. Indeed, the opposition to them has so materially lessened during the past few years, that it can hardly be said to have any existence since the majority of the medical societies have withdrawn their opposition.

FLOWERS AND HOMES.—Why should your homes be dreary? Let the floral beauties invite the bees to keep you company. The beauty and freshness of spring is only the more welcome when it is made balmy with odor of flowers. Plant flowers. They have a language all their own. They refine and elevate, and soothe and enoble mankind. The feast, the tournament, the triumphal ovation, the hymenial ceremony, and the obsequies of the dead all call for bouquets, wreaths, and blossoms of beauty, and sympathetic, silent, consonant voices speaking to you in subduing potential charms through the language of flowers. It will crimson the face of the maiden with blushes of joy to present her with a bouquet, which speaks in emblems and tokens of your own heart pulse, and it will cheer the octogenarian to put the choice twigs in the button-hole of his coat, as in it he wears the sentimental tokens of child-like innocence. The soldier puts the cluster in the gun-harrel as he marches from home with his fluttering heart, thinking of the "girl he left behind him." Plant flowers; there is more in them than language can speak.

THE flowing reporter who wrote, with reference to a well known belle, "Her dainty feet were encased in shoes that might be taken for fairy boots," tied his wardrobe up in a handkerchief, and left for parts unknown, when it appeared the next morning: "Her dainty feet were encased in shoes that might have been taken for ferry-boats."



## Chaff.

DON'T talk when you are climbing up the mountain, because silence gives ascent.

MANY students burn midnight oil, but do very little midnight toil.

Mose—"He nebber drapt dead in his tracks or anywhar else as long as I had him, goin' on 20 years."

THE young man who gave up drinking to propitiate his girl, wisely concluded that a miss is as good as a smile.

A NEW JERSEY girl died after drinking 15 glasses of lemonade. Some of the New Jersey girls are very delicate.

THE inhabitants of the Cannibal Islands have discovered trichinae in an American Missionary. This is a sad blow at one of our country's leading exports.

INDIANS have a strong way of putting things. "I never," said Sitting Bull, picking up a little dirt from the tent floor, letting it fall and blowing it away, "sold that much land."

A TROY hotanist has christened a double tuberoses of his propagation "Mary Anderson," and we suggest that when he doubles up a tobacco blossom he names it "Ham Griffin."

"While there's Bliss there's hope," says the Boston Post, and there does a Rebyburn about there, that's a fact. Who Woodward it off?—New Haven Register. Oh, for a new pun!

THE latest advices from over the Gulf state that the Mexicans have captured Meqpwztzicopolztzlatlan. Do you know, we always did believe the Mexicans would have possession of that place some time or other.

"Pa, do they make cannons as they do glass bottles?" "Certainly not. Why do you ask such a question?" "Well, then, why does the paper say the wind blows great guns?" And then old man caught the youngster by the neck and hreeched him.

A RHODE ISLAND Sunday-school superintendent, in a touching address, told the children that out West—far, far, in Illinois and Iowa and Nebraska—there were people who had never been to a clambake. And when the contribution box went around after that, the nickle rained into it until it weighed a ton.

A NEWLY imported Hungarian, employed on a ranch a few miles north of Helena, Montana, tilted up a bee hive the other day to see what the bees were doing under there. He knows now. He says they were making chain lightning and had 2,000 tons of it on hand which exploded before he had time to let down the box.

## Womanhood in Germany.

The American lady who travels in Germany views with astonishment and indignation some of the labors there assigned to her sex. All the most menial, the most repulsive, and much of the most exhaustive work is accomplished by the German women.

They hoe the best fields, and where it is not safe to use a boe, weed on their hands and knees. They sow, stack and reap the grain, and bear it home upon their shoulders in sheaves that a few paces off they appear like walking haystacks.

They drive the plow, and in some cases draw as well as drive it. They carry heavy loads of manure upon their backs, bringing it from distant places of deposit and distributing it as it is needed. They haul away heavily loaded carts. They break stones and mend roads. They dredge small streams for the sake of their fertilizing mud.

In the cities they clean the streets, working with shovels, handcars and brooms made of rods. They collect the offal and refuse from houses and stores. They are harnessed to milk carts and bakers' carts, which they draw from door to door. They saw and split wood. They unload freight cars at depots. They serve as porters, conveying their loads on their backs in baskets made to carry 60 lbs. They are yoked with dogs, cows and oxen to drag heavy weights along the highway, and they even act as hod carriers, climbing up and down steep ladders to bring bricks and mortar to the masons. So reports Mrs. Livermore in a recent letter to the Women's Journal. It strikes the mind with horror. In our own country the condition of women who sew on shop work in a bot loft 10 hours a day, supported by a lunch of pie and cold tea, is had enough; but, thank God, we have no such horrible sights in this free land as the barnsiding of a woman alongside of a cow!—Colorado Farmer.

WOMEN AS LEGISLATIVE OFFICIALS.—The following note from Washington Territory has points of interest: The Territorial Legislature convened at Olympia, W. T., on Monday of last week, and elected the following officers: Council—President, Horace F. Stratton; Chief Clerk, Ross G. O'Brien; Assistant Clerk, John Detiere; Enrolling Clerk, A. W. Engle; Engrossing Clerk, Miss Louisa McMillan; Sergeant-at-Arms, Louis McMillan; Doorkeeper, W. A. Leonard; Messenger, Frank E. Moore; Watchman, H. H. Morgan; Chaplain, Rev. J. R. Thompson. House—Speaker, George Comegys; Chief Clerk, E. R. Burke; Assistant Clerk, William Hughes; Enrolling Clerk, Miss C. Newton; Engrossing Clerk, Miss Lizzie Ferry; Sergeant-at-Arms, L. P. Berry; Doorkeeper, W. H. Johnson; Watchman, George D. Forbes; Chaplain, Rev. D. Bagley.

## Young Folks' Column.

## Little Edna.

[Written for the RURAL PRESS by M. W.]

Edna is my brother's little girl; the cutest, sweetest little thing you ever saw. Last month Edna went to see her grandma, who lives in the country. Grandma's home is in one of those pretty spots of California where wild flowers bloom, and silver-throated songsters dart among the green boughs and warble all day long; where the bees make honey in the sunshine, and gaudy painted butterflies illumine the air. Edna's home is in the great, busy city, and it was the crowning joy of the little thing's life to go out in the fresh, health-giving air of the country; to gather "daisies pied and violets blue;" to chase the chickens, ducks and turkeys, and romp with old Dick on the grass before grandma's door. Dick is grandma's large shepherd dog, who conceived a great fondness for little Edna the first time he saw her, and has ever since been her constant companion and faithful guardian. Above I give a true sketch of this noble brute, as taken from life, for my little readers.

One day a large rattlesnake was killed and brought to the house. Dick had seen and helped to kill many of these venomous reptiles, and



seemed to understand how very dangerous they were. Edna had never seen a snake before, and innocently imagined it a strange sort of plaything. She started to take hold of it, but was prevented by her mama. To test old Dick's instinct, grandpa took the snake out, laid it upon the horse block before the door, and then, after telling Dick not to let the little girl go near it, he sent Edna out toward the block. True to his charge, the noble brute passed between the child and the snake, and, though she repeatedly tried to reach it, he as often interposed his body, and fairly pushed her from the object that he regarded as dangerous.

Edna is a remarkable mimic for a child of her age. She will sit quietly and watch your every gesture, movement and contortion of features, when you are describing a certain incident, and then, when you are all through, she will imitate you almost to the very life. She does it with such a sober countenance, too, while all the rest of the family are laughing heartily. Her papa will sit down on the calves of his legs, and walk across the floor in imitation of a dwarf. This of course brings a great strain on the muscles of the legs and is quite a difficult thing to do. But several days after Edna saw her papa do this, she got down on the floor before them and walked clear across it in the above described manner. The next day she was asked to walk dwarf, like papa, but try as she would she could not do it. After falling over in several attempts she gave it up. The cords in her little legs were evidently strained until they were very sore. She will sometimes put on papa's big hat or tasseled smoking cap, either of which covers her head so she can hardly see out, and then with his cane in one chubby hand and a glove in the other, she will strut airily about the room, giving a low Chesterfieldian bow at every turn.

In grandpa's back yard there is a pipe that carries water from the well to a small trough, from which the ducks and chickens drink. Edna at once improvised this trough a bath tub for her doll, and taking its clothes all carefully off, she soused it up and down in the muddy water until it was fairly a sight, and then carried it into her mama to have it dried and dressed.

Edna's mama sometimes thinks there never

was such a mischievous child as her little girl. While at grandma's she went out into the hen-house and took from under an old setting hen, nine eggs that would have hatched in just a few days, and broke every one. How she managed to get them out with out a serious pecking on the hands and arms, they could never tell; but as she was seen watching around the hen-house several times, it is supposed that she waited until the old hen came off for something to eat, and then took advantage of the opportunity to rob her.

Danville, Cal.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of eighteen letters  
My 3, 6, 13, 13, is to cultivate the soil.  
My 17, 5, is an animal.  
My 12, 14, 11 is one of the forms of my whole.  
My 15 is a letter but little used.  
My 7, 4, 8, 9, many exchange for my whole.  
My 18, 16, 10, 2, my whole may bring upon you.  
My 1, 11, 2, is where my whole can usually be procured.  
My whole is a great curse upon humanity.  
J. C. B.

## Hidden Rivers of Europe.

1. The robins have come again.  
2. Helen and Jane have gone to a ride.  
3. Charles said he would win a prize.  
4. The little cur always snaps at my heels.  
5. The box used to be hidden under that tree by the roadside.  
6. Charley, don't go near the river.  
UNCLE CLAUDE.

## Problem.

Add one to a certain number, then subtract the sum from the original number and have one remaining.  
JUSTICE.

## Cross-word Enigma.

My first is in wren, but not in crow;  
My second is in fellow, but not in beau;  
My third is in row, but not in scull;  
My fourth is in tempest, but not in lull;  
My fifth is in heart, also in hand;  
My sixth is in company, but not in band;  
My seventh is in ark, but not in ship;  
My eighth is in leather, but not in kip;  
My ninth is in old, but not in new;  
My tenth is in yellow, also in blue;  
My eleventh is in ice, but not in snow;  
My twelfth is in finger, but not in toe;  
My thirteenth is in reap, but not in sow;  
My whole a Southern State you'll find to be—  
Who among you can tell its name to me.  
PERCY.

## A Floral Bouquet.

1. To injure, a personal pronoun and a valuable metal.  
2. A falsehood and to want.  
3. A part of speech, even, and a vowel.  
4. A nickname, two articles, and silent.  
J. C. B.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—George Washington.  
TRANSPPOSITIONS.—1. Hoop, pooh. 2. Rat, tar. 3. Meat, team. 4. Rome, more. 5. Fare, reap. 6. Dan, and.  
HIDDEN AUTHORS.—1. Cowper. 2. Hood. 3. Poe. 4. Sterne.  
DECAPITATIONS.—1. Spear, pear. 2. Grape, rape. 3. Spine, pine. 4. Clamp, lamp. 5. Hand, and.  
CONDRUMS.—1. A river. 2. Because it is at the end of the Mediterranean.

## Cure for Feather Eating.

EDITORS PRESS:—This is the first letter I have ever written to your paper. I am 12 years of age, and I have a trio of Plymouth Rock chickens, and I think they are very nice, except one hen; she has got to eating the feathers of the rooster, and I thought I would ascertain through your columns some way to prevent her from eating feathers. I will be ever so much obliged to the person who lets me know through your columns a cure for feather eating.—FRANK G. TAYLOR, Ophir, Placer Co., Cal.

Who will give Frank an answer?

## GOOD HEALTH.

## The Management of Sick Children.

The vicissitudes necessarily incident to an out-door and primitive mode of life are never the first causes of any disease, though they may sometimes betray its presence. Bronchitis, nowadays perhaps the most frequent of all infantile diseases, makes no exception to this rule; a draft of cold air may reveal the latent progress of the disorder, but its cause is a long confinement in a vitiated and overheated atmosphere, and its proper remedy ventilation and a mild, phlegm-loosening (saccharine) diet, warm sweet milk, sweet oatmeal porridge, or honey-water. Select an airy bed-room and do not be afraid to open the windows; among the children of the Indian tribes that brave in open tents the terrible winters of the Hudson Bay territory, bronchitis, croup and diphtheria are wholly unknown; and what we call "taking cold" might often be more correctly described as taking hot. Glowing stoves and even open fires in a night nursery, greatly aggravate the pernicious effects of an impure atmosphere. The first paroxysm of croup can be promptly relieved by very simple remedies: fresh air and a rapid forward-and-backward movement of the arms, combined in urgent cases, with the application of a flesh-brush (or piece of flannel) to the neck and the upper part of the chest. Paregoric and poppy syrup stop the cough by letting the irritability and thus preventing the discharge of the phlegm until its accumulation produces a second and far more dangerous paroxysm. These second attacks of croup (after the administration of palliatives) are generally the fatal ones. When the child is convalescing, let him beware of stimulating food and overbeaten rooms. Do not give aperient medicines; costiveness, as an after effect of pleuritic affections, will soon yield to fresh air and a vegetable diet.—Dr. Felix L. Oswald, in Popular Science Monthly.

## DOMESTIC ECONOMY.

VERMICELLI PUDDING.—Boil three teacupfuls of milk, then mix in it one ounce vermicelli until it is thick and well done; take from the fire and agitate until somewhat cooled; then mix one-half ounce best butter in small pieces, one-half ounce white granulated sugar, the yolks of four eggs, and at last add the whites of the eggs beaten to a firm froth; pour into a pudding mold which has a cover to within an inch of the top, previously buttered and thickly powdered with fine molded crumbs of hard toasted bread; close the cover with little strings through the eyes and let boil, standing upright one hour in a covered iron pot sufficiently filled with water to cover the mold. Taking out the mold let it cool a little, then open, put a plate on top of the mold, turn it gently out, keeping the mold against the plate. For the sauce, boil one pint best milk with four tablespoonfuls white granulated sugar and a small piece of vanilla; when boiling, hind with a little flour. Take from the fire, and when it is cooling mix the yolks of the eggs.

INDIAN PICKLE.—This recipe for Indian pickle gives something hot enough to have pleased Mr. Joseph Sedley, and to have burned poor Becky Sharp's tongue worse than the historic chile. To every gallon of vinegar put four ounces of curry powder, four ounces of mustard powder, three ounces bruised ginger, two drams cayenne pepper, two ounces of turmeric, two ounces garlic, one-half lb. skinned onions and one-fourth lb. of salt. Put all in a stone jar, cover it with a bladder wet with the pickle and keep it warm by the fire for three days, shaking it well three times a day. Anything may be put into this preparation excepting red cabbage and walnuts. Gather everything fresh, such as small cucumbers, green grapes, green tomatoes, cauliflowers, small onions, nasturtiums, string beans, etc. Wipe them, cut them when too large, and throw them into the pickle.

GRAPE JAM.—Slip the skins off from the pulps and put them into an earthen dish; put the pulps into a porcelain kettle over the fire, cover them, and bring them to a boil, being careful not to burn them; boil and stir them until the pulps are broken and the seeds are separated; remove from the fire, and let the seeds settle to the bottom of the kettle; then pour off the juice or strain it through a colander, and put back into the kettle; add the pulps and their weight in best brown sugar; simmer slowly, stirring frequently for an hour; put up as you would fruit in glass jars. If you cook it long enough to keep without being air-tight, the flavor of the grape will be spoiled.

GRAPE CATSUP.—Stem the grapes, place in a kettle or preserving pan, which, to prevent scorching, is set within another vessel of water. To each quart of grapes add a teaspoonful each of cinnamon and mace, both broken fine, and half a teaspoonful of bruised cloves. Cook for an hour, and pass the juice through a colander or sieve. To each quart of this add a pound of sugar, and boil until nearly a jelly. Then thin to a proper consistence to flow from a bottle, with vinegar, cork, seal and put in a cool place. This is said to be a very delicious condiment for cold meats, etc.

PIGEONS WITH PEAS.—Take four pigeons, fix them with the feet upwards, put them in a stew-pan with a piece of butter rolled in flour, two or three slices of ham and a little water; let them stew until tender, then add one quart of green peas, a bunch of mint, with a piece of butter and a little warm water; let them stew slowly and when done dish them with the peas under them and stir in some more butter.

SAVORY MUTTON OR VEAL CUTLETS.—Cut up the chops and beat them with the edge of a knife. Beat the yolks of a few eggs and dip the cutlets in them; season them with pepper, salt, nutmeg and bread crumbs. Roll them in buttered crumbs and broil them. Use for sauce some good gravy, a piece of butter, crumbs of bread, capers, anchovies, with some nutmeg and a little vinegar.

STAIN FOR BROWN OAK.—Mix together two ounces of pearl ash and two ounces of American potash in a quart of warm water, and apply to the parts to be stained; a very little red sanders in your polish improves this stain. Some polishers use bichromate of potash, weak, for this stain, but I prefer the former. Always stain before oiling your work, and the stain strikes deeper into the wood.

GINGER LOAF.—To four pounds of dough add one pound of raw sugar, half a pound of butter, one ounce and a-half of caraway seeds, one ounce and a-half of ground ginger. Bake in the usual way. It very much resembles Scotch hot cross buns. It makes a very nice cake, either for tea or luncheon.

DESTROYING BUGS IN MILLS.—Alum water is recommended for preventing hogs and worms from infesting flouring mills. Take two pounds of alum and place it in three quarts of warm water (or in that proportion), and let it stand on the stove until the alum disappears. Apply while hot, with a brush, to the crevices of the bolting machine and other places that conceal the insects. Alcohol or turpentine should not be used in sponging off bolting cloth, as they dissolve the sizing.





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Saturday, October 15, 1881

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## The Week

We are now fairly landed in October, and the signs of winter rains recur at short intervals. There has been great progress made during the last two weeks in gathering in and housing products liable to injury from water. The rain crop was brought in much earlier than last year, and all makers from whom we have heard speak of an unusually good quality of product this year. The common estimate for the crop is 100,000 boxes, and the fruit has been encompassed by a single firm. It is fortunate that the average quality is high this year, for our raisins will be put forward more prominently than usual at the East this winter, and the more people pleased the better the immediate future of our raisin industry.

How beautiful are the days! Pæons of praise to the weather are in every one's mouth. Buoyancy and animation written upon the countenances you see everywhere. With her industries awake and progressive, California is better fitted than ever to enjoy the peerless charms which nature has lavished upon her.

CANNOT LEAVE THE RURAL BEHIND.—I am going to spend a few months in England, but cannot afford to leave the RURAL PRESS behind. It is better than a dozen correspondents, as from its pages I can gather more information than any other paper I know of. I wish it success and a wide circulation. —JOHN SAINT, Hollister.

## California for the British Emigrant.

The Mark Lane Express, the widely known London agricultural journal, has a special correspondent in California who is sending some most timely and trustworthy information for the instruction of the moving Britons, of which there are many just at this time. He presents the advantages and disadvantages of California in a very temperate way, and is evidently unprejudiced in the matter of which he writes. There is one subject discussed which we wish in particular to note at this time, and that is the increase of the small farms. The English writer contrasts the large and the small as follows:

On the whole, the wheat rancher does not seem to be on the highway to wealth. These large ranches have got incorporated amongst them a class of comparatively small farms, in many instances well cultivated and carefully managed, which are the backbone of the arable farming of California, and which will yet build up and consolidate this industry on a sound and practical basis. These farms to which I allude are rapidly becoming more numerous, as the large rancher is compelled through the unprofitable return of his farm to sell off sections to keep it running. These sections vary from 100 to 200 acres, having a small orchard and probably orange groves and vine fields (for almost every semi-tropical fruit grows here to perfection), wheat and barley; also potatoes and other vegetable products, a few cows and pigs, and a stock of poultry from branches of the mixed farmer, who is in a sense almost self-supporting, growing almost everything he requires for his table, and having a little of everything to sell. His profit is almost always sure, and on the average double the return of the large wheat rancher for the amount of capital invested, as well as for the acreage of the soil employed. Were each of these large ranches divided into farms of moderate size, and managed in a style similar to that indicated, of which there are plenty of examples throughout the country, I am quite convinced that the value of the agricultural produce would be more than doubled.

The writer from whom we quote has very good ideas of the opportunity offered in California for the immigrant with moderate means and much energy and patience. He points out that even on the small mixed farm a fortune is not to be made in a few years—that day is past—but there is a sure return for the capital invested, and a very probable competence for old age, combined with living in one of the most temperate and healthy climates in the world. A closer view of the chance for success in moderate farming and home making is very well sketched off, as follows:

Fruit growing, combined with a little mixed farming, would be a very good start for a man with a small capital. His profits would be small for some years, but would rapidly increase as his fruit trees commenced to bear. The prices of dairy produce and poultry and eggs are always at a remunerative figure. Butter is seldom under 1s a lb., and eggs seldom under 1s a doz. Chickens vary from 3s to 4s a pair. California has a very fertile and rich soil, and the dry summer, though bad for cereals, suits admirably for the growth of fruit. There can be no doubt that the climate is the main attraction of the Pacific slopes at the present time to the emigrant, and many people, particularly from the New England States, are going thither on that account, and also partly because they know something of the profits of fruit growing, which will yet undoubtedly be the staple trade of the State. To those with a small capital willing to labor, and who would be content with a fair return for their labor and capital, if residence in a climate with an almost perpetual summer has any attractions, I would say to them, see California.

And they are seeing California. The incoming of British with money enough to well locate themselves, and with energy to drive along productive and commercial enterprises of various kinds, is continual, and all parts of the State are receiving them as citizens. The British man is a good traveler. He generally sees what there is in a State before locating; and when he fixes upon his place, he abides there, and each year his property grows in value, because of the enterprise which he brings to the work of development and improvement.

## Danger in Wool Sorting.

Mr. Naud's death, as we learn, was caused by a very curious circumstance. It seems that he was sorting wool in his loft, and that some of it had been clipped from scabby sheep, and was consequently poisonous. After handling this infected wool, he touched a portion of his person which was bleeding, and thus inoculated himself with the poison from the wool. His blood was thoroughly impregnated with the poison, and Mr. Naud became a victim to pyæmia. —Los Angeles Express.

The death of a prominent citizen of Los Angeles through poisoning, from contact with diseased wool, leads us to remark that the fatalities from this source are frequent; so much so that "wool sorters' disease" is a term used to describe a malady which occurs among those engaged in sorting wool for the large manufacturing in Great Britain. It is held there that the disease is imparted by handling fleeces taken from sheep which have died through disease. The Los Angeles authorities hold that in Mr. Naud's case, the blood poisoning came from scabby wool, and was imparted directly to the circulation through a bleeding wound. The foreign disease is more subtle in its action than this. As, however, death has come to one of our citizens through unhealthy wool, we have thought it timely to present some facts concerning the regular "wool sorters' disease," as it is known abroad, in order that all may know how danger may sometimes be incurred.

A report to the British Parliament last summer by Prof. Brown, clerk of the veterinary department of the Privy Council, states that inquiry recently conducted has established the fact that the wool sorters' disease, which was first observed 43 years ago, when the import of mohair commenced, is a form of anthrax, a disease which is due to the presence of a microscopic plant (the *Bacillus anthracis*) in the fluids of the body. Anthrax is essentially an affection of the lower animals, but is as readily communicable to man as to the lower animals

by the introduction of the spores of the *Bacillus anthracis* into the blood. Anthrax, in the form of splenic fever, has long been known in Great Britain as a disease which occurs occasionally among farm stock. The affection does not, however, spread to any extent by contagion, and, as a rule, does not extend beyond the farm on which the outbreak occurs. The disease is more virulent in some parts of Ireland than it is in England, and on the Continent it sometimes prevails extensively. The Siberian plague, which was rife in Russia last summer, was one of the most virulent and fatal forms of this disorder. It may be remarked that anthrax is one of the diseases which are distinguished by periods of excessive prevalence and decline.

It may be accepted as a fact that the use of wool, hair, and other substances from animals which have died of anthrax, in agriculture or manufactures, is attended with danger to men and animals. This fact has given rise to many propositions in Great Britain for the purpose of excluding the diseased wool from the country if possible, but as yet nothing thoroughly practicable has been brought forward. Farmers are warned of the danger which attends the employment of the refuse of wool mills as top dressing for pastures, but it does not appear how the wool sorters can be protected from contact with the occasional fleece from a dead sheep, which is thrown in with better wool. It would be well for our sheep and wool handlers to keep in mind that in some cases it is highly dangerous to handle sheep which have died from disease, though of course it is mainly the animals which have died from anthrax, a malignant fever which is especially dangerous.

## The Laws Set at Naught.

The debris question is assuming alarming phases, and one of the parties in the issue is now in open defiance of the orders of the courts, thus setting at naught the highest constituted authority in the commonwealth. The excuse is that the Supreme Court decided that Judge Keyser was disqualified for bearing the case at issue because he owned land subject to debris destruction. But the Supreme Court did not, by this decision, affect at all the standing of the injunction which forbade the miners to turn any more tailings into the river. However, the miners took the occasion to break over the injunction, and have returned to hydraulic mining in defiance of the court. Thus the matter has assumed the phase of a rebellion and the miners have already severely weakened their cause by their unfortunate position. It was, of course, a hardship for them to be idle, but this is not sufficient excuse for taking an attitude of rebellion. Whatever comes, we must obey the courts. They are not perfect, it is true, and it is to be hoped that they will be improved; but they represent the highest will of the people, and must be obeyed and respected.

The journals of the State, with the exception of a few local papers, which uphold the miners, denounce the position assumed by those now in defiance of the law. The popular view of the case seems to be well set forth by the following paragraph from the *Call*:

Some hydraulic miners in Nevada county have disregarded an order of court restraining them from work until the question of law could be determined. In this course, it is a matter of little surprise that they should be upheld by one of their local journals. The Sacramento Record-Union has taken the miners' view of the controversy all the way through, but it stops sharp at the point where the miners set the law at defiance. In this its policy might well be imitated by the Nevada journals, which assume the world at large, and the State of California in particular, that "no threats of invading armies can terrorize them; no constabulary force can drive them from their strongholds." If the miners of Nevada county were so situated that their tailings could reach the sea without injury to the valleys, rivers and harbors below them, they would receive the same journalistic support which other industries receive. But this work has been prosecuted already much longer than was consistent with the true interests of the State. The flood of tailings moving down from the mountains to the sea is as plainly and surely destructive as any form which the work of devastation could take. The lava from Vesuvius is not more deadly to the sloping shores of Naples than the debris from the mines is to the country lying between the gravel range and the Pacific ocean. So far as the hydraulic mining industry can be prosecuted without damage to other interests, it is entitled to support, but no one interested can be permitted to pursue a course of operations destructive to other interests. The right the Nevada miners are contending for, is not the right to work their mines, but the right to lodge their tailings in water courses which empty their contents upon the plains and into the rivers below. It is not the right to work, but the right to destroy, that they propose to defend. It is quite useless for any class of people to assume that they are above the law. The law may be evaded and beaten in a roundabout way, but it cannot be defied with impunity. The original merits of the question are at once lost sight of in such an emergency, in a general determination to assert the supremacy of the law. When that supremacy is re-established, discussion on the original point in dispute may be resumed. Our Nevada contemporary says they are not warring against the just laws of the State or Nation. Who is to say what the just laws are? Who is the judge of what constitutes an unjust law? No rebellion was ever yet incited without a real or fancied cause. If every community is permitted to be the judge of its own disputes with the State or Nation, there would be no end to the fighting.

THE PACIFIC RURAL PRESS, of San Francisco, is the only weekly paper, we believe, on the Pacific coast, devoted exclusively to agricultural interests. It occupies the ground, however, and does it well. Agriculturists and horticulturists should not fail to provide themselves with this excellent journal. There is not a number issued that does not contain information worth to the farmer in coin value, more than the subscription price of the paper. —Los Angeles Mirror.

## QUERIES AND REPLIES.

## Comparative Value of Feeding Stuffs.

EDITORS PRESS:—Can you give some idea of the comparative value of the different materials commonly used as food for domestic animals? If we had data of this kind it would be of value in considering what food is cheapest at certain times.—READER.

The best we can do in compliance with this request is to cite some of the analyses of feeding stuffs which have been made, which will, in a general way, serve the purpose desired. These analyses have been, for the most part, made by English and German chemists and the various feeding experiments, made with different animals have, in the main, borne out the judgments formed from the analyses. We give selections from the long tables which have been published. They do not contain some materials grown in California, as for example there are no analyses of the young grain which we use as hay in this country, all determinations of hay abroad being the dried "grasses" which are usually grown in pasture and meadow in other countries. The following is a determination in round numbers of the proportion of flesh and fat forming materials in each of the substances named:

	Flesh.	Fat.
Turnips.....	1	5
Rutabagas.....	1	7
Carrots.....	1	7
Mangel and Kohlrabi.....	2	8
Straw.....	3	16
Potatoes.....	2	17
Brewers' grain.....	6 1/2	18
Wheat and barley.....	12	67
Dried brewers' grain.....	16	70
Earth nut cake.....	20	40
Beans (English field).....	22	46
Rice meal.....	6 1/2	77
Locust beans.....	7	72
Hay (early cut).....	8	50
Millet (seed).....	8	76
Buckwheat.....	9	60
Malt.....	9	76
Rye.....	11	72
Oats.....	12	63
Corp.....	12	63
Tares (seed).....	12 1/2	57
Linseed cake.....	23	56
Bran and coarse mill stuff.....	31	54
Rape cake.....	31	63
Decorticated earth nut cake.....	39	45
Decorticated cottonseed cake.....	41	77

Another more detailed table of a number of materials is as follows:

There is in every 100 parts of	Flesh or oil ere.	Fat or starch.	Bone form-ers.	Husk fiber.	Water.
Beans and Peas.....	25	2	48	2	15
Oatmeal.....	13	6	63	2	9
Middlings.....	13	6	53	5	14
Bran.....	16	4	43	6	17
Oats.....	15	6	47	2	10
Wheat.....	12	3	70	2	13
Buckwheat.....	12	6	58	1 1/2	11 1/2
Barley.....	11	2	60	2	14
Indian corn.....	11	8	65	1	10
Hempseed.....	10	21	45	2	14
Rice.....	7	Trace	80	Trace	13
Potato.....	6 1/2	Trace	41	2	50 1/2
Onion.....	1 1/2	0 1/5	4 4/5	0 1/2	91
Parsnip.....	1 1/5	1 1/2	8 7/10	1	81
Carrot.....	0 1/2	0 1/5	5	1	89
Turnip.....	0 1/2	0 1/10	4	1	93
Milk.....	4 1/2	3	5	0 1/2	80 1/2

It will be observed that the two tables do not agree in all respects. This is just as would be expected, for some vegetable substances vary considerably in composition, according to their degree of ripeness; also according to the conditions under which they are grown. We give still another short table derived from another set of analyses, to which is added a table of comparative values based upon the general feeding results in the German experiment stations:

	Flesh Formers.	Fat Formers.	Fat.	Value per 100 lbs.
Meadow Grass.....	14.9	14.2	0.5	\$ .22
Meadow Hay.....	5.2	41.0	1.0	.64
Corncob.....	7.3	69.3	2.6	1.04
Bran Coarse.....	12.6	42.6	2.6	1.04
Bran Fine.....	11.8	44.3	3.0	1.03
Middlings.....	10.8	54.0	2.9	1.07

## Dose for Scale Insects.

EDITORS PRESS:—Thinking the results of some experiments I have been making on the orange scale bug might be of use to some of your readers, I will give you my recipe which has been very successful on 500 or 600 trees, some of which were very badly affected with the insect. Take a vessel holding about 30 gals., fill about one-third full of water; add three quarts whale oil soap; stir until well dissolved; then add six quarts of kerosene, and stir well when the soapsuds and kerosene will unite. Then fill up the barrel with water and apply freely with fountain pump, stirring the mixture frequently. This will not hurt even the tender young growth of the trees, but is death to the scale. It may be necessary to go over trees that are badly affected the second time, so as to kill any that may not get the benefit of the first dose. The proportions are 1 qt. soap and 2 qts. kerosene, to 10 gals. water. It is very important to dissolve the soap in a small quantity of water, and add the kerosene to this before adding the balance of water as it unites better, wherein lies the secret of the strong proportion of kerosene not hurting the trees, which would be the case if not thoroughly united with the soapsuds. Enclose a small orange leaf with dead scale attached, that you may see the efficiency of the remedy.—BYRON A. CLARK, Anaheim, Cal.

[The insects on the leaf sent were all dead.—EDS. PRESS.]

PHYLLXERA has attacked the German vineyards, and that favorite vintage, the Rudesheimer, is threatened.



## Mineral King and Mt. Whitney.

(Written for the PRESS by J. W. A. W.)

My last letter to the PRESS was from Trauer's ranch, on the road from Visalia to Mineral King, 13 miles west of the latter, and at an elevation above sea level of some 4,500 ft. This is written in Camp Whitney at an altitude of about 11,600 ft., on the true Whitney creek, which flows in a southwesterly direction through the grand granite-walled canyon that forms the readiest ascent to our highest mountain, indeed, the only ascent accessible at present for pack animals.

In the Mineral King mining district, we found nothing of special interest to record, but shall stay there longer on returning, and shall tell your readers everything reliable that we can learn about it.

Suffice it to state here, that Mr. Tom Fowler is pushing his work in the Empire mine, and seems as sanguine as ever of its future value. Also, we found the altitude of the flat where the town is, to be approximately 7,750 ft., and the total snowfall there last winter was about 27 ft., corresponding to 32.40 inches of rain against 35 ft. the winter before, or 42 inches of rain. This difference is to be accounted for chiefly by the heavy and uncommon snow storms of April, 1880.

Friday, August 26th, we left Mineral King, with three saddle and two pack animals, and coming by a very circuitous and rugged trail some 81 miles, reached this camp Saturday, Sept. 3d. We came slowly, spending considerable time fishing, hunting, exploring and taking notes. Seven miles beyond Mineral King, we found Mr. Wales awaiting us. Of mountain trout, including the celebrated golden trout of some of the smaller tributaries of Kern river, we caught in all, till we reached these higher streams where there are no fish, 222. Certainly no more delicious fish than these are to be found anywhere. Of those caught, the sizes ranged from 4 inches in length to over 17 inches, the latter weighing 2 lbs. For a week we feasted to satiety on these finny delicacies. The peculiar features of these

## Golden Trout.

On each side they have a golden or orange-colored stripe from one-eighth to one-quarter inch wide, extending from gills to anus, a similar one one-half inch and more on their white belly, and from 8 to 11 dark brown blotches about one-quarter inch wide and the same distance a part upon the lateral golden stripe. Their vitality is something wonderful. Often, for 5 to 10 minutes after cleaning and their heads off, they would at intervals double up, turn over with a jerk, and even jump out of a shallow pan. One that was split and spread open to its backbone, moved at intervals as if trying to breathe, for fully 5 minutes. Sunday and Monday, Aug. 28th and 29th, we spent on Fish lake, sometimes confusingly called Kern lake. Here, on Monday, were caught our largest fish, all marked like the golden trout, only the orange stripes were less brilliant than on those caught in the smaller streams. Even the 2-lb. trout had the yellow stripes and dark blotches, though fainter.

There is a larger and smaller

## Fish Lake,

The larger about half a mile higher up the main Kern than the smaller one. The smaller has long existed, but the larger was formed by the heavy storms of '67 and '68, which choked the mouth of a deep canyon with rocky debris. The surface of the larger is from 100 to 150 acres, the smaller about 50 acres. Each is from a few feet to 20 ft. deep. Both are gradually filling up with sand. The altitude of this lake is about 6,600 ft. But as this letter, written under the unfavorable circumstances of mountain travel, must be short, I must omit full details, hoping to give them in future, and must here sum up a few facts.

## The Only Soda Springs

Met with on our route are the four noted ones of Mineral King described in my letters of last summer; temperature 45° to 48° F.; one on Little Kern, two miles below Edwards' ranch or Bullion flat, that is, nine miles from Mineral King; temperature of water 49°; altitude about 8,900 ft. and the last at Runkles or Soda Springs ranch, one mile up the main Kern from Fish lake; temperature of its water, 50°. All these springs are strongly impregnated with carbonic acid gas, and have a reddish sediment, like all chalybeate springs. In Farewell gap, four miles southeast of Mineral King, we had the good fortune to find some genuine

## Red or Crimson Snow.

We melted some and have saved the water for scientific examination. Though we have seen much snow at several points since, we have found, as yet, no more of this curious and interesting product of nature. We may find more on the vast snow fields of the lofty and unmeasured Kaweah peaks.

Our camps have varied in altitude from 6,500 to 11,400 ft.; the various passes on our trail from 9,600 to 12,000 ft. We have seen but few deer, and no bears.

## Signal Service Camp.

Two miles above us, and some 3,000 ft. below the summit of Mt. Whitney, is the camp of Prof. S. P. Langley and Capt. O. E. Michaelis, with their assistants in the important work of establishing a signal station of the U. S. Army on the summit of Mt. Whitney. Capt. Michaelis commands the expedition, and Prof. Langley is consulting specialist of the expedition. In their lower camp they have seven tents, and their most complicated and valuable instruments. On the summit, one tent is pitched, and there careful observations have been made for four days past with mercurial barometer, thermometers and part of their apparatus intended to determine more accurately the real color and heat of the sun. Having completed most of the observations for which they came, this party of 12 or 15 in all will leave for their return East about the 10th inst. Prof. Langley informs me that results so far have been quite satisfactory. So much can be said about this interesting and valuable excursion, that it must be left for future record. The camp on the summit, where Capt. Michaelis raised the

Elias, in Alaska. I must mention, in brief, that the mountain now known and measured as Whitney is what has been called

## Fisherman's Peak.

But more of this in future letters. Its Indian name, as I learn from Wm. Crapo, mining and civil engineer of Cerro Gordo, Inyo county, is Too-man-i-goo-yah, meaning the very old man. Their superstition is that their guardian spirit resides there, and they naturally look toward it with great veneration.

## A Stone House on Top

And a trail 15 miles long toward Lone Pine—10 miles farther by road, but only 19 in a direct line, and 45 by present pack trail—are a necessity for the valuable work of our Signal Corps on this mountain. Officers in charge deem \$10,000 enough to do this work. Let Congress be urged to make this appropriation next winter, that the Signal Station of Mt. Whitney may be fully established next summer, and observations made there the year round, as can be done with such inexpensive improvements.

Mt. Whitney, Sept. 7th.

## The Wheat Growers' Association.

Articles of incorporation of the Wheat Growers' Association of California were filed last week. The Directors are: A. C. Paulsell, San Joaquin county; H. M. La Rue, Sacramento county; W. B. English, Contra Costa county; A. D. Logan and J. C. Campbell, Colusa county; Thos. Upton, Merced county; L. M. Hickman,

the grain growers, as expressed at their last meeting. The law required notice to be made by publication in a daily newspaper before the by-laws can be adopted. Hence they would only discuss and not adopt them to-day. The objects of the association were not as yet generally understood. Last year there was not a man in the State who knew the amount of wheat in store by 400,000 tons, and if it had been known, the grain growers would not have carried their wheat at a loss, as they did. The necessity of an association has been apparent. The information now furnished the farmer is not reliable. Crop products, shipments, tonnage, bags, every subject connected with the sale of wheat crops can be furnished.

After the reading of the articles of incorporation, Mr. Paulsell, continuing, said that in order to have a live institution they should have at least 300 members, because the expense would be at least from \$3,000 to \$5,000 a year. A committee should be appointed to solicit membership, so that at the meeting in January, when the by-laws are adopted, if the membership justified it, they could employ a competent person to compile a publication giving them the necessary and reliable information. In accordance with the suggestion of the Chair the following were appointed part of the committee of five from each county to canvass for members.

Butte county—Marion Biggs of Biggs Station; Allen Henry, Chico; John Crouch, Chico; A. D. Nelson, Nelsou; Henry Keaselle, Biggs.  
Colusa—P. Peterson, Maxwell; A. D. Logan, Willows; J. C. Campbell, Maxwell; William Ashe, Berlin; Fred Quint, Willows.  
San Joaquin—G. H. Ashley, Woodbridge; A. C. Paulsell, Stockton; James Waskey, Linden; W. L. Overheiser, Stockton; W. W. Cowell, Stockton.  
Stanislaus—Dr. J. E. Tynan, Modesto; John Murphy, Salida; Simon Newman, Hill's Ferry; A. W. Moulton, Oakdale; Stephen Rogers, Modesto.  
Merced—Samuel Smith, Los Banos; J. L. Crittenden, Hill's Ferry; H. J. Ostrander, Merced; Augustus Smith, Merced; Thomas Upton, Merced.

W. L. Overheiser, after an inquiry as to who should be eligible to membership, said he would be in favor of having the meeting of the association secret, so that the information furnished the society should not be furnished to business men, whose interests were against those growing wheat. They had had experience with speculators in wheat and tonnage, and he wanted none of them with him in the organization.

H. J. Ostrander of Merced, J. L. Crittenden of Hill's Ferry and Chairman Paulsell each in turn expressed his opinion as to whom should be solicited to become members, and whether business men interested in grain growing should be admitted as well as farmers. It was finally

agreed to leave the matter to the good sense of the committee. The meeting then adjourned until the second Monday in January.

**AN INTERLOPING ALMOND.**—An old peach tree on J. F. Deming's place near Vallejo, has developed a singular freak. Two or three years ago a bud voluntarily appeared from the bark of a two-inch limb which this year bore a dozen or more sweet, soft-shell almonds, while nothing but insignificant peaches were produced by the balance of the tree. The bud started about four feet from the ground. No other indications are observable to indicate that the tree is other than an ordinary peach tree. Is it a case of "bud variation?" Equally interesting instances have been noted before and for lack of fuller understanding of the work of nature in putting out the new growth, it has been called "bud variation." This occurs from time to time on fruit trees, forest trees and on shrubs, and several desirable things have resulted. We should attribute Mr. Deming's instance to the same source. Can any one assign a better cause?

**CITRUS FAIR—1882.**—National Ranch Grange has unanimously voted to hold a Citrus fair, either in the last week of February or first week of March next, according to the state of the fruit crop. The date will be fixed in time to give due notice to all. A large Horticultural hall will be erected for the fair, the one occupied by the last fair not affording sufficient space. Committees have been appointed for the purpose of organizing the work; and the secretary will open personal correspondence with fruit growers throughout the county.—*San Diego News.*

**SAN JOSE FAIR.**—Our representative at the San Jose fair brings us a budget of notes concerning different exhibits, which we are forced to postpone until a future issue, owing to a crowd upon our columns this week.



OUTLINE OF MOUNT WHITNEY AS SEEN FROM MOUNT YOUNG.

stars and stripes for the first time August 16th, and officially established the signal station, as per orders of the Secretary of War, is called

## Camp Frank Thomson.

in honor of a Philadelphian of that name, who has partly equipped the expedition. Our party, consisting of W. B. Wallace, Rev. Fred. H. Wales and your correspondent, ascended Mt. Whitney Monday, September 5th, as did Prof. Langley, Capt. Michaelis and one or two others. Through the kindness of Capt. Michaelis, Mr. Wallace and I enjoyed the rare and unexpected novelty of spending

## A Night on Mt. Whitney.

Fuller details of this, we must also leave for the future. We saw a sunset and sunrise from the summit, to perfection.

The panorama of surrounding mountains, valleys, lakes, canyons, precipices, and snow masses presented from that giddy height is perfectly superb—almost bewildering. There is no end to its grandeur, its beauty, its weirdness. Then a moonlight scene on Mt. Whitney! Mountains and valleys and lakes made visible by the bright moonbeams, so bright in this pure transparent atmosphere. Men of the expedition have spent only four nights on the summit. Mr. Wallace and I were the 8th and 9th persons who have slept there, and we enjoyed the oddness of the situation so much that we slept only three or four hours after midnight. Then think on moon and star studies from Whitney's highest point! The coldest hour Monday night was 25° Fahr., though Saturday night, Sept. 31, the northeast wind raged so that the mercury fell to 14°. That night ice froze solid in buckets and pans. Tuesday morning ice was only frozen from half to three-quarters of an inch.

Complete reductions of observations for the Altitude of Whitney Have not been made, but it is not likely to vary much from results of former observations, that is 15,000 ft., or possibly a little less. The officers in charge think there is no doubt of its being four highest mountain except Mt. St.

Stanislaus county; E. Jacobs, Tulare county; John McPike, Napa county.

The corporation has no capital stock. The declaration of purposes is in effect as follows: To bring the grain growers of the State into closer communication, with a view of securing concerted action when deemed necessary. To provide means for collecting and disseminating information concerning crop prospects of the grain-producing districts of the world, the probable demand and consumption, the available tonnage for moving the surplus product of this coast to market, and such information concerning storage facilities, railroads and inland water transportation as shall enable the members of the association to act intelligently; also, to discourage all practices which may tend to lower the standard of California wheat in the markets of the world, and to endeavor to enhance the value of our wheat and increase the producing capacity of our land; also, to provide a method to enable the grain growers of California to promptly and efficiently act when their interests are threatened.

## The Agreement.

The following is the form of agreement: We, the undersigned grain growers in the State of California, believing that our interests can be promoted and our business made more profitable by a concerted effort to overcome the great and well known disadvantages under which we now labor, do hereby agree to associate ourselves together in an incorporation (without capital stock), to be called "The Wheat Growers' Association of California," and to be governed by the rules, regulations and by-laws of said incorporation, adopted for the promotion and protection of the interests of the members.

## The Meeting On Monday.

The Wheat Growers' Association met in the Grangers' building Monday, Oct. 10th. A. C. Paulsell, of San Joaquin, presided, in the absence of H. M. La Rue, the Chairman. A. W. McCarthy, of Modesto, acted as Secretary.

Chairman Paulsell, for the Committee on Organization and By-laws, reported that articles of incorporation had been prepared, and the certificate thereof was expected to be received from the Secretary of State in a very few days. A code of by-laws, said the Chairman, have been prepared in accordance with the desire of



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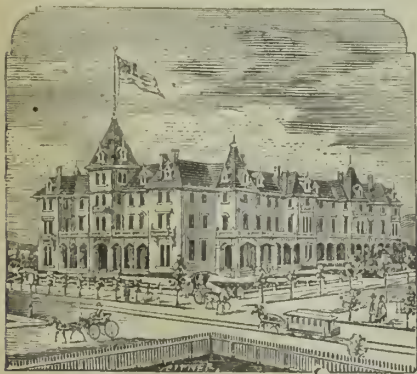
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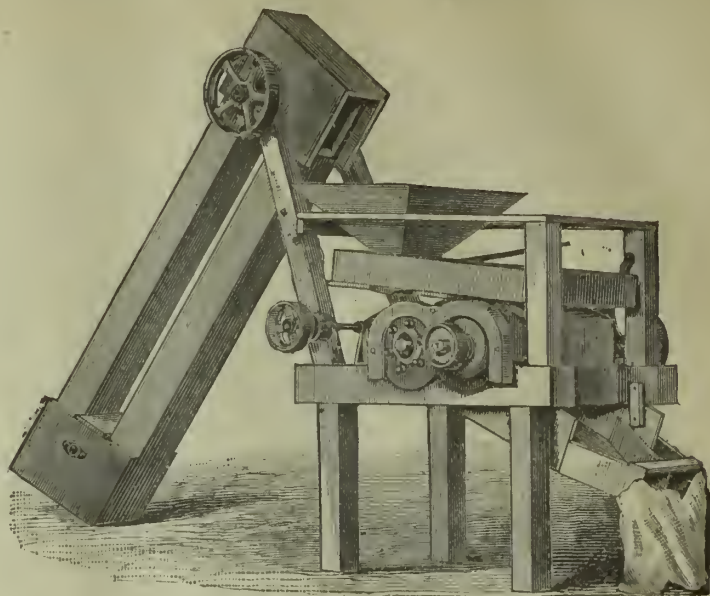
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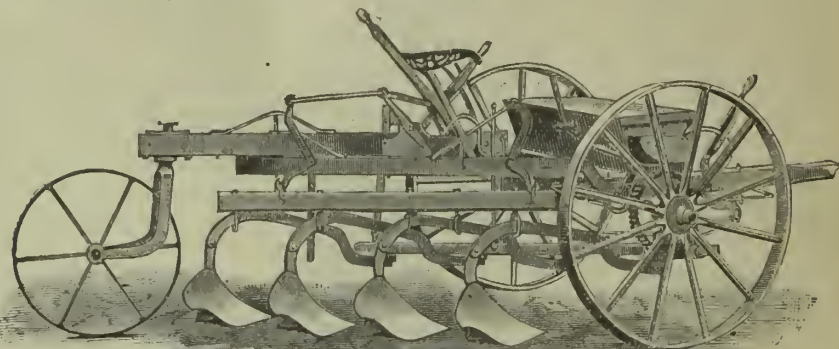
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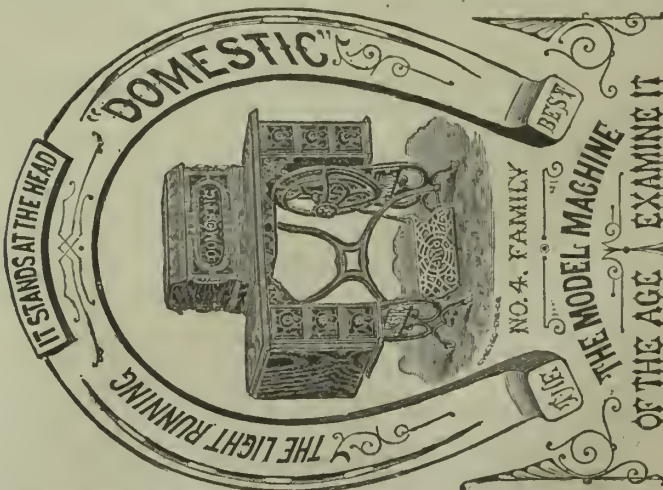
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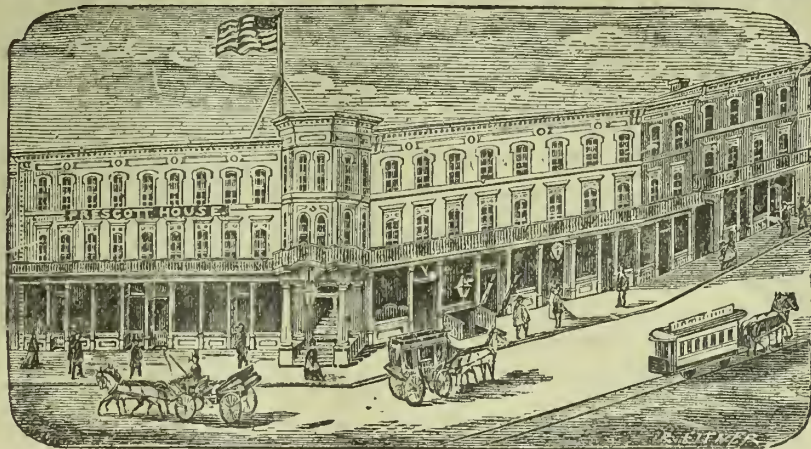
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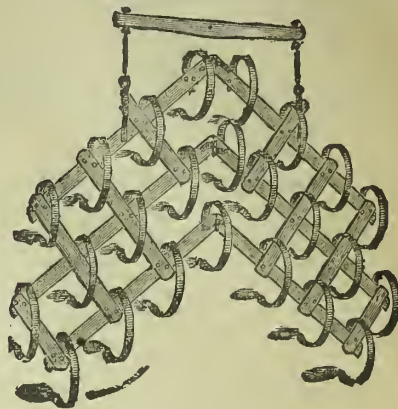
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**INVENTORS' MEDAL AWARDED.**—One of the most important awards at the late Mechanics' fair in this city was a gold medal for the best recent Pacific coast invention. It will interest many of our readers to know that Messrs. Jackson & Truman have been awarded the Inventors' Medal for an "outfit for handling headed grain in threshing," and comprised a spreader, feeder, elevator, fork and derrick. S. H. Wheeler, H. Root and W. H. Birch were the committee. Messrs. Jackson & Truman's apparatus is already well known to our grain-growing readers, and the award at the fair is but the crystallization of the popular appreciation of the machinery.

### Berkshires at the State Fair.

John Rider's premium herd of Berkshire swine was on exhibition at the State fair, held at Sacramento, from September 19th, to the 24th. His Berkshires recorded in the *American Berkshire Record*, it was admitted by all who seen them that they were the best in the State. He received the following premiums: Best boar, two years and over, "Commodore," 1525; best breeding sow, two years and over, "Princess of Wooddale," 3763; best pair of pigs under ten months old, "Comet," 3619, and "Peerless C," 7553; sweepstakes, best boar of any age or breed, "Commodore," 1525; best sow of any age or breed, "Princess of Wooddale," 3763; best pen of six pigs, sire "Commodore," 1525; dam "Princess of Wooddale," 3763. Best family all of the same breed consisting of one boar, two sows, and six pigs of any age; best family, all of same breed, "Canote," 3221, "Pino," 7174, "Peerless," "Cathleen," 4318, and six of her pigs.

### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

**IMPORTANT additions** are being continually made in Woodward's Gardens. The grove walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sealions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

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## S. F. MARKET REPORT.

**NOTE.**—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 12, 1881.

The markets are quiet this week, and the improvement in values which has been in progress for several weeks stops and goes backward slightly on some grains. There is, however, but little trading done, as holders are firm. The latest from abroad is as follows:

**LIVERPOOL, October 11.**—Wheat—Spot, inactive; 11s 2d @ 11s 6d for good to choice California; floating cargoes, heavy; on passage for shipment, heavy; Mark Lane Wheat — cargoes off coast, 54s 6d @ 55s; nearly due, 54s 6d; just shipped, 54s.

#### The Foreign Review.

**LONDON, Oct. 10.**—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: A very small portion of the Scotch crops are still ungarthered. The yield in Scotland is reported unsatisfactory, and the quality varied. The harvest has now ceased to influence trade. The supply in London is liberal and the offerings increase. The firmness of fine samples is due to the pressing demand for seed wheat. Flax absolutely reject the inferior. The foreign trade is weaker. Red Wheat declined 1s at the close. The spot supply, about half of which was American, was equal to the demand, which was healthy, although inactive. Buyers are waiting for a decline. The high rates in New York affect but little the London or Liverpool trade, as the buyers' attention is now being attracted to Southern Russia. Flour is in fair supply, and in healthy demand throughout the country. The best makes are firmly held. Foreign in fair demand, and best makes thereof are also firmly held. The most salable brands of American are practically out of the market. Barley for malting is in good demand and firm. Off the coast the supply is restricted. Of seven arrivals, of which 5 were American, four are sold. No 2 Milwaukee declined 6d on Friday. The floating bulk is increased 90,000 quarters on this week. The sales of English wheat during the week are 60,864 quarters at 46s 9d per quarter against 50,110 quarters at 41s for the corresponding week of last year.

#### Eastern Wool Markets.

**New York, Oct. 8.**—A strong market continues to be reported for all clothing Wools, and the outlook, it is thought, promises further improvement. The demand fluctuates somewhat, but temporary lulls create no apprehensions, as new buyers are constantly appearing and there are a great many stocks yet to be filled out by consumers to simply meet their regular and established wants. Desirable accumulations of all growths appear to be under first rate control, and owners are quite indifferent about displaying their samples, except upon an assurance that negotiations will be upon the basis of the extreme valuations, as reached on the recent improvement. With the exception of some full parcels of California, the movements of this week have been a little slow and confined to odd lots to sort up and fill out, but after the heavy amounts lately handled it is natural to expect that manufacturers would pause slightly. Up to the close, however, the line of valuation has continued full and offerings of an indifferent character. Carpet wools are firm, but so far as reported not quite so active as a week or so ago. Cable sales at hand report a pretty firm market abroad. Sales include 9,000 lbs secured California, at 55¢ @ 57¢; 275,000 lbs Spring, at 24¢ @ 26¢.

**Boston, Oct. 8.**—There is a healthy tone in the Wool market. Prices are sustained with a good demand from

manufacturers. Although the market is less active than for some previous weeks, sales of all kinds amount to 3,500,000 lbs.

**PHILADELPHIA, Oct. 8.**—Wool is steady and firm. The supply is light.  
**LONDON, Oct. 8.**—At the Wool sales to day 8,300 bales were disposed of, comprising Sydney, Victoria and Cape. The series of sales closed with good competition. The rates of the series, compared with those of June last, show a small advance for Port Phillip and the better classes of scoured, but faulty and inferior grades of Australian and Cape were rather lower, while fine cross-breeds were unchanged. Out of 382,649 bales offered 338,000 were sold, 165,000 for home consumption and 17,000 for export. The next series of sales is set for the 22d of November.

#### BAGS—Unchanged.

**BARLEY**—Barley is quiet and rates unchanged.

**BEANS**—Pea Beans are higher. Red and Pink have dropped to 82¢ ctl. Small White Beans are doing better.

**CORN**—Corn is rather weak this week, and large Yellow has sold at \$1.40 to \$1.50 per ctl.

**DAIRY PRODUCE**—Fancy fresh roll is now at 45c, and is in demand. Cheese is unchanged.

**EGGS**—Eggs have advanced to 40c—the choicest California.

**FEED**—Bran and Middlings have each advanced \$2 50 per ton. Hay is unchanged.

**FRESH MEAT**—Prices are just the same as at our last report.

**FRUIT**—Grapes and Strawberries are the chief fruits now in, except the standard Apples and Pears. Prices are about the same as last week.

**HOPS**—Choice California hops are now quotable at 18¢ @ 24¢—a considerable advance.

**OATS**—Oats have sold lower this week, the choicest Surprise not going above \$1 65, and good Humboldt Oats selling at \$1 50.

**ONIONS**—Onions are unchanged.

**POTATOES**—Prices are considerably better as shown in our list.

**PROVISIONS**—The demand for all classes of Meat products is strong and prices are firm.

**POULTRY AND GAME**—Fowls have shaded off again; the chief decline being in Ducks. Our list gives present rates.

**VEGETABLES**—Cucumbers and Cauliflower are a shade higher.

**WHEAT**—Quotations are 2½c lower per ctl, but the point is in contest and but little is now selling, and the market is dull.

**WOOL**—The Wool market hangs in expectancy. There is a large amount of Wool awaiting buyers who do not arrive. What sales are made, however, are at higher rates than we have lately quoted.

### Domestic Produce.

WHOLESALE.

WEDNESDAY M., October 12, 1881.	
BEANS & PEAS.	Silver Skin..... @ 80
Hayo, cts..... 25 @ 25	Oregon..... @
Butter..... 3 00 @ 3 25	POTATOES.
Castor..... 3 50 @ 4 00	Early Rose..... 1 15 @ 1 30
Pea..... 4 00 @ 4 15	Petaluma, cts..... 1 37 @ 1 50
Red..... @ 2 00	Tomatoes..... 1 30 @ 1 45
Pink..... @ 2 00	Humboldt..... @ 1 00
Large White..... 3 00 @ 3 50	"Kidney..... @ 1 00
Small White..... 4 00 @ 4 10	"Peachblow..... @
Lima..... 6 12 @ 5 50	Jersey Blue..... @ 1 50
Field Peas, b'k eye..... 50 @ 75	Cutty Cove..... 1 40 @ 1 50
do, green..... 75 @ 90	River, red..... 35 @ 37 1/2
BROWN CORN.	
Southern..... 3 @ 6	Sweet..... 90 @ 100
Northern..... 4 @ 6	POULTRY & GAME.
CHICKEN.	
California..... 4 @ 41	Hens, doz..... 5 00 @ 6 00
German..... 6 1/2 @ 7	Roosters..... 5 00 @ 5 50
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb..... 39 @ 40	Spring..... 1 50 @ 1 75
do Fancy Brands..... 42 1/2 @ 45	Teal..... 1 50 @ 1 75
Pickle Roll..... @ 32	Wildgeon..... @ 1 25
Parkin, new..... 27 1/2 @ 30	Geese, pair..... 1 50 @ 1 75
Eastern..... 20 @ 25	Wild Gray, doz..... @
New York..... @ 14	White do..... @
CHEESE.	
Cheese, Cal., lb..... 13 @ 14	Turkeys..... 13 @ 15
EGGS.	
Cal. Fresh, doz..... 33 @ 40	do, Dressed..... 13 @ 16
Ducks..... @ 25	Snipe, Eng..... 2 50 @ 3 00
Oregon..... 30 @ 32	do, Common..... @ 60
Eastern, by express..... 20 @ 25	Quail, doz..... 1 00 @ 1 25
Pickled here..... @	Partridges..... 75 @ 1 00
Utah..... 22 @ 25	Hare..... 50 @ 75
FEED.	
Bran, ton..... @ 22 50	Venison..... 6 @ 8
Corn Meal..... @ 13 00	PROVISIONS.
Hay..... @ 13 00	Cal. Bacon, extra..... 15 @ 16
Middlings..... @ 13 00	Medium..... 15 @ 16 1/2
Oil Cake Meal..... @ 20 00	Light..... 16 @ 17 1/2
Straw, bale..... 42 @ 45	Lard..... 15 @ 17 1/2
FLOUR.	
Extra, City Mills..... 3 25 @ 3 50	Cal. Smoked Beef..... 12 @ 12 1/2
do, City Mills..... 3 75 @ 4 00	Shoulders..... 8 @ 9
do, Oregon..... 4 50 @ 5 00	Hams, Cal..... 13 1/2 @ 14
do, Walla Walla..... 4 50 @ 5 00	Dupees..... 17 @ 19
Superfine..... 3 00 @ 3 50	Whittaker..... 17 @ 18
FRESH MEAT.	
Beef, 1st quality, lb..... 5 @ 6	Royal..... 17 @ 19
do, 2nd..... 4 @ 5	Stewart..... 17 @ 19
do, 3rd..... 3 @ 4	Eastlake..... 17 1/2 @ 18 1/2
do, 4th..... 2 @ 3	SEEDS.
do, 5th..... 1 @ 2	Alfalfa..... 15 @ 17
do, 6th..... 1 @ 2	do, Chile..... 4 @ 5
do, 7th..... 1 @ 2	Canary..... 4 @ 5
do, 8th..... 1 @ 2	Clover, Red..... 14 @ 15
do, 9th..... 1 @ 2	White..... 45 @ 50
do, 10th..... 1 @ 2	Cotton..... @ 20
do, 11th..... 1 @ 2	Flaxseed..... 25 @ 30
do, 12th..... 1 @ 2	Hemp..... 7 @ 8
do, 13th..... 1 @ 2	Italian Ryegrass..... 25 @ 30
do, 14th..... 1 @ 2	Perennial..... 25 @ 30
do, 15th..... 1 @ 2	Millet, German..... 10 @ 12
do, 16th..... 1 @ 2	do, Common..... 7 @ 10
do, 17th..... 1 @ 2	Mustard, White..... 3 @ 4
do, 18th..... 1 @ 2	Brown..... 11 @ 12
do, 19th..... 1 @ 2	Rape..... 3 @ 4
do, 20th..... 1 @ 2	Ky Blue Grass..... 20 @ 25
do, 21st..... 1 @ 2	2d quality..... 16 @ 18
do, 22nd..... 1 @ 2	Sweet V Grass..... @ 25
do, 23rd..... 1 @ 2	Orchard..... 20 @ 25
do, 24th..... 1 @ 2	Red Top..... @ 15
do, 25th..... 1 @ 2	Lawson..... 30 @ 40
do, 26th..... 1 @ 2	Mesquit..... 10 @ 12
do, 27th..... 1 @ 2	Thunberry..... 10 @ 11
do, 28th..... 1 @ 2	TALLOW.
do, 29th..... 1 @ 2	Crudo, lb..... 7 @ 7 1/2
do, 30th..... 1 @ 2	Refined..... @ 10
do, 31st..... 1 @ 2	WOOL, ETC.
do, 32nd..... 1 @ 2	SPRING—1880.
do, 33rd..... 1 @ 2	Oregon, Eastern..... 24 @ 26
do, 34th..... 1 @ 2	do, fine, heavy..... 21 @ 23
do, 35th..... 1 @ 2	do, Valley..... 27 @ 30
do, 36th..... 1 @ 2	SAN JOAQUIN—1881.
do, 37th..... 1 @ 2	do fair..... 14 @ 18
do, 38th..... 1 @ 2	do, Southern Coast..... 17 @ 18
do, 39th..... 1 @ 2	Slightly Burry..... 15 @ 16
do, 40th..... 1 @ 2	Burly and Seedy..... 15 @ 16
do, 41st..... 1 @ 2	Northern choice..... 25 @ 26
do, 42nd..... 1 @ 2	Burly or Seedy..... 20 @ 22
do, 43rd..... 1 @ 2	Sonoma, Mendocino, ftumboldt, fancy..... 29 @ 30
do, 44th..... 1 @ 2	FALL—1881.
do, 45th..... 1 @ 2	San Joaquin..... 16 @ 17
do, 46th..... 1 @ 2	do, Lamb..... 16 @ 18
do, 47th..... 1 @ 2	do, Northern..... 16 @ 18
do, 48th..... 1 @ 2	do fair..... 15 @ 16
do, 49th..... 1 @ 2	Northern, free..... 23 @ 24
do, 50th..... 1 @ 2	do, defective..... 20 @ 24
do, 51st..... 1 @ 2	ONIONS.
do, 52nd..... 1 @ 2	Red..... @ 75

### Fruits and Vegetables.

(WHOLESALE.)

WEDNESDAY M., October 12, 1881.

FRUIT MARKET.	
Apples, bx..... 30 @ 1 00	Raisins, Cal, bx..... @ 2 75
Bananas, bnch..... 2 50 @ 4 00	do, Halves..... @ 3 00
Cocoanuts, 100..... 6 00 @ 7 00	do, Quarters..... @ 3 25
Cranberries, bbl..... 12 @ 15 00	do, Eighths..... @ 3 50
Figs, bx..... 50 @ 75	Zante Currants..... 8 @ 10
Grapes..... 50 @ 85	VEGETABLES.
Limes, Mex..... 10 00 @ 12 00	Asparagus, doz..... @
do, Cal, box..... @	Artichokes, doz..... @ 25
Lemons, Cal, bx..... 2 50 @ 4 00	Beets, cts..... @ 5
Sicily, box..... 10 00 @ 12 00	Beau, Lima, lb..... @ 5
Anstrallan..... @	do, String..... 1 @ 1 1/2
Oranges, Cal, bx..... 2 50 @ 3 00	do, Wax..... @
do, Tahiti M..... @	do, Fountain..... 1 @ 2
do, Cal, box..... @	Cabbage, 100 lbs..... 75 @ 1 00
do, Loreto..... @	Carrots, sk..... 40 @ 50
Pears, bx..... 50 @ 1 00	Cauliflower, doz..... 60 @ 75
Pineapples, doz..... 7 00 @ 8 00	Cucumbers, bx..... 25 @ 40
Plums, bx..... 50 @ 75	Egg Plant, bx..... @ 50
Strawberries, cts..... 5 00 @ 6 00	Garlic, lb..... 4 @ 1
Watmelus, 100..... 3 00 @ 6 00	Green Corn, doz..... 12 @ 18
DRIED FRUIT.	
Apples, sliced, lb..... 5 @ 5 1/2	Green Peas, lb..... @
do, quartered..... 4 @ 5	do, Sweet..... 2 @ 2 1/2
Apricots..... 16 @ 17	Grn Peppr, bx..... @ 50
Blackberries..... 10 @ 11	do, Chile, bx..... 50 @ 75
Citron..... 23 @ 30	do, Lettuce, doz..... 10 @
Dates..... 9 @ 10	Mushrooms, lb..... @
Figs, pressed..... 5 @ 7	Okra, lb..... 2 @ 3
do, loose..... 4 @ 5	Horseradish..... @
Nectarines..... 14 @ 15	Larapla, lb..... 50 @ 75
Peaches..... 12 @ 12 1/2	do, chest..... @
do, pared..... 13 @ 16	Squash, Marrow..... @ 10 00
Pears, sliced..... 9 @ 10	do, fat, ton..... 8 00 @ 10 00
do, whole..... @ 7	Sprouts, lb..... @
Plums..... 4 @ 5	Potatoes..... 35 @ 40
Pitted..... 12 @ 13	Turnips, cts..... @ 50
Prunes..... 9 @ 10	

### Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending October 11, 1881.

HIGHEST AND LOWEST BAROMETER.

Oct. 5	Oct. 6	Oct. 7	Oct. 8	Oct. 9	Oct. 10	Oct. 11
30.135	30.135	30.052	30.101	30.006	29.972	30.018
30.083	30.011	29.974	30.000	29.890	29.878	29.953

MAXIMUM AND MINIMUM THERMOMETER.

62	65	67	70	72	61	69
52	53	53	52	54	52	52

MEAN DAILY HUMIDITY.

77.3	67	62.3	65	61.3	73	74.7
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PREVAILING WIND.

W	W	W	W	W	SW	SW
185	218	158	125	140	320	268

STATE OF WEATHER.

Clear	Clear	Clear	Clear	Clear	Fair	Clear
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RAINFALL IN TWENTY-FOUR HOURS.

Total rain during the season, from July 1, 1881, 0.35 inches.

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Wool, Grain and  
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Liberal advances made on consignments, at low rate interest.  
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Special attention given to Wool, Grain, and Country Produce.

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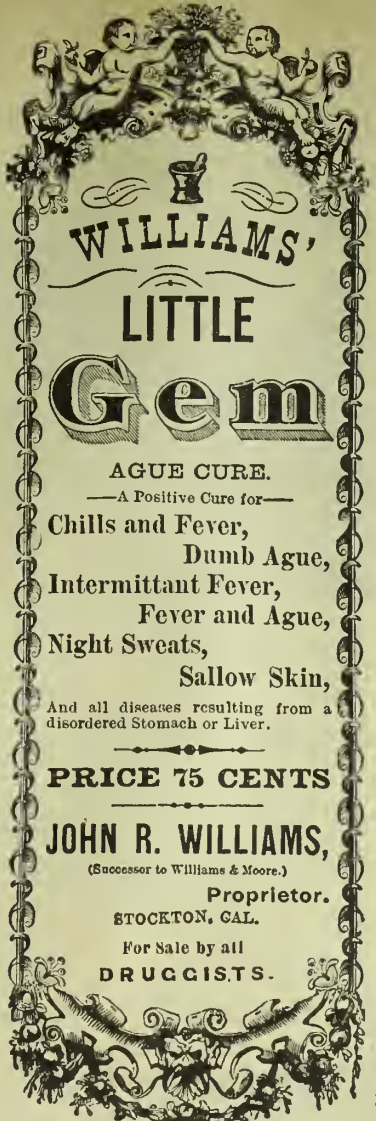
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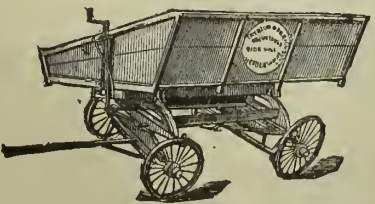
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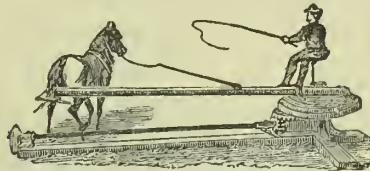
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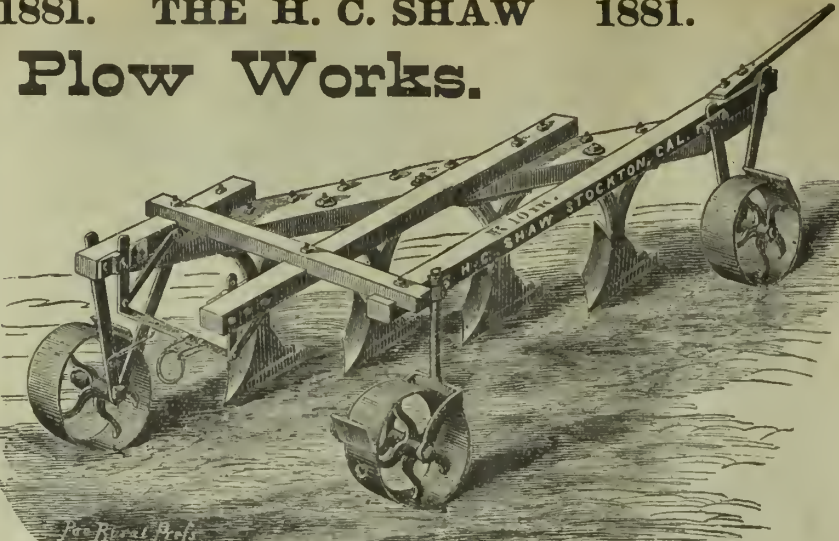
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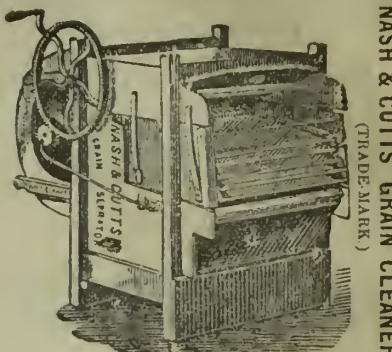
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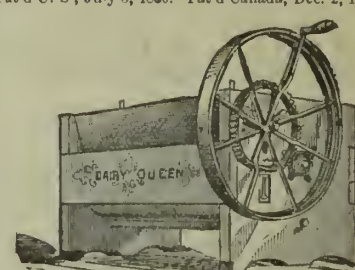
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Importers, Growers and Dealers in Garden, Field and  
Flower Seeds, Dutch Bulbous Roots, Summer Flower-  
ing Bulbs and Garden Requisites of every description.  
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## PEPPER'S NURSERIES.

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For sale, all kinds of Fruit Trees, Vines and Fruiting  
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20,000 Pear trees, mostly Bartlett. 15,000 June budded  
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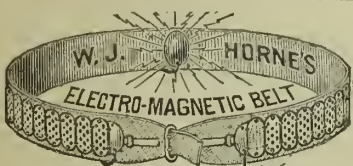
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For sale coming season, from one to three feet high, con-  
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Apricots, also General Nursery Stock.

My buds are taken from bearing trees and true to name.  
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Patent, Nov. 11, 1879.

Patent, Nov. 9, 1880.

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(The Only Genuine.) Received 1st Premium State Fair,  
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Will positively cure without medicine—Rheumatism, Paralysis,  
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Nervousness, Dyspepsia, Spinal Disease, Ague, Piles and other  
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Fair, awarded to the CAL-  
IFORNIA ELASTIC TRUSS  
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ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
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Samples sent free. Circular and references given on  
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50 All Gold, Chromo and Lithograph Cards. (No 2  
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**THE CELEBRATED**  
**H. H. H.**  
**Horse Liniment.**

THE  
MOST EFFECTUAL!

As a Horse Medicine

It is Superior to any Lini-  
ment ever invented. For  
RINGBONE, SPAVIN,  
SWEENEY,  
CALLOUS LUMPS,  
And OLD SORES, apply  
freely so as to blister, from  
three to five days in suc-  
cession, and in four or five days  
if not cured repeat as at first.

SPRAINS, STIFF JOINTS, BRUISES, WIND GALLS,  
and all slight ailments, apply a small quantity so as not  
to blister. SADDLE SORES, CUTS, and all other sores  
where the skin is broken, mix the Liniment half and half  
with any kind of oil and apply in moderation.



THE BEST!

AS A  
FAMILY REMEDY.

We are safe in making the  
bold assertion that no Lini-  
ment exists that will com-  
pare with the H. H. H., in  
curing the following diseases:  
RHEUMATISM,

Apply freely to the parts af-  
fected, and take internally  
from 10 to 20 drops in from  
2 to 3 tablespoonfuls of water.

3 times a day. DIARRHŒA, dose, as above. COLIC,  
same as above, repeated every half hour until relieved.  
TOOTHACHE, saturate a piece of cotton and put it in  
the tooth, repeat in 15 minutes if not relieved. All other  
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Price—Small Size, 50c.; Medium, \$1; Large, \$2.50.

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In Large Quantities and Offered in Lots to Suit Purchasers.

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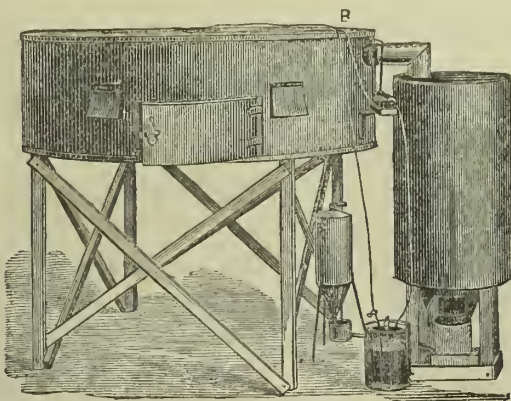
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The Baby National Incubator

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Self-Regulating, Durable, Practical and easily  
Understood. Will hatch where none other  
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THE GRANGERS, CONTRA COSTA CO.

Principal Office—No. 38 California Street, San Francisco.

The Association is now prepared to receive Grain on consignment for sale and storage in its warehouses at Port  
Costa, on which advances will be made at a low rate of interest, and at the usual rates of storage. Cars can now be  
run on the wharf and the grain unloaded directly into warehouses. **AMOS ADAMS, Business Manager.**

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50 Lithographed Chromo Cards, no 2 alike 10c. Name  
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For Sale in large or small tracts, on easy terms, in  
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Goods Crops every Season without Irrigation

Farms, Stock Ranches, Dairy Farms, Fruit Farms,  
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**The Famous "Enterprise,"**

**PERKINS' PATENT**  
**Self Regulating**  
**WINDMILLS,**

Pumps & Fixtures.

These Mills and Pumps are  
reliable and always give sat-  
isfaction. Simple, strong and  
durable in all parts. Solid  
wrought iron crank shaft with  
double bearings for the crank  
to work in, all turned  
run in babbitted boxes.

Positively self regulating  
with no coil spring or springs  
of any kind. No little rods,  
joints, levers or balls to get  
out of order, as such things  
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have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in  
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**HORTON & KENNEDY,**  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,  
San Francisco Agency, **LINFORTH, RICE**  
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Price Reduced to \$1 Per Gallon.

**MOORE'S SULPHUR DIP,**

THE BEST AND CHEAPEST PREPARATION FOR  
THE CURE OF SCAB.



The General Health and Condition of the  
Sheep Promoted by its Use.  
Non-Poisonous.

One Gallon (making 60 gallons of dip) is sufficient to  
dip 120 to 150 newly shorn sheep. Cost of dipping will  
not exceed one cent per sheep. Manufactured by

**C. E. WILLIAMS & CO., Stockton, Cal.**

Sold by all Wool Commission Merchants in San  
Francisco.

We call attention to following testimonial from **J. H.  
Kirkpatrick,** breeder of fine sheep:

**KNIGHTS FERRY, Cal., Aug. 26, 1881.**  
**C. E. WILLIAMS & CO., STOCKTON:** Gentlemen: I have  
used Moore's Sulphur Dip in dipping my band of thor-  
oughbred Merinos, which are admitted to be very hard  
to cure of scab, owing to the density of fleece, and I  
am free to say that the Sulphur Dip will certainly eradi-  
cate the disease when properly applied. Moreover it is  
the cheapest of the prepared dips of which I have any  
knowledge, and being a certain cure it deserves to come  
into general use as the standard remedy.

Yours Truly, **J. H. KIRKPATRICK.**

**Whitmore's Improved Gear,**

ADAPTED TO

**Buckwagons, Buggies and Light Business  
Wagons.**

Weight carried to the extremities of the Axles. Long,  
soft, double sweep springs. No side sway or pitching  
motion. It is jointed, relieving all strain.

**E. WHITMORE, MAKER,**  
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Traveling Agent for the Pacific Coast.



**KNOW THYSELF**

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cheapest, indispensable to every  
man, entitled the "Science of Life or  
Self Preservation," bound in finest  
French muslin, embossed, full gilt,  
300 pp. Contains beautiful steel en-  
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Boston.

**CERTIFICATE OF PARTNERSHIP.**

We, the undersigned, hereby certify that we compose  
the partnership transacting business under the firm  
name of Robinson & Hallidie.

The principal place of business is the City of San Fran-  
cisco, in the State of California, and the full name and  
respective place of residence of the partners are signed  
hereto,  
**ANDREW J. ROBINSON.**  
**ANDREW S. HALLIDIE.**



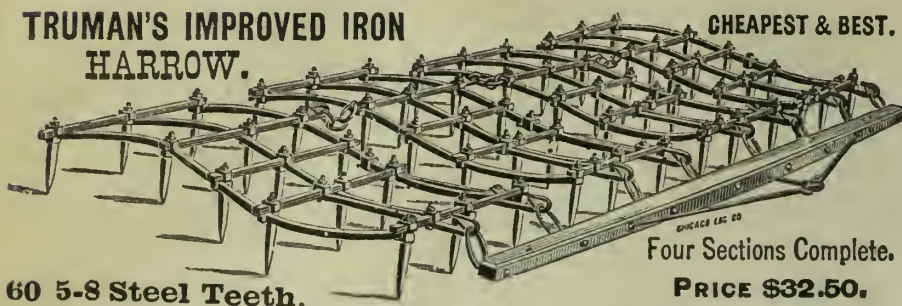
I. J. TRUMAN.

BYRON JACKSON.

# JACKSON & TRUMAN,

## TRUMAN'S IMPROVED IRON HARROW.

CHEAPEST &amp; BEST.



60 5-8 Steel Teeth.

Four Sections Complete.

PRICE \$32.50.

## TRUMAN'S IMPROVED IRON HARROW.

The cut represents a Harrow Frame that is indestructible; made entirely of iron, and locked firmly together by the teeth passing through malleable iron clamps and having screw-threaded shanks on their upper ends, which bolts the framework securely together. This mode of constructing a Harrow Frame dispenses with drilling or punching holes through the bars of the frame, thereby giving greater strength and durability to the frame of the Harrow.

Iron is continually more and more taking the place of wood in the manufacture of all kinds of farm machinery, and there is no implement used on the farm where it is employed with more profit and advantage than in the construction of the Harrow.

In handing you this description of our improved Iron Harrow, we desire to call your attention to its merits and advantages over all other implements of its class:

## JACKSON'S CALIFORNIA WINDMILL.



## JACKSON'S

CALIFORNIA  
PATENTED JUNE 27-1874  
WINDMILL

- THE -

Best and Cheapest.

10 foot..... \$75  
12 " ..... \$85  
14 " ..... \$100

MADE BY

JACKSON & TRUMAN,  
San Francisco.

This Mill was first introduced in the West, and is now known there as the INGALLS Mill. We purchased the patent for this Coast, and have made a complete new design and new patterns throughout, greatly simplifying its construction. Making Large Wearing Surfaces; Oil Reservoirs, ample and convenient; Boxes are all lined with babit; Steel Pins for Connecting Rods; the S.roke is Adjustable; the Castings are Heavy, Strong and Smooth; the Wheel is Solid, and dished like a Wagon Wheel; Thoroughly Braced in every direction.

The Sections are so framed, with a special machine for that purpose only, that when simply stuck together without a nail they cannot be racked the least without breaking.

The whole circle is regularly filled with wings and no place left out for spokes, they being behind, out of the wind.

The Turn Table is small and the Vane large, insuring it to turn face to the first available wind.

It is thrown out of the wind by a Hand Lever at the base of the tower, or by a severe gale, presenting a wind surface of less than five inches and defying the fury of the storm.

A Float may be placed in the tank, so attached to the shipping gear as to automatically stop the mill when the tank is full and resume work before the water is drawn out.

It is neatly painted with two coats and varnished.

Duplicates of every part.

In designing this Mill, we have aimed to make one that will bear us out in applying all of the qualifying adjectives usually employed by the descriptive ingenuity of windmill inventors and manufacturers. The following is a brief extract of those common to all windmill catalogues: Cheap, Simple, Compact, Strong, Durable, Powerful, Adjustable, Automatic, Anti-Friction, Self-Regulating, Noiseless, Ornamental, and fully warranted not to run unless the wind blows.

We challenge competition in any or all of the above enumerated qualities of a Wind Engine for Pumping.

**PRICE OF MILLS:** Twenty-five per cent less than any other first class mill. Ten-Foot Wheel, \$75; Twelve-Foot Wheel, \$85; Fourteen Foot Wheel, \$100. These prices include Actuating Pump Rod and Connection for Pump at the works in San Francisco.

The Tower, Pumps, Pipe, etc., are extra. The cost of Tower and setting Mill is from \$25 to \$50, or \$1 per foot in height.

We can furnish Tanks of any required size; also, Frames of any required height. On receipt of size of Tank, height of Frame, and a diagram showing length of pipe, number of elbows and faucets, we can send the whole, properly fitted. If desired, we will send a competent man, at reasonable rates. Instructions for setting up sent with each Mill.

## PRICE LIST.

**No. 1 HARROW** Has three sections, 45 5-8 steel teeth; cuts 9 feet wide. This is a light size for two horses. Price \$25.00.  
**No. 2** (Represented in the cut) has four sections, 60 5-8 steel teeth; cuts 12 feet. This is our standard style for two horses (generally used). Price \$32.50.

**No. 3** Has 5 sections, 75 5-8 steel teeth; cuts 15 feet wide. This is our three-horse Harrow; can leave off one section and use two horses with the same draft bar Price \$37.50.  
**No. 4** Has 6 sections, 90 5-8 steel teeth; cuts 18 feet. For this size we use four horses—standard, with two draft-bars coupled together at the ends; for large farms.... Price \$48.00.

This Harrow can be taken apart and packed very closely for shipment, they can be put together with a wrench; the teeth are five-eighth-inch solid steel. Order the TRUMAN IRON HARROW. For sale by all Implement Dealers. Manufactured by

## JACKSON & TRUMAN,

No. 625 Sixth St., San Francisco.

## M. J. PAILLARD & CO.,

Manufacturers and Importers of all Kinds of

## MUSICAL BOXES

Of Standard Reputation. The largest and finest assortment in the city. Musical Boxes with changeable cylinders always on hand at low figures. The latest style patented, "THE INTERCHANGEABLE," patented February 11, 1879.

Repairing Musical Boxes and Furnishing Material a Specialty.

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## TAMALPAIS HOTEL,

SAN RAFAEL.

This well-known and favorite hotel is now open for the reception of guests. Newly furnished. FIRST-CLASS in every respect.

TABLE supplied with the VERY BEST the market affords. The long experience of the proprietor enables him to make the TAMALPAIS the most desirable country house on the coast.

The salubrity of the CLIMATE and beauty of the SCENERY is world-renowned.

W. G. GRAHAM, Proprietor.

## ERADICATE NOXIOUS INSECTS.

Lewis' Exterminator and Force Pump, with its sheet spray making attachment. No change of nozzle; is unequalled by any pump offered!

Will wash from 500 to 1,000 trees per day! Will throw any liquid! Hot water or London Purple; will conquer all Leaf or Bark eating insects. Equally adapted for tree or ground crops. Durable and efficient.

Force Pump, Agrion tural and Veterinary Syringes in combination. Price \$8; In polished brass, \$7.50; nickel plated Portable Fire Extinguisher, \$15. Orders received from Agents and the trade. D. N. DILLA, 825 Twenty-Ninth Street, Oakland.

## Hubbell's Self-Cleaning Harrow.

This Harrow fills a long desired want among farmers. As it is built in sections for one or six horses, and can be cleaned while in motion without lifting the harrow. Address T. J. HUBBELL, Mayfield, or McKENZIE & CO., San Jose, Manufacturers.

## STILES' GRAIN MILL.

This Mill grinds by corrugated friction rollers. It will grind eight tons to one-horse power per day, and one-half-horse power will run it and do work in proportion. It can be run by a common windmill. Any orders received by W. C. STILES, Nevada City, will be filled at once.

## Colonies of Pure Italian Bees,

In movable (10) frame blves prepared for shipping, \$12.50 each. J. D. ENAS, Sunnyside, Napa P. O., Cal.

## Important to Orchardists.



Parties desiring to plant fruit trees the coming season can obtain them from the leading Eastern Nurseries in lots of 100 and over by sending their orders before the 5th of November, to C. W. REED, Sacramento, Cal.

## PRICES:

Apple (standard), 6 to 7 ft. .... \$15 @ 100; \$125 @ 1,000  
Pear (standard), 5 to 6 ft. .... 25 @ 100; 200 @ 1,000  
Plum (standard), 5 to 6 ft. .... 25 @ 100; 200 @ 1,000  
Peach (first size) ..... 10 @ 100; 80 @ 1,000  
Apricot (first size) ..... 20 @ 100; 180 @ 1,000  
Cherries (first size) ..... 25 @ 100; 200 @ 1,000

In addition to the above prices a small charge will be made to cover cost of packing and freight per carload rates from Eastern nurseries to California.

From an experience of 25 years in planting trees, propagated in the East and in California, I can affirm that all kinds of trees grown in the East and transplanted to California are much more hardy and vigorous in their growth, and are more free from diseases of all kinds, especially the scale insect, than California grown trees. I will attend personally to the selection, packing and shipping of all orders, and insure their safe arrival in good order. Address, C. W. REED, P. O. Box 161, Sacramento, Cal.

## California Washer.

This machine is an improvement on the celebrated "Humboldt." For Families or Hotels it will pay for itself in less than six months. Lace curtains and other delicate fabrics can be washed without injury. Price \$15. Manufacture, 431 Fourth St., S. F. Local or traveling Agents wanted. G. M. PURCELL, Patenteo.

## California Improved Rotary Churn,

PATENTED AUGUST, 1881.

A Box Churn with dashers, or can be used without dashers. Can be run with reverse motion with one man or two. A trial will convince that this is the best Churn in use. For Churns and Agencies, apply to

E. L. PRIEST & CO.,  
629 Market St., Oakland.

## Russell's Hollow Tooth Harrow.

This Harrow is guaranteed to do double the work of any other Harrow and do it better. GEORGE SEANOR, Los Gatos, Agent for Santa Clara Co.

## PACIFIC RUBBER PAINT.

## BEST MIXED PAINT IN THE WORLD.

It is made of the very best qualities of materials used in ordinary Lead and Oil Paint, combined intimately with a strong solution of PURE INDIA RUBBER.

It is superior to ordinary White Lead Paint, costs less, will cover more surface and will not CRACK, PEEL, OR CHALK OFF.

It makes a firm, handsome, glossy and durable surface. It will not be affected by any changes of climate or atmosphere.

It is mixed ready for use, and anyone can apply it.

It is just the thing for farmers and others who wish to do their own painting. There is no waste of material or trouble in mixing.

## On Wood, Stone, or Brick,

It works equally as well, adheres firmly and with a BEAUTIFUL FINISH.

## For Roofs,

THE RUBBER METALLIC has no superior as a WATER-PROOF and LASTING PAINT.

## For Inside Work,

Where you wish to finish in tints or colors use the outside Paints—nothing can give as handsome a job. It makes an even surface, and with a GLOSS EQUALING VARNISH; its use dispenses with expense of graining and varnishing.

## For Plastered Walls,

In any shade or tint, nothing gives a PRETTIER or MORE FINISHED job, at less expense for material or labor.

FOR AGRICULTURAL MACHINERY, WAGONS, ETC., the RUBBER WAGON COLORS cannot be excelled. They make an ARTISTIC FINISH and DURABLE JOB.

Put up in Barrels, 5, 1, 1-2, and 1-4 gallon cans.

## BE SURE YOU GET THE PACIFIC RUBBER PAINT.

There are several miserable imitations in the market under the name of "Rubber" Paints. See that the words "PACIFIC RUBBER PAINT" are upon every label.

Ask your storekeeper for Sample cards and testimonial sheets, and if he does not have them you may receive same on application to

## PACIFIC RUBBER PAINT CO.,

OFFICE—S. W. Cor. Pine & Front Streets, S. F.





Volume XXII.]

SAN FRANCISCO, SATURDAY, OCTOBER 22, 1881.

Number 17

### Lincoln Sheep.

We give on this page a handsome engraving of four imported Lincoln sheep belonging to Mr. John Geary, of London, Canada. The two rams are four years old, the larger one weighing 303 lbs., and the other 297 lbs., and averaging 18 lbs. of wool each. The ewes weigh now, after raising lambs this season, 250 lbs. and 257 lbs., and they sheared 12 lbs. of wool each. Mr. Geary's flock numbers 125 sheep of all ages, 17 of them being imported and the balance bred from imported stock. As there has been some inquiry from our readers for information about Lincoln sheep, we secured the engraving from Mr. Geary to show the animals at their best.

For descriptive notes on the Lincolns, we cannot do better than quote from the able report on sheep and wool at the International exposition at Vienna, made by Hon. J. R. Dodge, who is now in charge of several important inquiries in the agricultural department of the United States Census office. Mr. Dodge shows that the old Lincolns, of the fertile meadows of Lower Lincolnshire, were remarkable beyond any contemporary breed for coarse and heavy forms and length of wool, the fleeces weighing 10 to 12 lbs. They were hornless, with large limbs, hollow flanks and flat sides. They shared with the Romney-March sheep the alluvial and fen districts, consumed largely their rank pasturage, and fattened slowly. When the fame of Bakewell at Dishley was rising to its zenith, recourse was had to his improved Leicesters for improvement in the flesh-taking property, and this course of crossing was pursued to the close of the 18th century, and indeed to the present time, as found necessary, for the purpose of securing a better form and earlier maturity without losing wholly their peculiarities of size and length of fiber.

For at least a quarter of a century a sharp contest was waged between the supporters of the old and the new, the former fearing the loss of hardiness and local adaptation, as well as its unrivaled peculiarities of fleece, while the latter were quite willing to risk any or all of these results in the belief that more mutton and wool and money could be realized upon each acre of area than with the modified Lincolns. And the latter ultimately prevailed, and verified the correctness of their theory.

The effect of this change upon the wool has been to make it shorter and finer, and to diminish somewhat its softness of fiber. It is a question whether the peculiar quality of the wool could have been retained in larger degree without essential injury to its meat-producing quality. This district still produces the largest sheep of Great Britain, with fleeces superior in weight and value to any other. They are not equal in earliness of maturity to the Leicesters, but they are profitable, and suitable to the rich lands they occupy, wethers frequently attaining the enormous weight of 50 to 60 lbs. per quarter.

**TOBACCO GROWING.**—A recent bulletin from the Census office gives a preliminary report on tobacco growing in the United States. From the report it appears that Kentucky stands foremost in production, in the average and total value of the crop, although eight States surpass her in the value per acre and twelve in value upon the hundred pounds. The value of the crop in the farmers' hands was \$11,089,782. Virginia comes next and then Pennsylvania, producing respectively \$5,406,744 and \$4,612,894. While Florida produced but 21,000 pounds, valued at \$3,995, Florida tobacco was valued at \$18 93 per 100 pounds, while Kentucky tobacco was valued at but \$6 48, and Virginia at but \$6 75. Next comes Connecticut tobacco, valued at \$14 10 per 100 pounds. New Hampshire is a remarkable instance of extremes. While it raised but 170,843 pounds, valued at \$20,501, its crop was valued at \$32 96

**ACORN-STORING WOODPECKERS.**—At the last meeting of the Academy of Sciences, Robert E. C. Stearns read an interesting paper on the acorn-storing habit of the California woodpecker, donating also specimens of hark of the yellow pine, showing acorn deposits by the bird. He had examined a fallen pine 175 ft. in length, above the 90-ft. line of which the woodpecker's holes were comparatively few. Neither were there any in the first 10 ft. of the trunk from the ground. One piece, 12x12 inches, showed 60 holes, and taking 36 holes for an average to the square foot, that tree had 41,040 acorn holes in its bark. The holes are drilled to receive acorns of various sizes, the birds being exact workmen, and each acorn fitted to its cavity with wonderful nicety. Woodpeckers reject the cups about the acorn. The birds bore also in the spruce tree, and to a limited extent into certain oaks. The acorns are generally consid-

### The Arid Land Commission.

The Arid Land Commissioners, Gov. Furnas and Judge Jones, have been husily engaged for more than a month in going from place to place in this State, and are becoming well informed concerning our achievements and methods and resources. So far as informal indications go, the commissioners are becoming very favorably impressed with California, and their favor, honestly bestowed, as it must be by such men, will be of great value to us. The editor of the *Healdsburg Flag* learned from recent conversation with Gov. Furnas that he was agreeably surprised at the impressions he received of the greatness of our State; its wonderful climate and greatly diversified soil. He thinks we are justly entitled to take rank in the future

with the wealthiest and most populous States in the Union. He says what we most need is more small self-supporting land holders, and all of our farmers should grow a greater variety of crops. The farmer, so far as possible, should grow everything he consumes, and his boys should be interested in the farm work, and so grow up industrious, useful members of society, a source of real wealth to the State.

The Governor is a well known and prominent horticulturist of Nebraska. He has 40 acres of orchard embracing every variety of fruit known to his State. He has traveled over a considerable portion of our State studying its soils and climate, and all the possible resources that shall make us a great and prosperous people, and comes to the conclusion that ours is a truly favored country. He had heard of the attractions of our State, but he thinks the half had not been told him. In fact the Governor remarked that if his interests in his own

State were not so large, and his associations and relations other than what they are, he would pull up stakes and emigrate to California with a view to engaging in horticulture here, as no section of the U. S. offers so many inducements.

Judge Jones seems also to have been favorably impressed with much that he has seen. He believes that the growth of the small-farm interest is one of our greatest needs. When we divide our immense ranches into smaller farms, and these are owned and cultivated by careful, painstaking, economical holders, then our prosperity and progress will grow apace. Our State by reason of its diversified soil and climate is capable of sustaining an immense population. This will not only enable us to be self-sustaining as a community, but to become large exporters. The Judge says our wheat surpasses in quality anything that is raised east of the Rockies, and we should receive better prices. He thinks our horses excel any he has seen either in the United States or England. While the horses of Kentucky deservedly rank high for their excellence, still he is of the opinion that the California bred horse surpasses them all.



GROUP OF IMPORTED LINCOLN SHEEP OWNED BY JOHN GEARY, LONDON, CANADA.

per acre, while that of Florida was valued at but \$44 38, that of Kentucky at but \$49 04, and that of Virginia at but \$38 40. The statistics show tobacco culture to yield less profits in Tennessee than in any other tobacco-raising State. California does not come in, as tobacco men claim to see no resemblance to the Indian weed in the article we raise, it is however not yet established that the "tobacco men" are infallible. From the census of 1880 it appears that Kentucky raised 171,120,784 pounds of tobacco on 226,120 acres of land; Virginia raised 79,988,868 pounds on 140,791 acres; Pennsylvania raised 36,943,272 pounds on 27,566 acres; Ohio 34,735,235 pounds on 34,676 acres, and Florida 31,182 pounds on but 90 acres of land; California raised 73,317 pounds on 84 acres, and Maine raised 250 pounds on one acre.

**BUFFALO** are very plentiful this season in the Judith Basin, Montana, and hunters anticipate a rich harvest. If the animals be slaughtered in the future as they were last year, but a short time will elapse before the Yellowstone region will no longer be a home for buffalo.

ered to be laid up for winter food; but as this climate demands no such provision, and it being also very improbable that the birds would feed on hard nuts or seeds of any kind, the more plausible explanation is that the acorns are preserved for the sake of the grubs they so frequently contain. These being very small when the acorn falls, grow until they eat the whole interior of the acorn, becoming a welcome delicacy. As woodpeckers leave a great number of acorns in the tree untouched, it is probable that they are sound ones, and are eaten by squirrels and blue jays. The woodpeckers received from early Mexicans the name of "carpinteria," which name is also adopted by many Americans. Trees used by the woodpecker for the storage of acorns contain on an average 366 lbs. of acorns imbedded in their bark.

In July, 1879, Mammoth City and vicinity contained 3,000 inhabitants. It now has not 10, having declined on account of failure of the Mammoth mine which with mill was recently sold for \$25,000, the whole having cost half a million.



## CORRESPONDENCE.

We admit, uncensored, opinions of correspondents.—Eps.

### More People Wanted.

EDITORS PRESS:—The *Merchant*, in speaking of California as a "home for the homeless," struck the keynote when he said, "One thing we lack, and that is population." California contains 100,992,640 acres of land, the greater portion of which is capable of cultivation. In extent it is nearly as large as Spain, which has a population of 16,630,000. In 1880 the population of California was \$65,546. Belgium, with 11,373 square miles of territory, supports a population nearly seven times as large as California, with its 188,981 square miles. If California were as densely populated as Belgium, it would contain 92,000,000 inhabitants, and, furthermore it would sustain that population, easily, if the soil were fully cultivated by a thrifty, law-abiding, economical people. The want of California, then, is more immigrants—hard-fisted Eastern men who are not afraid to work. It has no other want. It has abundance of capital awaiting investment. It has vast regions of virgin soil awaiting cultivation. It has a perfect system of land and sea transportation; but it lacks a people. The agricultural population of California is comparatively small, which is an inducement for Eastern farmers to emigrate here.

There is an abundance of Government land for pre-emption and homesteading in accessible places. Perhaps the very same land that may be had for settling upon now, will, in less than 10 years, sell for \$15 or \$20 per acre. To illustrate, I have still another year to live on my homestead, and I am within five miles of two different potato fields, one of which is only one mile from my place. We have also a steam locomotive capable of hauling seven heavily laden wagons in one train, running within half a mile of my ranch. When I first took my claim I was 12 miles from any kind of steam transportation, but California is a fast State, made up of fast people, and all we want is more neighbors—men and women who are willing to put their shoulders to the wheel and labor for the hidden treasures of this rich and fruitful land.

Men must work in the "Golden West" if they are to be successful. This is no place for a lazy man. If the frugal farmers of the East could be induced to come here, bringing with them their settled habits of industry, California would soon take such a lead among producing States as to distance all competitors. While we have said so much in praise of this fruitful State, we must not forget to mention in particular our own county of Colusa, which is credited with being one of the greatest wheat-producing countries, not only in the State of California, but also in the whole United States.

The amount of wheat raised in Colusa county in the year 1879 is said to be about 4,500,000 bushels, or 17½ bushels per acre. This is a pretty good showing in a country where the land is at most never more than half cultivated, and a great deal of the crop falls out, having sometimes to remain in the field long after it is ripe. What we want is smaller farms better cultivated, and this, of course, necessitates more people.

L. D. JENKINS.

Olimpo, Cal.

## HORTICULTURE.

### The Black Scale.

Last week we gave a picture of the insect commonly known as the black scale and some notes on destroying it, taken from Mr. Cooke's forthcoming report. At the late meeting of the Horticultural Commission, Ellwood Cooper, of Santa Barbara, gave an interesting account of his investigations into the history of this pest and his observation of its life and work. The following is Mr. Cooper's document:

TO THE COMMISSIONERS OF THE STATE BOARD OF HORTICULTURE: Gentlemen—I have the honor herewith to submit a partial report on the insect pests that have committed such terrible ravages on the olive, not only in California, but in almost every part of the world where the olive is grown. The history of the olive is full of interest, as it carries us back to the earliest history of man, and where we find him in his most primitive state or condition, regarding the tree with a value almost sacred; an appreciation that recent generations have not respected; otherwise we would not be called upon to-day to make the struggle in fighting the diseases of which I propose to discuss in this communication.

My attention was called as early as 1874 to the condition of the trees in and around Santa Barbara, from the ravages of the *Coccus oleæ*, commonly known as the "black scale," and which was always followed by the black fungus. In 1875, I visited the orchards of San Diego, San Gabriel, San Buenaventura and Santa Barbara, and in 1876, San Luis Obispo. At the latter place I learned from the Mission Fathers, through the late Hon. Judge Murray, that the

disease had appeared about 14 years before that date, fixing the date of its appearance in California at about 1862. Prior to that time they had had uninterrupted success with their olive trees. These examinations very carefully made, determined in my mind one of two alternatives, either to keep the trees free from the scale bug or root them out. I chose the former and have been fighting it without any cessation ever since. I believe all my olive trees are clean, and are at this writing, loaded with a beautiful fruit crop. An olive tree once attacked with the scale bug, unless cleaned, will soon be infested so that it cannot bear fruit. Such fruit as is borne during the period of rapid increase of the insect, will not make oil. There are trees enough in the southern part of the State, if properly cleaned and cared for, to produce many thousands of gallons of oil, while with a few exceptional orchards, I do not believe one single gallon could be made. This is the condition everywhere where the insect is prevalent. The attack is fatal unless it is at once destroyed, and it is useless for any orchardist to fortify himself behind theories, that something will turn up to counteract the ravages, or that the ants will destroy them, or that some enemy or parasite will appear to do the work which he cannot escape. The whole business will be bankrupted anything short of total annihilation of the insect.

In some districts on the northern coast of the Mediterranean, the spread of this insect has become so alarming that the question of abandonment is contemplated. The ravages have baffled the efforts of their wisest men. To give some idea of the rapidity with which it will spread, I quote from a very interesting treatise—a pamphlet of 90 pages, written by Alfred Lejournand, agricultural engineer, published in Marseilles in 1864, title "*Maladie Noire*." It is in this work estimated that one female *Coccus* will produce from 2,000 to 4,000 eggs. By one author that one *Coccus* in five generations will produce

Five Billions, Ninety-four Millions;

By another that 10 generations are produced in one year, and allowing only 100 as the reproduction of each, we will have at the end of the year from one single female, 1,000,000,000,000,000,000,000—fortunately for us there are too many things contingent that prevents the possibility of such increase—high winds, birds and insects of various kinds destroy the greater number; still in favorable years the rapidity with which they will spread will require our greatest energies and intelligence to counteract.

In a very exhaustive work on the olive, compiled by A. Coutance, Professor of Natural Science in the School of Medicine, published in Paris in 1877, it is claimed that the silence of authors on this malady caused, during a period of 20 years, great ravages. Let us not commit the same blunder; and if we are to foster the culture of the olive in this country, the valuable portions of such works as above mentioned, and of other books on the subject, should be translated into English and made accessible to all the cultivators where the olive can be grown.

The ravages of this insect are of quite recent date. Lajournand states that it appeared for the first time at Nice in 1743, and that Bernard wrote on the subject in 1783; that there were no other writers before that time.

That all the Roman authors of the first half of the 18th century were silent upon the subject. It was in 1783 that all the proprietors in some localities trimmed down their trees to mere trunks, in order to clean them and commence with new trees.

It is certain that a malady so characteristic with such a disagreeable aspect could not have escaped the observation of authors.

Abbe Coutance presented a memoir to the Academy of Marseilles about the same time that Bernard wrote, in which he declared that the *Coccus oleæ* was observed for the first time in 1781. Capt. Cousin states that in 1861 this malady made terrible havoc in Kabylie (a part of Algeria), where the olive formed almost the only resource of the people. It was the more alarming because they could find no successful remedy. In Cousin's report, he makes the statement that the greater part of the Kabylea preferred to leave the trees without any effort to remove the insect or the black fungus, and that an orchard attacked would not give fruit before ten years, thus intimating that the disease would die out of itself in about that time. I have found in no other writings any intimation or possibility of the let-alone theory accomplishing the work.

Regarding the *Coccus* and the black fungus, there are various opinions; some contend that the black is caused by the humidity and the want of ventilation and sunlight in the tree. This theory is accompanied by the statement that the black fungus is seen without any appearance of *Coccus*; and that the *Coccus* is to be seen without any appearance of the black fungus. Some that it is caused by the smoke from chimneys; others that it is caused by the northern winds carrying the sea air through the trees; others still that it emanated from the ground. But the principal and accepted theory is, that it is caused by the attack of the *Coccus*; the piercing of the bark of the limbs and twigs, by these little insects, causing the emanation of sap, or some substance from the tree or from the insect, or both, which falls on the upper side of the leaves, as also on the trunk and branches and produces the fungus.

In my examinations and observations I have never seen the black fungus unless preceded by

the insect, and that where the tree was affected, the black was always on a lower level than when the insect was working; proving conclusively that the black was only a consequence of the insect work; and sometimes when there are comparatively few insects on a tree, it may be several months before there is any appearance of black.

When the fungus completely covers a tree, it is quite possible to destroy the insects and the black will remain for a long time afterwards; in fact when the trunk and branches, or limbs, are completely coated, it is very difficult to get it off; it becomes a paste and adheres as firmly as glue, and cannot be removed without the application of strong soap or some other substance equally powerful. It is my opinion, that with little care large districts could be kept free from this scale insect; I do not believe they would spread a distance of ten miles, unless carried on plants. Birds will spread them readily a distance of two miles.

In closing this part of the subject, I lay down the following facts:

1st. That severe frosts will kill the insects, but the number of degrees and limit as to time through which the cold should be extended, and yet not do serious injury to the tree, is beyond my knowledge, for the reason that I have had no opportunity to extend my investigations.

2d. That trees planted close to the sea will resist the attack better than anywhere else. The cold sea winds evidently counteract the spread of the insect.

3d. That high table lands or plateaus will be easier to keep free from the insects than on bottom lands, where there is more moisture in the soil and generally more humidity in the atmosphere.

In my next article, which I hope to have ready for our next regular meeting, I shall treat of the remedies for the prevention, as well as for the extermination, of this insect pest.

Santa Barbara, Sept. 30, 1881.

## THE APIARY.

### Notes on Methods.

EDITORS PRESS:—I extract from the *American Bee Journal* the following, thinking it might apply here in California:

#### English Law Regarding Bees.

The law with regard to bees is rather peculiar, says the *London Law Times*: A dispute as to the ownership of a swarm came recently before Mr. W. F. Woodthorpe, the judge of Belper County Court, and it was contended that being *feræ naturæ*, there could be no property in them, and that, therefore, the plaintiff, from whose land they had strayed to that of defendant, could not demand their return or damages for their loss. It was proved, however, that the plaintiff had followed the swarm on their departure from his own land, and had not lost sight of them, until he saw them alight in defendant's garden. On the strength of the following passage from Blackstone (Vol. II., p. 322), "Bees are *feræ naturæ*; but when hived and reclaimed, a man may have a qualified property in them by the law of nature, as well as by the civil law. Occupation—that is, hiving or including them—gives the property in bees, for though a swarm lights upon my tree, I have no more property in them till I have hived them, than I have in birds which make their nests thereon; and, therefore, if another hives them, he shall be their proprietor; but a swarm which flies from and out of my hive, are mine as long as I can keep them in sight, and have power to pursue them, and in these circumstances no one is entitled to take them." Judgment was entered in favor of the plaintiff for the amount claimed as the value of his truant bees.

On the foregoing I have no comments, as it appears very plausible to my ideas on its face. I wish to have a few remarks in regard to the

#### Tool Box

You engraved and described in a previous number of the *RURAL*, and was commented on by friend Rumford in the *RURAL* of August 13th. I think he labors under a mistake when he gives the invention or design to one of A. J. Root's boys. I used a similar box as early as 1853 or 1854 on the wharves at San Francisco in repairing cargo being delivered from clipper ships, with the exception of the handle, which consisted of a strip some two inches wide, for a handle instead of a seat. The center part held my cooper adze, driver, and sometimes a hammer, though I generally had a becket for the hammer on one of the long sides, and at the ends in the divisions were four-penny, eight-penny and ten-penny nails, which the broken kegs furnished in plenty. I used it several years in a warehouse, or one similar, and got the idea at that time from a New York "cooper," as they were all called who repaired the broken cargo to secure a receipt in good order from the teamsters. I don't claim to have invented it, but the same shaped box was in use before A. J. Root furnished bee appliances.

#### Italians.

Let me advise friend Rumford to replace his bees with some good leather-colored Italians to keep out those moth worms. I have 80 swarms and scarcely a worm. Some combs that got moths started on them by being left out of the hive too long and were well started, I put into a colony to see what would be done with them, and in a week looked at them again and found them as clean as though there had never been any worms. Before I had Italians, I used to be troubled with moths and worms, but not since.

#### Honey Crop.

The frosts killed our blue sage about the middle of May. I had on caps nearly finished, but had to leave them on; did not take them off, as a general thing, until the last of July (no honey coming in from middle of May till last week in July), when I found the brood apartment so full of honey as to crowd the queen and some queens in the act of being superseded. I then overhauled and made room for two or three empty combs or frames of foundation, and started the queens laying and building up the colonies. I have yet to go through them again. Since the rain it has been risky to open a hive, though I have had no robbing this season. I found one of my swarms robbing some hive, in July, away from home, but the infection was not

catching. Nuclei have been on their stands all summer, and are as ready to defend themselves as the strongest swarm.

I am still breeding queens, though drones are scarce. I failed to put up a good supply, though I have some. I find the queens go longer before laying, but have only discovered two drone laying queens. I would not advise anyone to buy untested queens, as I think, especially at this time of year, the fertilization is a matter of doubt. A good tested queen I consider always worth her cost.

#### Transferring.

I am very often asked whether it is too late to transfer. As a general thing, I should so consider it, though there is not a month when I have not transferred. The best time is when the peach or alfalfa is in bloom; but if the work is done indoors and care taken to prevent robbers getting in the hive before being cleaned up, no honey allowed to drip or flow along the bottom board, and the job done after most of the bees are done flying, it might be done with success most any time. Extra care must, however, be taken, as bees will get to robbing very easy at this time. I prefer to have my bees in hives that I can examine at any time, and should take the risk. When a person has a number of colonies in box hives, even the sacrifice of one would not amount to considerable. Our best, oldest and most experienced beemen get their information by sacrificing some of their swarms. The experience gained amply repaid them. Some perhaps may argue my advice is bad for beginners, but we are all beginners. The business is still in its infancy. Beginners cannot expect to be as successful as older hands. I consider one swarm in a good movable hive worth three in a box hive. You can always know their condition, and feed if need be, or do whatever the state of the swarm calls for. After getting all in the right kind of hive, they should be *Italianized* by all means. There are many advantages in favor of Italians, more especially in such a season as has just passed. My bees have increased from about 60 to 80 swarms, and all strong, and plenty of stores. I have had to extract twice since July, and shall extract as late as November. The honey is dark, but palatable. Just the thing on hot cakes. Some queens are laying in drone cells at present.

J. D. ENAS.

Napa, Cal.

REPLY TO MR. LYON.—Just as we go to press we receive a letter from Mr. Enas, in reply to the criticisms of Robt. Lyon in the *RURAL* of Oct. 8th. The letter from Mr. Enas which we print above, was written before Mr. Lyon's critique appeared. Next week we shall let Mr. E. present his compliments to Mr. L. We do not at all object to controversy so long as the writers confine themselves to the subjects in hand and do not proceed in the direction of each others hair.

## THE STOCK YARD.

### Notes on Cattle.

We take the following paragraphs from the *National Live Stock Journal* (Chicago), the leading authority on domestic animals in this country:

#### Growing Demand for Meats.

English and American epicures reject all except the most savory cuts from the choicest portions of the carcass of high-bred steers. The demand for this class of meats is rapidly increasing beyond all precedent or expectation. Countries that formerly used meat sparingly (Switzerland for example) now import about 80,000 head annually more than they export. This, of cattle alone, while large amounts of American swine product go to that country. This is a mere straw, but it points unerringly to the fact that we are in our infancy in the production of meats, and that in both quality and quantity we are not likely to keep pace with the future demands upon us. If any one has doubts about this, he may as well dispel them, and move on with his improvements with vigor, because the purse of the buyer is sure to open promptly for all high-bred and well-fed meat-producing animals. In some foreign countries the capacity for keeping cattle has decreased, while the demand for meat has materially increased. Our capacity for keeping farm stock has increased steadily, and we are very far from having reached our limit. In view of the fact that the future demand will inevitably be very heavy, and will, year by year, increase, it appears well for the growing intelligence of our farmers that but few are now found who use the term "fancy," applying this to improved farm stock in the light of derision. The constant discrimination made by buyers and shippers against low-bred cattle, sheep and swine has told upon the perverseness of those farmers who, having been brought up in a rut, have clung obstinately to it. There are perhaps one-third of the whole number who yet require to be reached in the matter of improvement, and three-fourths or more in the line of care taking.

#### The Sussex Cattle.

In shape and size the Sussex cattle are much like the Herefords; but, unlike them, they are pure red, having no white in their color. Formerly they were quite coarse in head and limbs, and the body was not in such good shape, or so well rounded out, as it ought to be. • Latterly,



however, in common with most English cattle, they have been so much improved in all their points as to make at present excellent beasts for profitable feeding, and for supplying the market with beef of good quality. These improvements have been carried on more particularly during the past 25 years, by continuous selections of the best from their own race; the breeders never going outside their herds for a cross from any other sort of cattle. They are very hardy, and reasonably thrifty animals, but do not generally mature quite so early as Herefords or Short Horns; yet, as compensation for this, they are considered more robust, will endure rougher weather and more exposure, and which has thus far stimulated breeders of the different classes of cattle in their efforts to excel, has the breath of life kept in it by the non-essential of color and markings, then by all means keep them from amalgamating. Let the outer covering, though it be confined to the hair, not even entering the cuticular coat of the skin, stand out in bold relief, though the inner edible parts be identically alike.

#### Full and Medium Condition.

We have all the time said, and now repeat it, that the flesh-producing breeds can only be appreciated as such by being shown in full flesh. How they will lay their flesh on is only fully known when they are made fat—fat to plumpness, fat to repletion. To fully fatten and ripen the beast that is to be killed, is of course right. It is right to show a representative breeder in the highest state of fitting, and it is well that there are men who can afford to do this—afford the expensive care-taking, and afford the occasional loss of a valuable animal through barrenness. Some men make it pay; but, mind you, only by becoming (if we may be allowed the term) professional exhibitors. They sweep several platters during the fair season. They know in advance just what show cattle there are in the country, and just what particular animals they are likely to meet by going to a particular fair. They know more than this; they know pretty nearly what competition they will meet on the "circuit" they propose to travel. So, on this system, certain breeders pocket clever sums of money each year. This is right, for they are sought by fair managers who have long since learned that the public cannot be entertained with thin cattle any better than they can with carriage work without having the paint and varnish on the outside and the stuffing on the inside. Therefore, those who have show herds fitted for show are invited to come, that the fair may be a representative one, and that it may pay.

Now, while all this is very proper from one point of view, still the system has driven 19 out of every 20 breeders from the show ring. Therefore, while we would not put a straw in the way of showing animals that have been fitted to the highest possible standard, that the man who runs may see the manifest merit, still a way should be opened for showing breeding animals of the fattening breeds in breeding condition. These should be shown separate and apart from the fatted show herds, and anything approaching a full state of fatness should rule the animal out of the class. There are plenty of breeders who would be glad to show their cattle, if the way were opened, in the manner indicated. There are lessons to be brought out in such a show that do not appear in exhibiting a fully fatted herd, and the public should have the advantage of these lessons, while the breeder should have this very fair opportunity to show his herd in the condition in which he shows it to customers the year round. We make no apology for bringing the matter up in this shape. The fact should be patent to all, that, taking Short Horns as an illustration, not more than one animal in a thousand is shown at any prominent fair in the Western States; and further, that there are not more than half a dozen breeders in the West who exhibit with any success worth the name, at the leading and more prominent Western fairs. We speak of this with due earnestness, because the evil has grown big on our hands—so big that a great and important interest is being seriously damaged.

## THE FIELD.

### Probable Demand and Supply of Wheat.

There is a considerable difference between English and French estimates of the probable deficiency and surplus of wheat supplies of the world. Messrs. Beerbohm estimate that there will be a deficiency of 50,300,000 bushels, while the *Bulletin des Halles* of Paris estimates the deficiency at no more than 25,560,000 bushels. Following is a comparison of the two estimates by countries, of the imports required, the quarters of the Beerbohm table being reduced to hectoliters:

Countries.	The Bulletin. hectoliters.	Beerbohm. hectoliters.
United Kingdom.....	45,000,000	45,675,000
France.....	20,000,000	20,300,000
Belgium.....	5,000,000	5,075,000
Holland.....	2,000,000	2,175,000
Germany.....	3,000,000	2,900,000
Switzerland.....	4,500,000	4,350,000
Italy.....	5,000,000	4,350,000
Spain and Portugal.....	1,500,000	2,900,000
West Indies, China and Brazil.....	5,000,000	5,800,000
Total.....	92,000,000	93,525,000

The difference between the two estimates of requirements is only 1,525,000 hectoliters, or about 4,330,000 bushels, and the estimates for

the different countries agree very closely except for Italy, Spain and Portugal, and the West Indies, China and Brazil. Following is a like comparison of the two estimates of probable surplus:

Countries.	The Bulletin. hectoliters.	Beerbohm. hectoliters.
United States and Canada.....	43,800,000	37,700,000
Austria-Hungary.....	2,000,000	2,175,000
Russia and the Danube.....	27,000,000	26,100,000
Egypt.....	1,200,000	1,160,000
Australia, Chili and India.....	9,000,000	9,425,000
Total.....	83,000,000	76,560,000

The differences between the two estimates is 6,440,000 hectoliters, or about 18,289,000 bushels. The principal difference, it will be seen, lies in Beerbohm's lower estimate of the exportable surplus of the United States and Canada, and of Russia and the Danube. It has been remarked that in forecasting the future of bread-stuffs, account should be taken of the fact that in Russia and other Eastern States the rye crop has been exceptionally good, and as rye is the cereal in common use for food in those countries, the disposable surplus of wheat will be larger than the reported yield of that crop, taken by itself would indicate. This is undoubtedly true; but, after making all proper allowances on this account, there must be a considerable deficiency, if either the English or the French estimate is approximately correct.

The hectoliter is the equivalent of 2 5/6 bushels nearly. The English statistician makes the deficiency much greater than the French. The latter is probably the more correct. The only doubtful point in the case at all is the probable surplus of Russia, which has been placed at much larger figures than either of those given above. On the whole, it seems that a good demand and a high market is to be looked for this year.—*St. Louis Republican*.

## POULTRY YARD.

### A Varied Diet.

Man, kept on a single and unvarying diet would sooner or later become worthless in both body and mind, unless that diet was perhaps a milk one, which is said to be the only thing which contains in itself all the elements necessary to sustain life, though we are inclined to believe that our system requires other food, the milk period of our existence having passed some years ago. A varied diet is, or is considered to be, essential to our health and well-being, and the same is equally true of all animal life, in fact, of almost all forms of life with which we are acquainted.

Analyses of plants, both of the fiber and the ash, show us they are composed of several different substances, derived from the air and the soil. If only one of these were supplied, the plant would soon die; or if only one of the elements were wanting, there would at least be but an imperfect growth, and not that full development which nature ordained. And so it is, we hold it, with animals. There is no cheap and readily attainable food which will supply all the demands of animal life; and to secure that measure of rapid and healthy development which means success and profit to the breeder, the diet must be varied, as well as regulated to meet the requirements of the particular purposes for which the stock is being fed. It is a well-known fact that corn is one of the cheapest and best foods for stock that can be fed, owing to the fact that it contains so much nutriment and strengthening matter, though its tendency to fatten shows the careful breeder that his breeding animals must be fed only moderately with it, the animals or fowls reserved for fattening being liberally supplied. While wheat is one of the best of foods for the laying and breeding fowls, it is not economical to feed heavily or exclusively on it, for the fowls require considerable vegetable and green food with it.

For fowls, which are confined so they cannot get what green food they require, supplies daily of grass must be forthcoming, while alternate feedings, at the regular intervals, should be made with small potatoes, boiled and mixed with corn meal, turnips treated in the same way, cabbage, onions, lettuce, scalded bran, the offal or overripe tomatoes and other vegetables from the garden—in fact almost everything which will break the monotony, and give the fowls the varied and healthy diet they need.—*Poultry Monthly*.

### How to Fatten Turkeys.

Nothing pays better to be sent to market in prime condition than the turkey crop. Many farmers do not understand this. Their turkeys grow on a limited range, get little or no food at home through the summer, and if fed at all with regularity, it is only for two or three weeks before killing. I see these lean, bony carcasses in the local markets every winter, and feel sorry for the owners' loss. They have received a small price for their birds, and a still poorer price for the food fed out. The average life of a turkey is only seven months, and the true economy of feeding is to give the chicks all they can digest from the shell to the slaughter. If they get all they can eat on the range, that is well. Usually this should be supplemented by regular rations when they come from the roost in the morning, and two or three hours before they go to roost at night. The food may be slack in the morning, so that they may

go to the range with good appetite, and fuller at night. They should be put upon a regular course of fattening food as early as the middle of October, when you purpose to kill the best birds at Thanksgiving. The younger and lighter birds should be reserved for the Christmas and New Year's markets. They continue growing quite rapidly until mid-winter, and you will be well paid for the longer feeding. There is nothing better for fattening than old corn, fed partly in the kernel and partly in cooked meal mashed up with boiled potatoes. Feed three times a day, giving the warm meal in the morning, and feeding in troughs with plenty of room, so that all the flock may have a chance. Use milk in fattening if you have a dairy farm. Feed only so much as they will eat up clean. Cultivate the acquaintance of your turkeys as you feed them. No more charming sight greets your vision in the whole circle of the year than a large flock of bronze turkeys coming at call from their roosts on a frosty November morning. New corn is apt to make the bowels loose, and this should be guarded against. If the bowels get loose give them scalded milk, which will generally correct the evil. Well-fattened and well-dressed turkeys will bring two or three cents per lb. more than the lean birds. It will not only be better for the purse, but for your manhood, to send nothing but finished products to the market.—*W. Clift, in Massachusetts Ploverman*.

## SHEEP AND WOOL.

### Experience with Angoras.

Col. L. A. Cralle, who has a goat ranch on the mountains near Santa Rosa, gives the *Petaluma Courier* an account of his experience with Angora goats as follows: The question has often been asked me, do Angora goats pay? Thoroughbred Angora goats are scarce, and are valued at \$200 each, male or female, and perhaps there are not more than 1,000 in this State that a careful breeder would like to use. An Asiatic would sell his farm rather than use an indifferent or impure-blooded buck. Great injury has been done, and the business of raising goats brought into disrepute by parties selling graded hucks for thoroughbreds, the same to be used in grading up the common goat. Parties who have been thus deceived, and failing to raise merchantable mohair, become discouraged, abandon the business and denounce it as unprofitable. There are in this State about 60,000 graded goats, from which not over 10,000 lbs. of mohair will average 30 cents per lb. when sold. Where is the fault? It is surely not in the goats, but in the breeder who fails to furnish his flocks with thoroughbred hucks, and give them that attention so necessary to the success of any business. It is a fact that in the English market the quotations of genuine mohair for the last 100 years have been about six shillings per lb., and as often above as below that figure. And in our market here it is worth 60 to 90 cents per lb. When good Angora goats average four lbs. each for females and seven for males, would not this pay? There are hundreds of thousands of acres in the foothills and mountains of California, too steep and brushy for other stock, that would make a paradise for goats. Nine years ago I went to the mountains, nine miles from Santa Rosa, with the intention of breeding sheep. I had with me a few goats, knowing their meat to be excellent, and the cheapest I could raise. Truly, I had 10 hogs that gave me more trouble and expense to care for them than 600 goats. During the nine years I have kept from 300 to 500 sheep, losing each winter from 50 to 100 head, but during these winters have seldom ever lost a goat. Last winter, out of 250 sheep I lost 60, though I fed them for two months with the best hay. During that time my goats ran out on the pasture, were not fed a single straw, and I did not lose one of them. For the first six or seven years I had no salable mohair, because I had only low grade bucks. At the end of that time I got two thoroughbred bucks, paying for each \$200. The year after I sheared three-fourths of a pound average; the next year a little over one lb. Many of them yield three lbs. now, and next year and following I expect a better average. I sold last and the preceding winter's clip to Falkner, Bell & Co., of San Francisco, at an average of 33 and 3½ cents per lb. I can readily sell to hutchers for meat purposes, all my surplus goats for the same price I do my sheep. Two goats on our mountain ranges can be kept in good condition, where one sheep will fare badly. As for the matter of herding, I had rather take charge of 1,000 goats than 500 sheep. My goats come home of their own accord every night; my sheep never, unless I bring them. I know there is a foolish prejudice against goats and their meat. Some have asked me if they would not butt, hook, tread you under foot, romp on your fences, mount your roof, jump down your chimney, turn over your stove, break your crockery and chew up the dish rag? Certainly not. There is no animal so docile and kind, or that recognizes man as its natural protector than the Angora goat, and there is none more beautiful. Now, sir, why should not the Angora goat be profitable? Haven't queens and princesses from the beginning of the world been proud to clothe themselves with cashmere coverings? Did not the patriarchs of old re-

fresh even angels with the savory meat of suckling kids? Prejudices! The sack in which a man sews himself so that he cannot raise himself, nor walk when raised.

### Woolen Mill Proposed at Red Bluff.

EDITORS PRESS:—The grain crop was not as good the past year as a year ago, but prices are good, and business is more lively than usual, especially at Red Bluff, the county seat. A great amount of building has been done there during the last year. It is very strongly hoped now that Red Bluff will soon rival Marysville in the manufacture of woolen goods. The people of the county have already subscribed over \$6,000 toward a \$10,000 subsidy, which is to belong to the capitalist who has knowledge enough of the subject and the willingness to erect and run woolen mills in said city, cost of same not to be less than \$100,000. There are already some capitalists inquiring into the probable success of such an enterprise—the supply and quality of wool, price of labor, supply of wood, water, etc., and all other things connected therewith. There is no doubt of the feasibility of such an undertaking in this county. All surroundings are favorable. There is annually produced, in this county, about 2,000,000 lbs. of wool, more than three times as much as could be manufactured by such a mill.

The large number of hands employed must increase materially the demand for supplies, etc., thus making a home market, and thus a saving of freight to the producers.

The supply of wood is abundant, and a market for this would give employment to a goodly number of men and support to as many families. It is to be hoped that, should the project prove a success, the enterprise may be undertaken by an anti-Chinese company, as there are plenty of men, women, boys and girls who will be glad and willing to work at reasonable rates.

The greatest benefit to the county, however, is to be derived by the saving of freight on so great an amount of wool and dirt (for the weight of the wool is just about doubled by the dirt it contains) across the continent—the saving of the profits which must be made by middle men every time the wool changes hands, until we receive it back in the shape of manufactured goods, which is some six or eight times—and also the freight back again.

The people are waking up to the fact that they can do something better than merely to produce their wool and sell it at whatever price they can get, without taking a thought as to the reasonableness of sending it so far to be manufactured, and at such a price that the first cost of the wool is not a quarter of its worth after being manufactured.

Stock is doing quite well in the county, and, should we continue to have early rains, will do first-rate during the winter. The crop of acorns is so abundant that, in the wooded portions of the county, the stock, especially hogs, are fattening exceedingly fast.

The culture of silk has been commenced in this county, and it is hoped that the soil, climate, etc., will prove well adapted therefor.

S. A. S.

### Wool Washing Machinery.

We read in an English exchange an account of a wool washing machine, shown at a wool exhibition at the Crystal Palace. The wool is placed on a self-feeding table. It is then passed into a trough 12 ft. in length, containing soap of an alkaline character and water. In this trough the wool is stirred with forks worked by a most ingenious crank, and carried forward to the far end. Here it is carried up an inclined plane of glass, on which the greater portion of the alkaline fluid drains and falls back into the trough. The mechanical contrivance for carrying the wool from the trough consists in a double set of rakes which act alternately, similarly to the action of the shakers of a threshing machine. But of course the teeth of the wool-raker are at the bottom. On reaching the top of this inclined plane it is received by two heavy pressed rollers; when it is well pressed, it is passed into another trough of the same length and again agitated in another quantity of liquid. Having been agitated by the same form of machinery in this second trough, it is conducted at another inclined plane by the same form of machinery when it is again pressed between rollers. On leaving this second pair of rollers it is met by a drum which threshes it—so to express the opinion—into fine loose locks when it is ready for the drying machine which is attached.

This drying machine is simply a trough or box with a wire-net covering, in which are revolving blast screws that circulate air rapidly. This air may be heated or of a natural temperature, according as the wool is required to be dried rapidly or not.

MAGNESIA FROM SEA WATER.—M. Schlvesing extracts magnesia from sea water by the following method: The magnesia is precipitated from the sea water by means of lime. One cubic meter of water, when thus treated and left to rest for one day, gives about 16 gallons of gelatinous precipitate of magnesia. If this precipitate is mixed with a weak solution of phosphoric acid, a precipitate of tribasic phosphate is obtained, which settles when left to rest, and can be filtered and used for the precipitation of ammonia from sewage by the methods already known.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Our New State Grange Officers.

A majority of the officers elected for the ensuing two years have previously been in office, and are well known to our readers. They have been re-elected for their known good qualities and abilities to serve the best interests of the Order. It is therefore with greater interest that information will be looked for concerning the new laborers put in the field.

So feeling that our readers would be desirous of knowing more of the newly elected officers of the State Grange, we have taken some pains to obtain a few brief facts concerning their lives, and shall present them in this and future issues. We commence with

#### Master Daniel Flint.

The subject of this sketch was, during the late State Grange session at Santa Rosa, elected Worthy Master of California State Grange for the ensuing two years. By this conferred honor he becomes a public character, one in which every Patron on the coast is interested, consequently we take the liberty, unsolicited, to pen the following sketch of our Worthy Master's antecedents. Daniel Flint was born in Suanzey, Cheshire county, New Hampshire, where he lived with his parents on a farm until 15 years old. At this age he left the farm and, under the direction of a master workman, learned the sash, door and blind trade. Although making blinets for others, his own clear sight was never obscured in the operation. In 1853, when he had just attained his majority, he gathered together his boy earnings and started for California, where he arrived June 25, 1853. His first occupation after arrival was that of bookkeeper in a warehouse. Afterwards he held the office of Inspector in charge of U. S. bonded warehouse for two years, under Presidents Pierco and Buchanan—Richard Hlaman and Milton S. Latham, Collectors. In February, 1858, Bro. Flint moved to Sacramento county, where he engaged in the nursery business; subsequently, he engaged in the business of hop growing, and claims to be the pioneer hop grower on the Pacific coast. In order to control more perfectly his risable products, he invented a hop press, which is now in general use and highly appreciated by those who love the proportions of a perfect sneezer.

Thinking it unnecessary drudgery to get out of his wagon and let down the bars every time he desired a ride, for profit or pleasure, he set his wits to work and constructed a self-operating gate, for which he obtained a patent. Mr. Flint was elected as one of the directors of the State Agricultural Society in 1878; re-elected in 1879, and in 1880. In 1879 and 1880 he was elected by the Board of Directors to the important office of Superintendent of the Agricultural Park.

Bro. Flint was also one of the promoters and earnest supporters of the Grangers' Sacramento Co-operative Association, and has ever since its inception been one of its directors. He has also been prominently connected with the Sacramento Building & Loan Association.

Bro. Flint is at present running two farms, one on the Sacramento, and the other on the American river. His principal products are hops, fruit and fine graded stock. He is a Past Master of Sacramento Grange. He is truly a self-made man; has the respect and confidence of the community in which he lives, and, as W. Sec'y Adams remarked a few days since, "he will wear well."

#### Lecturer, E. W. Davis.

Bro. E. W. Davis, newly elected Lecturer of the State Grange, was born in Washington county, Iowa, and is now in his 33d year. He is engaged in wheat farming a few miles from Santa Rosa. His father, G. W. Davis and lamented mother (first "Ceres" in the State Grange), were charter members and earnest participants in the organization of the State Grange at Napa, in 1873. As early as 1874, Bro. Davis held a position in the office of the State Grange agency in S. F., which gave him a somewhat general acquaintance with leading Patrons and the Grange work in that important period of the history of the Order.

Bro. Davis received his early education at the public schools of Santa Rosa; then at the Oakland College school and then at the University of California. Since college days, he has been engaged in teaching school and superintending schools. For three years past he has been at work on his farm, though he yet holds the position of President of the Board of Education of Sonoma county.

Sister Davis accompanied her husband at the State Grange, with their very young, but active junior Granger.

The new Lecturer assures us that as soon as possible he will visit the several counties, with the hope of revivifying and establishing Granges. It is the earnest wish and request of the Lecturer that all members of the Order go right to work. It is suggested that the Grangers of each county organize a system of county meetings, either in the form of a Pomona Grange or Grange reunions, meeting at regular times. At

these meetings the Lecturer will attend, as often as requested if within his power to do so.

#### Chaplain, G. L. Douglas.

G. L. Douglas, Chaplain, elected at the late session of California State Grange, was born in Henry county, Iowa, in the year 1850. He was raised on a farm, performing the usual duties of a farmer's son until 1864, when he, with his father, crossed the plains and located in Lassen county, California. After living in Lassen one year, young Douglas moved to Sutter county, of which he has been a resident ever since. Having labored under educational difficulties which usually beset farm life, and feeling sensibly the defects of his early mental training, which he received in a very common, common country school, Mr. Douglas determined to improve an opportunity made possible by energy and perseverance, and in 1873 and 1874 attended the State Normal school at San Jose. When sufficiently advanced he obtained a teacher's certificate and taught school for two years. After this he was appointed Deputy County Clerk of Sutter county, which position he held for two years, under W. H. Lee, the present incumbent of that office. Since leaving the County Clerk's office, Mr. Douglas has been engaged in farming. Having been an active and appreciated member of Yuba City Grange, in December 1880 he was rewarded for his faith and work in the interest of the Order by being elected Master of the Grange for the ensuing year. Mr. Douglas was married in 1874; at present his family consists of wife and two children. The history of the struggles and privations of Mr. Douglas' and Daniel Flint's early youth, are mirrored in the life of almost every man who has ever made his mark. Like the beautiful forms sleeping in the marble quarries of the world, the Divinity from the beginning so ordained it, that the chisel of destiny should work constantly, laboriously and with great painstaking, in developing and sustaining the delicate construction of a human soul, into an image well balanced, pure and God-like.

#### Ceres, Sister H. G. Deming.

Sister Hettie G. Deming, elected Ceres of the State Grange, is the wife of Bro. John F. Deming, who is well known for his zeal in Grange work. Sister Deming was born in the town of Blooming Grove, Orange county, N. Y., the daughter of Gilbert Gerow, a farmer. She was married in 1852 and came to California in 1856, and settled on the fine farm on the straits of Carquinez, where she has ever since resided. Sister Deming has been well known for her able and faithful services in the floral preparation of our State Pomona feasts, and for many other "truly kindly" acts.

Their "Glen Cove" farm touches the water of the straits, and is not far from opposite the new Grangers' wharves and warehouses near Port Costa. Bro. Deming is a prosperous farmer and devotes his attention chiefly to grain and fruit.

Sister Deming has a sister in California, the wife of Charles G. Deming—the two brothers Deming having both won in their suits for the sisters Gerow. Sister Deming has children of whom she may be proud, her daughter, Clara Deming, being well known for her excellent writing and her devotion to Grange work. Her son, Henry B. Deming, is engaged in the Grangers' Business Association in San Francisco.

Bro. and Sister J. F. Deming, as intimated above, have been long and consistent Grange workers. They have attended seven meetings of the State Grange. Bro. Deming was elected Master of Vallejo Grange in 1876, and has held the office six years. Sister Deming was Ceres of Vallejo Grange at its organization in November, 1873.

#### The Grange Roll Call.

Friday afternoon's session of the State Grange was devoted mainly to calling the roll for five minute reports from the subordinates by the representatives present, and for the presentation of any business they might have to offer. It proved a highly interesting and profitable feature, which might have been adopted to advantage at an earlier period of the session.

#### Antelope Grange, Colusa County.

Bro. H. A. Logan, who has long been a member of the State Grange, from Antelope, briefly stated that the Grange is now taking in new candidates and improving in membership and prosperity.

#### Alhambra Grange, Contra Costa Co.

In the absence of its honored Master, Dr. J. Strentzell, Sister Landers responded to the call for Alhambra Grange. She said the Worthy Master of her Grange was unable to attend the session on account of ill health and press of work. Alhambra Grange is in a fairly prosperous condition. Average attendance at its regular meetings, from 25 to 30 members. The Grange does not own its hall, but from the proceeds of a Grange fair have purchased a valuable instrument. The proposition to establish a library has been discussed in the Grange, with the prospect of establishing one in the future. Alhambra has derived much pleasure and benefit from the interchange of sentiment and visitations of Temescal, Vallejo and Walnut Creek Granges. They organized and for a time maintained a children's Grange, for which she wrote and had published "The Junior Grange Ritual." It proved a matter of much interest to the children, but, owing to the time and work required to keep it up to a creditable standard, it has fallen into disuse.

#### Bennett Valley Grange, Sonoma County.

Bro. Nelson Carr said Bennett Valley Grange reported progress. It has considerably in-

creased its membership within the last year. Its members are made out of the right kind of material, for they are always present and prepared for work. Have a hall of their own, hard-finished, 30x60 ft. The country, with country Grange halls, is the place to develop Grangers and insure a full attendance in our meetings. Meeting away from any town he considered a good feature, as the members came to attend the Grange, and did so, and would not be scattered in business places and about town. We endeavor to discuss practical subjects; we buy together and sell together, when practicable; we send our orders through the Grangers' Business Association of San Francisco, and furnish the house considerable of our produce for sale.

#### Ceres Grange, Stanislaus Co.

Bro. Browne reported that Granges in his county had made but little progress within the last year. The Stanislaus county Pomona Grange had done much good. He considered the Pomona Grange worth all others for business. Ours contains 40 members. It meets at one o'clock P. M. on the fourth Saturday in each month. The time spent at its meetings is not spent in conjuring up preambles and resolutions. We duly consider the wants of our section, draw legislative bills based upon reform principles, and then endeavor to pledge the legislative nominees of the several parties, and after they have so pledged themselves, and in consequence have secured our votes, we endeavor to hold them up to their promises. We are bent on certain reforms, and propose to secure them or fight it out on this line, if it takes a decade.

#### Eden Grange, Alameda County.

Bro. O. Dennis, present Master of the Grange, and one of its charter members, responded. He said, during the first two or three years of its existence many objectionable members gained access to its gates, which required a great deal of weeding and cleaning to get rid of them. Those who joined the Grange through curiosity or from selfish motives have all disappeared from the roll of membership. At present we have a live Grange. The better element of the delinquent membership is coming back to our councils. New members are also coming in. We have a class of six or seven now on the way to the Master's chair. The Grange is in a great deal better condition than it was two years since. More interest is taken in the meetings; the average attendance is better. Discussions on subjects relating to our calling, and matters in which all have a common interest, are becoming a leading feature in our Grange work. We are learning from each other; we are becoming more interested in each other's welfare; we are beginning to feel we have a common interest, a common aim and a common end.

#### Elliott Grange, San Joaquin County.

Bro. Kniss said Elliott Grange was a small one, having only 17 members in good standing. It has been, within the last three years, reported dead, but it is at present a very lively ghost. We have six or seven new members coming in. At one time we had 107 members, but the failure of Morgan & Sons, by which many of our people lost heavily, discouraged our work, and in consequence the Grange dwindled to its present numbers. We feel much encouragement for the future. The Grange is bound to build up.

We shall give brief notes from other Granges hereafter, and further reports and general remarks concerning the late sessions.

### Feast of Pomona.

In addition to our last week's remarks on the "Feast of Pomona," we would mention particularly the table nearest the entrance, which was the most praised of all. Bro. Whitaker's dried prunes, peaches, apples, etc., showed remarkably fine fruit, and very successful drying and packing. He uses a family Plummer drier. The products of the local fruit canning establishments of Santa Rosa were quite laudable.

The Santa Rosa Republican has inside the following fair notice of the occasion, but nothing short of an ocular demonstration can do full justice to the rare display made:

"Santa Rosa and Bennett Valley Granges have covered themselves with glory. Their displays of fruit at the Feast of Pomona, Friday night, were magnificent. They were indebted somewhat to the kindly interest of several outsiders, also, for material contributions. In all our lives we never saw such a fine collection of grapes, apples, pears, etc. The ladies in charge arranged the fruit and flowers with exceeding good taste, and we are sure they are deserving of the highest praise for this exhibit. Following are the names of donors, as nearly as we could get them:

M. Gilliam, 33 plates of apples, Newton Pipp. Esopus Sp. Red Ch. Pippin, Yellow Newton, Swart, Jonathan, Wh. Belle F., 20-ounce Pipp., Golden Russett, Nonsuch, Milen, Carolina Greening, MacKenzie Pipp., R. I. Greening, Green Val. Seedling, Roxbury Russett, Gloria Mundil, Lady apples, Wine apple, Newark Pipp., Winter N. pear, Jeannette, N. Spy, Vandever, Limbertwig Dutch Mignon. J. H. P. Morris, six plates of N. Nonsuch, Y. Bellflower, G. Russett, Red Cheek Pipp., Vandever, D. Mignon, all very fine and exceedingly large.

Dr. C. H. Thompson, four plates, Vicar of Winkfield P., Clymonds Pipp., Esopus Sp., Tennessee Red—apples.

R. B. Cannon, 50 plates, 17 varieties of apples, very fine and showy, 3 of pears, 5 of grapes and 2 of tomatoes.

R. B. Whitaker, 100 plates of apples, 19 varieties, 3 sorts of pears, 4 boxes of dried fruit, prunes, pears, plums and apples, box of figs, box Damson plums, 2 varieties of grapes.

A. J. Mills, plates of apples and tomatoes. J. M. Talbot, quinces, apples, plums. S. T. Coulter, very large pears, quinces, figs. John Adams, apples, pears and almonds. L. B. Hawkins, 20-ounce plums, Smith elder, Gloria Mundil, Beauty of Kent, Golden Russett, Bellflower, pears, 4 boxes; also six boxes of grapes Tokay, Muscat, White Nise, Rose of Peru; watermelons, quinces, almonds, etc., a wagon load.

Holman Talbot, 22 dishes of grapes, Flame Tokays, Black Morocco, Nonsuch, Mission, Black Prince, etc., all very large and fine, some of the bunches immense.

B. Lacque, a dozen plates of large and good varieties of apples. Charles Lyman, several varieties of grapes. Isaac De Turk, almonds and walnuts. Some of the ladies in charge of arranging the fruits and housewafers were: Mesdames Whitaker, Holman Talbot, S. T. Coulter, R. B. Cannon, A.

J. Mills, A. T. Dewey of Oakland, C. De Turk, the Mesdames Deming of Vallejo; T. T. Hooper, Solano; Hoover, Sacramento; Misses Mills, Coulter and Cannon.

We could not learn the names of all the contributors of fruit, flowers, etc. The hall was tastefully arranged. Three long tables extended through well filled—groaning with such a horticultural show as would fit out a State Fair."

### A Morning Drive.

Bro. Webster, who says he is not "a hale fellow well met," gets off the following, in the Patron, which we appropriate as a choice "find" for the RURAL. It tells the story of Bro. and Sister Frisbie's kind thoughtfulness of newspaper workers better than we possibly can:

While at Santa Rosa last week, Bro. Frisbie, of Yuba City, who, with his good wife and boy, had made the trip all the way from home (60 miles) behind his line span of horses, invited us, in conjunction with Bro. and Sister Dewey, and Sister Landers, to take a ride around the town. The team used upon the excursion was not his, but a "coach and four," furnished by an old friend whom he found settled in Santa Rosa, N. J. Stone, the insurance agent. The splendid turnout was a mixture of joy and wonder to a couple of impecunious editors who had been accustomed to tramping on bit diners and free lunches, with an occasional ride on a truck or street car. The hazy sun hung over the eastern mountains like a red flag in a bull fight. The full moon was washing her night cap in the Pacific ocean. The grasshopper chirped on the sweet potato vine; the ducks quacked angelic songs from back yards, while little robin redbreast sat on a fence-post singing:

"Good morning, noble strangers,  
Please greet me as you pass,  
For I'm bound to join the Grangers,  
Or send them all to grass."

The streets and roads were in splendid condition, and the way we held our heads back and inspected the town would have induced a novice in this art of style to the conclusion that we were to discover some old subscriber suitably in arrears to pay our board bill. The outer edge of the sidewalks are lined with ornamental shade trees. There is much shrubbery about the multitude of neat dwellings which skirt the business part of the town, showing great taste and much refinement among the people. We inspected Mark McDonald's fine place situated on the north of the town and about half a mile from its commercial center. Within two years he has developed from wild nature one of the most beautiful improved places in the State.

We were driven around to the charming homestead of Mr. N. J. Stone, our generous conveyance, and introduced to a material substantial in the shape of a beautiful woman whom Mr. Stone has the legitimate and exquisite pleasure of calling "wife." Two hours were spent thus in the endeavor to astonish the natives, but they didn't "astound worth a cent," for it appears they had all seen four horses to a "rig" before, with equally good-looking people in it. It is claimed that Santa Rosa contains 6,000 inhabitants; it is certainly delightfully situated, with a climate unsurpassed. The people appear to be proud of their town, proud of their country, and proud of themselves. Their cereals, wines and fruits are coming to the front in a way which is bound to command recognition as the very best produced in the State.

After such a jolly ride with Bro. Webster, we shall hear no more of his not being a hale fellow well met.

### GRANGERS SURPRISED.—Bro. and Sister J. V.

Webster were "utterly" astonished when a four-horse omnibus load of Temescal Patrons poured in upon them at Fruit Vale, about 8 o'clock on Friday evening of last week. Immediately no happier Grangers could be found in the land than both hosts and guests. Bro. Webster's fine and spacious "house" soon presented a gay and festive scene. A feast of fruit, nuts, cake and coffee, with social conversation, games and music made time go fleeting until the hour of 2 A. M. arrived almost unawares upon the large company present. Bro. and Sister C. H. Cooley, of Cloverdale, and Sister Wright, of Martinez were among the merry visiting Patrons present, and we confidently refer to them as to the social qualities of our State Secretary, his better half, and in fact, Temescal Grangers in general.

ADDRESS ON FRUIT.—At the last regular meeting of the Healdsburg Grange, it was voted to invite W. N. Gladden, Esq., to deliver an address on the present condition and future prospects of our fruit interests. Mr. Gladden accepted the invitation, and will deliver an address in Grange hall on Saturday, the 22d inst. Mr. Gladden is one of our largest and most successful fruit growers, and will speak from knowledge gained from practical experience. A cordial invitation is extended to the public to attend and listen to the address. It will doubtless prove of special interest to those who are contemplating setting out fruit orchards another season.—Flag.

BRO. EDWARDS, of St. Helena Grange, who was taken severely ill during the late State Grange meeting, it will be pleasing for many members to learn, recovered sufficiently to return home on the following Monday. It was a great deprivation for a good Granger to be sick, especially upon such an occasion.

### THE CALIFORNIAN.—The Californian is pro-

ceeding commendably and brings out an excellent collection of original articles each month. There are now two noble serials running, one by Joaquin Miller, entitled "One of the World Builders," with its scene in the mining camps in the early days, the other, "At Cohweb and Crusty," by Leonard Kip. C. H. Shinn has a little dash of poetical prose about the garden, and Hon. B. B. Redding places upon record some interesting observations about California Indians and their food. There are several other excellent articles in the November issue which appears this week.

### POULTRY AND STOCK BOOK.—We have re-

ceived advance sheets of the revised edition of "Pacific Coast Poultry and Stock Book," by Wm. Niles, the well-known breeder at Los Angeles, Cal. The publication is vastly improved and notable additions have been made. We shall refer to it at greater length next week.



## AGRICULTURAL NOTES.

## CALIFORNIA.

## SAN JOAQUIN.

**AN ORCHARD EXPERIMENT.**—Six miles south-east from Colledgeville, Joseph Leighton has been trying the experiment of growing an orchard on the adobe without irrigation. He had planted two orchards previous to the last attempt, and each was irrigated and thrived. But in some unlucky moment, when harvest cares crowded, the water was not put on for a few days, and as the roots extended along just under the surface, following the water channels, the hot sun killed the roots, "burned them right up, sir," as soon as the soil became dry. Mr. L adds: "Then I made up my mind to try and grow an orchard without irrigation. I prepared the land by thorough cultivation, and put out that orchard—you can see it yonder—three years ago, and the trees are doing well so far. I have done nothing to them, only to keep the land well cultivated, and every weed exterminated as soon as it made its appearance. The trees don't grow as rapidly as irrigated trees do, but they are healthy, and I think they are growing to roots now, going down for the water, and when the roots are well set, I think the bodies will grow as rapidly as though the trees were irrigated." From the evidences of careful culture, vigorous health of the young trees, Mr. L. will succeed in his experiment, provided the hard pan is not too close to the surface.

**WHAT THE FARMERS ARE DOING.**—Stockton Independent: From inquiries made of farmers during the past few days the fact is ascertained that they are very generally engaged in sowing their summer-fallows. For several weeks men here and there on the bottom lands have been trying to prepare some of their fields for seed by dry plowing. This is done, however, only where the weeds are not thick. There seems to be a general desire to forward the work of seeding as much as possible. The acreage put in this season bids fair to be very large. There has been an unusual area summer-fallowed in the county this season, and the intention of putting in all that is possible is everywhere expressed. Yesterday John B. Crow, of Crow's landing was in the city, and he said there would be more wheat sown on the West Side this year than ever before. In fact, he did not know of 160 acres of wheat land that would not be seeded. Men are already engaged in putting in their crops in that section.

## SANTA CRUZ.

**ONE ACRE OF BLACKBERRIES.**—L. M. Corum, in *Courier-Item*: I leased the fruit farm of W. Huntington, December 6, 1879, which consists of about one acre of blackberries of the Lawton variety, growing in most part among the orchard trees. I commenced in January pruning blackberries. The picking season commenced about August 1st and continued until the latter part of September, with scattering berries up to November 15th, during which time I sold 5,600 baskets of the largest size for berries, at an average price of 5½ cents per basket, consuming at a safe estimate in family use, wine making and berries not taken into account, 400 baskets more, making the actual yield 6,000 baskets, worth \$330; cost of picking, 1 cent per basket, \$60, leaving for production and selling on one acre of vines \$270. The vines were not irrigated much, a few were sprinkled at times through a small hose. Had irrigation been plentifully supplied the vines would have continued bearing until checked by frost, and the berries been larger, yet the size and quality I never saw equaled anywhere else. The soil is a sandy loam, inclining to adobe.

## STANISLAUS.

**THE INDUSTRIAL SITUATION.**—*News*, Oct. 1: It is a serious problem as to whether farms are becoming larger or smaller in this county. Whilst many of the heavy land owners have sold to small holders, yet it is also a manifest fact that a great number of small farmers have sold to adjoining successful neighbors. Hence it is doubtful if the number of actual farms are increasing in the county. Lands are going up, increasing not less than 50% in the last three years, and at least 20% within the past year. The villages and towns of the county show also an unusual thrift and increase of wealth and population. This increase in the value of farming lands is undoubtedly based on actual profits as well as an increased desire on the part of our farmers for the establishment of permanent homes. This fact is observable in all parts of the county, by the general improvement and building of residences, cultivating of orchards, gardens and vineyards. A spirit of progress and improvement is rife among our farmers. The past spring and present fall have been prolific with house building, not only in towns but in the country as well. Carpenters are now scarce and quite busy, and will probably remain so until the rainy season begins. This speaks well for the prospective future of the county. If we are not to have immediately a dense population, it begins to look as if we were at least to have a contented, prosperous people, wedded to the county, taking a just pride in its progress, and determined to enjoy life in a more refined and rational manner. Nor are our people, even now, to be considered a poor community. Taking the census of last year and comparing it with the assessment roll of the present year we find, if equally divided between every person in the county, there would be \$1,300 to each soul. We believe that the pro-

duction of our people would this year, at a low estimate, reach \$5,500,000. In this estimate we are only counting the production of the farm, omitting entirely all other vocations. These facts attest the prosperity of our people. It tells why farming lands are increasing in value in our county, and accounts for the improvements in villages and on farms.

## SONOMA.

**UPLAND RICE.**—*Petaluma Argus*, Oct. 5: We give the result of our experience in rice farming. This operation may be relied upon as a fair test in this climate, for the following reasons: An intelligent and practical farmer was selected. He prepared the ground properly, and sowed the seed broadcast and in drills. Part of the seed was thus disposed of in February of the present year on good upland soil. In March and April the rest was put in on the very best of bottom land, and also on sandy loam. On the upland, every seed, so far as we could judge, germinated and grew finely till the hot weather of June checked it to some extent. The rice was then about two ft. in height, and though the tips turned brown, the plants continued to "stool out" or furnish new shoots, till it resembled a fair quality of bunch grass. On the 1st of August the crop on the upland looked at a distance as though it was ripe and ready for the reaper and thresher, but on a close examination not one grain of rice could be discovered. It would have made first-class hay if it had been cut and cured at the proper time. One small piece on moist bottom ground that was sowed in drills the first week in April, looks green and is yet growing, though it shows no signs of heading out. It has "stooled out" wonderfully. As many as 100 stalks have come up from one grain of rice in some instances. It is pretty to look at, and resembles wheat somewhat, just before heading out, though the blades are much longer, and about half an inch in width. We had an idea that almost anything could be grown in Sonoma county, under favorable circumstances, but will except rice after this. Will the gentleman who tried this crop in Contra Costa and Kern counties tell the public "what he knows about rice farming?"

## SUTTER.

**SUCCESSFUL RAISIN MANUFACTURE.**—*Healdsburg Flag*: Dr. S. R. Chandler, of Yuba City, has demonstrated that raisin making in California may become an important industry. He has 80 acres of vineyard, the proceeds of which are manufactured into raisins. His crop last year amounted to 40 tons, notwithstanding the vines are not all in full bearing. He has recently grafted a new variety onto some old vines. He sells his raisins at 12½ cents a lb.; at this price his 40-ton product will yield him \$10,000 gross, or \$125 to the acre, and that not in full bearing. So far as possible he dries by the natural heat of the sun, resorting to artificial heat only when the weather will not permit sun drying. He has experimented with the artificial process and finds that the heat used cannot be brought sufficiently under control to secure uniform temperature; he finds they are quite apt to blister and become damaged in other ways. He puts the raisins up in neat boxes and usually ships by the carload. When he can sell to an advantage in the San Francisco market he does so; when Chicago offers a better market he ships there. He has recently been solicited to ship his crop to one house in Denver.

**THE RAIN.**—*Farmer*, Yuba City: The late rain was a great benefit to summer-fallow. It is safe to say there is more land in Sutter county laid over in summer-fallow than ever before in the history of the county, there being so much to plow. Owing to the flood of last winter, much of it had to be turned up very rough and cloddy, or not at all. This rain soaked up the clods and slaked them, so that a stroke of the harrow is sufficient to crumble them and put the sod in excellent condition for the seed. Our farmers were not slow in taking advantage of this fortunate circumstance. Every available team was put to work harrowing the rough summer-fallow.

## Premiums at the Stockton Fair.

The following are the awards in the agricultural classes at the late fair of the San Joaquin district, at Stockton:

## Horses.

**Thoroughbred.**—Stallion, 3 yrs old, Joe Daniels, by H. Sargent; special prem., Nathan Coombs, by William Boots; stallion, 2 yrs, Idler, by W. A. J. Gift; stallion, 1 yr, no name, by D. S. Terry. **Mares.**—3 yrs old, Molly H., by William Boots; 2 yrs, Anita, by E. J. Baldwin; sucking filly, H. S. Sargent. **Families.**—Stallion, other than thoroughbred, with 10 colts, Tom Boulouge, by Joshua Cowell; dam other than thoroughbred, Jane and 3 colts, by William Thomas. **Horses for all purposes.**—Stallion, 8 yrs old, Chieftain, Jr., by John A. McCloud; stallion, 2 yrs, Duplex, by C. F. Howland; stallion 1 yr, Duroc, by Wm. G. Phelps; sucking colt, Chatto, by Ed. Delano; mare, 9 yrs, Molly Bright, by J. B. Harclison; mare, 2 yrs, Emma Boone, by Capt. Ben E. Harris; mare, 1 yr, Molly Miller, by Wm. Thomas; sucking filly, Peggy, by H. H. Hugheson. **Special premium,** saddle horse, Vanity, by Capt. Ben E. Harris, also Nutwood, colt, by James Cole. **Roadsters.**—Stallion, 8 yrs, Priam, by W. E. Morris; stallion, 3 yrs, Hawthorne, by L. U. Shippee; stallion, 2 yrs, Young Nephew, by George W. Traherne; mare or gelding, 3 yrs, Black Bess, by W. B. French; mare or gelding, 2 yrs, Pastime, by P. J. Shafter. **Special premium,** to James Cole for Birchwood; span roadsters, Billy and Fannie, by Alex. Chalmers; second best ditto, Belmont and Nelson, by L. U. Shippee. **Draft Horses.**—Stallion, 6 yrs old, Tornado, by T. Skillman; stallion, 2 yrs, Monarch, Jr., by G. W. Voorhes; stallion, 1 yr, Monarch, by T. Skillman, sucking, Model, by T. Skillman; mare, 6 yrs, Jennie, by Derrick & Stewart; mare, 2 yrs, Beck, by Joshua Cowell; mare, 1 yr, Maggie, by Derrick & Stewart.

**Carriage Horses.**—Span, Reuben and Prince, by J. K. Meyer; second best, Prince and George, by S. P. Bailey. **Special mention,** George Washington and Henry Clay, by Capt. Ben E. Harris; single buggy horse, Sultan, by Mrs. Lucy P. Goff.

**Sweepstakes.**—Stallion of any breed or age, Lumix, by T. E. B. Rice. **Jacks.**—Best jack, Levi Carter; best jennet, Castolina, by W. F. Freeman.

## Cattle.

**Durhams.**—All premiums to Col. Younger. **Jerseys.**—Best bull, 3 yrs, Banker, by H. S. Sargent; bull, 1 yr, Ingomar, by Maj. Robt. Beck; best calf, H. S. Sargent; 3-yr-old cow, Pauline, by Maj. Beck; cow, 2 yrs, Dewdrop, by P. J. Shafter; cow, 1 yr, Maj. Robt. Beck; heifer calf, Ida 5th, by Robt. Beck.

**Ayrshires.**—All premiums to George Bement. **Sweepstakes.**—Best bull of any breed or age, 2d Duke of Alameda, Col. Younger; best cow of any breed or age, 2d Rose of Forest Home, by Col. Younger. **Special premium,** bull Banker, by H. S. Sargent; also, Newton, by George Bement; cow Dewdrop, by P. J. Shafter; and Marietta, by George Bement.

**Graded Cattle.**—Best cow, Daisy, by Wm. R. Ruggles. **Herd.**—Best herd of one breed, Col. Younger; best herd under 2½ yrs, Col. Younger; Ayrshire herd, George Bement; Jersey herd, by Maj. Robt. Beck.

## Sheep.

**Best ram,** 2 yrs, Spanish Morino, to L. U. Shippee; best pen 5 ewes, J. Wright Johnson; best ram, French Merino, J. Roberts; best ram, French Merino, 1 yr, J. Roberts. **French Merino.**—Best pen ewes, 2 yrs, J. Roberts; best pen ewes, 1 yr, J. Roberts; best pen 5 ewe lambs, J. Roberts.

**Sweepstakes.**—Best ram and 5 of his lambs, J. Roberts. **Testimonial of committee for the value of the French Merino sheep shown by Mr. J. Roberts, for excellence of quality and fineness of wool.**

**Cotswold.**—Best ram, General Hancock, by Col. C. Younger; best pen Cotswold ewes, Col. Younger.

**Sweepstakes.**—Best ram of any breed or age, L. U. Shippee; second best, J. Roberts.

## Swine.

**Berkshire.**—Best boar, Twin Brother, by J. Wright Johnson; best sow, J. Wright Johnson.

**Poland China.**—All premiums to Elias Gallup.

## Poultry.

**Six premiums for different breeds to Thomas Waite; best White Dorkings, Elias Gallup.**

## Fruits, Etc.

**Best English walnuts,** best soft-shelled almonds, best peanuts, Mrs. Joseph Hale; best and largest exhibit of vegetables, fruits, etc., T. J. Murray; best dried pears, Burt Lyons; best figs, Mrs. Joseph Hale; second best ditto, Mrs. C. J. Smith; best dried plums, Burt Lyons; best apricots, Mrs. Joseph Hale; best raisins, Burt Lyons; best collection of apples, W. A. Shippee; best five varieties of grapes, best collection of grapes, best single variety of grapes, best raisin grapes, D. A. Learned; best dried prunes, Mrs. Joseph Hale; best collection of figs, Frank Cutting; second best ditto, John Vivian; best dried peaches, Mrs. Joseph Hale; best collection pears, Burt Lyons; second best ditto, Mrs. Joseph Hale; best five varieties of pears, Burt Lyons; best quinces, D. A. Learned; best exhibit of fruits in spirits, Mrs. Joseph Hale; second best ditto, Mrs. Abbie Fisher; best exhibit of pickles, Mrs. Joseph Hale; second best ditto, Mrs. Abbie Fisher; best exhibit of jellies, Mrs. J. C. Reid; second best ditto, Mrs. C. J. Smith.

## Implements and Machinery.

**Best threshing machine,** Seymour, Sabin & Co; best sweep horse-power, Seymour, Sabin & Co; best large cultivator, Sherill Plow Co; best farm gate, A. P. Campton; derrick and net combined, E. J. Marsters; combination horse-power, R. M. Beebe; adjustable fruit gatherer, T. M. Lash; Long's improved detached traveling threshing, E. O. Long; McCormick's wire and self-binder, McCormick's iron mower, Bailey & Badgely; best gang plow 4x10, John Caine; Bowden's improved grain cleaner, J. C. Bowden; 24 premiums to W. A. Dorr for various implements and machines.

**Sweepstakes.**—Best display of agricultural implements, Seymour, Sabin & Co; best windmill, E. J. Marsters; best four-wheel truck, best platform wagon, best two-horse wagon, John Caine; the committee finds fine display of buggies by M. E. Albaugh; best adjustable patent single-tree clip, T. M. Lash; best portable steam engine, Seymour, Sabin & Co; best insect powder apparatus, N. Vizelech.

## Premiums at San Jose Fair.

The following are the awards for agricultural products at the late district fair at San Jose:

## Horses.

**Thoroughbreds.**—Stallion—Best 4 yrs old, Bob Wooding, Wm Boots; 2d, Nathan Coombs, by Wm Boots; best 2 yrs, Conquest, L. Stanford; 2d, Inauguration, by Wm Boots. **Mares.**—Best 4 yrs, Glen Dew, by L. Stanford; 2d, Mollie H., by Wm Boots; best 2 yrs, Evangeline, by L. Stanford; 2d, no name, by L. Stanford; best 1 yr, Frou Frou, by L. Stanford. **Families.**—Best sire with not less than 5 colts, Emerson Patchen, Lady Emerson, Lady Ethel, Lady Anderson, Belle Dale, Betsie and Maggie, by S. B. Emerson.

**Horses of all Work.**—Stallion—Best 4 yrs, George Patchen, by J. Savidan; 2d, Emerson Patchen, by S. B. Emerson; best 2 yrs, Clifford, by Dan Hellyer; 2d, George C, by J. R. Hanton; best 1 yr, Johnnie, by Lone Vardon. **Mares.**—Best 4 yrs, Maggie, by S. B. Emerson; 2d, Lady Emerson, by S. B. Emerson; best 3 yrs, Lady Ethel, by S. B. Emerson; 2d, Bijou, by L. Stanford; best 2 yrs, Barnes' Idol, by L. Stanford; 2d, Maggie, by P. Evans; best 1 yr, Helen, by L. Stanford; best sucking colt, Rose Abbott, by Capt. B. E. Harris.

**Draft Horses.**—Stallion—Best 4 yrs, Bayard, by J. McDonald; best 3 yrs, Prince Charles, by D. Stewart; best 2 yrs, Dick Raker, by Thos. Blake; best 1 yr, Pride, by H. Albright. **Mares.**—Best 6 yrs, Jennie Cogswell, by T. Blake; best 3 yrs, Maggie, by J. Lendrum; best 1 yr, Louisa, by T. Andrews; best sucking colt, by J. Snyder.

**Roadsters.**—Stallion—Best 4 yrs, Startle, by A. C. Marston; best 2 yrs, Brigade, by B. McDonald; 2d, Nutwood Boy, by W. A. Parkhurst. **Mares.**—Best 4 yrs, Lady Allison, by E. Allison; 2d, Fanny, by C. Younger; best 2 yrs, Lady Rhodes, by L. Stanford. **Geldings.**—Best 4 yrs, Whisper, by Ed. Younger.

**Jacks.**—Best 4 yrs, John Gilpin, by James Boyd.

**Mules.**—Best span, Dolly and Beck, by M. Sator.

## Cattle.

**Ayrshires.**—All premiums to George Bement. **Durhams.**—Bulls.—Best 3 yrs, Second Duke of Alameda, by Col. Younger; 2d, Duke of the Valley, by Wm. Quinn; best 1 yr, Mollie's Prince, by C. Clark; 2d, Kirklevington Prince, by C. Clark; best bull calf, 20th Red Thorndale, Col. Younger; best cow and calf, Red Dolly 2d, by Col. Younger; 2d, 6th Rose of Forest Home, Col. Younger. **Cows.**—Best 3 yrs, Fuschia, by Wm. Quinn; 2d, Red Dolly 2d, by Col. Younger; best 2 yrs old, 6th Rose of Forest Home, by Col. Younger; 2d, Flora B, by Mrs. E. L. Bradley; best 1 yr old, Mary Queen 3d, by Col. Younger; 2d, Oxford Rose 3d, by Col. Younger; best heifer calf, 9th Rose of Forest Home, by Col. Younger.

**Jerseys.**—Cows.—Best 2 yrs, Fanny, by C. B. Polhemus; 2d, Pearl, by C. B. Polhemus; best 1 yr, Pearl 3d, by C. B. Polhemus; 2d, Bessy 3d, by C. B. Polhemus; best heifer calf, Blanchey, by C. B. Polhemus; best bull 3 yrs, General Grant, by B. F. Fish; 2d, Roscoe, by C. B. Polhemus; best bull 2 yrs, Robert Bement, by J. S. Connor; 2d, Duke, by E. W. Mills; best bull 1 yr, Hector, by C. B. Polhemus; 2d, Jersey Boy, by best cow and calf, Cherry and calf, by C. B. Polhemus; 2d, Stellaetta and Stella, C. B. Polhemus; best cow 3 yrs, Heir Belle, by J. S. Coombes; 2d, Fairy, by C. B. Polhemus.

**Devons.**—Cows.—Best 3 yrs, Rosa, by B. F. Fish; best 1 yr, Rosa Lee, by B. F. Fish.

**Herd.**—For beef.—Best thoroughbred herd of 4 yrs, Younger; best herd of cattle for dairy purposes, C. B. Polhemus.

**Graded Cattle.**—1st premium, Scott, by Mrs. E. S. Bradley; best fat cow, Maggie Thorndale, C. Younger. **Cows.**—Best 4 yrs, Bessie, by Wm. Quinn; best 3 yrs, Kate Hayes, by Wm. Quinn; 2d, Fannie, by C. B. Polhemus; best 2 yrs, Violet, by C. B. Polhemus; best 1 yr, Dolly, by Wm. Quinn.

## Sheep.

**Cotswold.**—Best ram, Prince, by Wm. Quinn; best ewe, no name, by Col. Younger; best ewe lambs, Col. Younger; best ram lambs, Col. Younger.

**Graded Sheep.**—Best ewe—Lodsedale, by Wm. Quinn.

## Swine.

**Berkshire.**—Best boar, Bob Ridley, by Mrs. E. L. Bradley; best sow, Lizzie, by Mrs. E. L. Bradley.

**Suffolk.**—Best boar, Jim, by J. E. Rucker; best sow, Lizzie, by J. E. Rucker; best 5 pigs, by Tyler Beach.

## Poultry.

**Leghorns.**—1st, by S. Rogers. **Plymouth Rock.**—1st, by Mrs. L. J. Watkins. **Cochins.**—1st, by Geo. Bull. **Bantams.**—1st, by C. D. Horn. **Langsbans.**—1st, by Mrs. L. J. Watkins. **Geese.**—Best pair, by S. Rogers. **Turnkeys.**—bronze, by S. F. Ayer. **Ducks.**—Pekin, by Mr. Newhall.

## Fruits, Etc.

**Best single variety pears,** J. J. Wilcox; best strawberries, J. J. Wilcox; best six varieties pears, John Merse; best figs, Mrs. D. C. Bailey; best six varieties apples, S. J. Chapin; best strawberries, J. W. Mead; best twelve varieties apples, D. C. Feeley; best single variety apples, Richard Pierce; best quinces, P. C. Ogier; special mention, the collection of apples exhibited by J. Brannan, grown near Susanville; best soft-shell almonds, best hard-shell almonds, Spencer & Covell; best English walnuts, G. M. Bruce; best black walnuts, Eddie Beal; best chestnuts, E. J. Baldwin.

**Canned Fruits, Etc.**—Best jellies, Miss Lizzie Ogier; best fruit in glass, Mrs. C. D. Horn; best factory canned fruits, San Jose Fruit Packing Company, gold medal; best factory canned jellies, San Jose Fruit Packing Company; best factory fruit in glass, San Jose Fruit Packing Company; best factory preserves, San Jose Fruit Packing Company.

**Dried Fruits.**—Best apples, C. D. Horn; best pears, C. D. Horn; best peaches, C. D. Horn; best nectarines, C. D. Horn; best figs, C. D. Horn; best prunes, W. W. Cozzens; best plums, A. C. Penniman; committee recommended special mention of dried fruits exhibited by Mrs. M. E. Bradley.

## Grapes and Grape Products.

**Best raisin grapes,** Spencer & Covell; best wine grapes, three varieties, Chas. Le Franc; best and greatest variety of grapes, D. C. Feeley; best wine grapes, D. C. Feeley; best table grapes, D. C. Feeley; best grape brandy, Chas. Le Franc (special prem.); best grape brandy, E. J. Baldwin (regular prem.); best white wine, Chas. Le Franc; best red wine, Chas. Le Franc; best sweet wines, muscatel, Chas. Le Franc, special mention; best sweet wine, E. J. Baldwin. **Special.**—Best port wine, Chas. Le Franc; best port wine, E. J. Baldwin; best sherry wine, Chas. Le Franc.

## Field and Garden Products.

**Best silk cocoons,** Miss J. B. Farnsworth; best turnip, J. W. Easten; best pumpkin, W. M. Russell; best beets, G. K. Hostetter; best squashes, Henry Bookins; best tomatoes, S. Q. Broughton; best hand bouquet, Mrs. J. S. Parker; best greenhouse plants, R. D. Fox; best hanging-basket, with plants, S. Toner.

## Dairy Products.

**Best cheese,** S. C. Cheeso Factory; best cream cheese, O. W. Farnsworth, special mention; lard, hams, etc., Andrews & Co. Kendall.

## Agricultural Implements.

**Best display of agricultural machines and implements,** Geo. Bull & Co; best threshing machine, Seymour, Sabin & Co; best sweep horse power, San Jose Foundry; best cider mill and press, George Bull & Co; best horse hay rake, John Dadds; best portable engine, Seymour, Sabin & Co; best farm gate, A. P. Compton; best broadcast sowing machine, George Bull & Co; best cultivator, George Bull & Co; best elevator for stacking grain, W. T. Adel; best spring tooth harrow, G. W. Tarleton; best horse hoe, G. W. Tarleton; best harrow, San Jose Foundry; best double shovel plow, George Bull & Co; best windmill, Centennial, T. E. Martin; best fanning mill, John Klees; best churn, A. H. Conkling; best cheese vat with heater, J. S. Woolsey; best pump, San Jose Foundry; best fruit gatherer, T. M. Lash; best sulky plow, best stubble plow, best sod plow, best side hill plow, best one-horse plow, George Bull & Co; best gang-plow, Boyce & Topham; best farm wagon, George Bull & Co; best two-seat open carriage, best ladies' phaeton, best carriage wheels, etc., Charles Bradley.

## News in Brief.

**JOHN W. CARROL, the actor, is dead.** **SMALL POX and typhoid fever are raging in Chicago.**

**GAS works are to be erected at once in Tucson, A. T.**

**DISASTROUS typhoons occurred last month in China and Japan.**

**SENATOR MAHONE has decided that Gen. Early is beneath his notice.**

**FLOUR is selling at \$15 per 1,000 lbs. at the Eagle mills near Ashland, Oregon.**

**The recent hurricane in England and Ireland did immense damage to property.**

**A NEWSPAPER is to be started at Mandan, Montana, on the Northern Pacific.**

**The steamer Great Eastern is to be sold again. She is the white elephant of the sea.**

**SOME 200 Postmasters will, it is alleged, be implicated in the Star route frauds.**

**LOCAL Independent movements exist in a majority of the counties of Mississippi.**

**A WASHINGTON correspondent says President Arthur is more taciturn than Grant was.**

**NINETEEN miles of track are already laid on the California Southern from San Diego.**

**The Mississippi river is again on the rampage, and fears of great damage are entertained.**

**A steamship capsized in the drydock at New York, badly damaging her and killing one man.**

**ARRESTS of prominent Land Leaguers continue in Ireland, and the excitement is intense.**

**The railroad up the Nile is progressing, and already the cry is heard "all aboard for Sahara."**

**The jail of Eureka county, Nevada, is empty, a thing that has not occurred before for a long time.**

**The gale which caused such damage in England and Ireland extended to France and Germany.**

**EX-GOV. IRVIN has repurchased his old paper, the Yreka Tribune, and resumed the editorial harness.**

**The settlers upon the Upper Columbia river, in Washington Territory, are constantly agitating the matter of completing the locks around the Cascade, in order that they may have open highway to the ocean.**





### Dialogue of the Horses.

#### FIRST HORSE.

We are the pets of men—  
The pampered pets of men!  
There is naught for us too gentle and good  
In the graceful days of our babyhood:  
We frisk and caper in childish glee—  
Oh, none so pretty and proud as we!  
They cheer and cherish us in our play—  
Oh, none so smilingly sweet as they!  
And when a little our lives have grown,  
Each has a table and room of his own,  
A waiter to fill his bill of fare,  
A barber to clean and comb his hair.  
Yes, we are the pets of men—  
The pampered pets of men!  
They show us, gayly dressed and proud,  
To the eager eyes of the clamorous crowd;  
They champion us in the rattling race,  
They praise our beauty and cheer our pace;  
They keep for us our family trees—  
They trumpet our names beyond the seas;  
They hang our portraits on the walls,  
And paint and garnish and gild our stalls.  
Yes, we are the pets of men—  
The pampered pets of men!

#### SECOND HORSE.

We are the slaves of men—  
The menial slaves of men!  
They lash us over the dusty roads,  
They bend us down with murderous loads;  
They fling vile insults on our track,  
And know that we can not answer back;  
In winds of winter, or summer sun,  
The tread of our toil is never done;  
And when we are weak, and old, and lame,  
And labor-stiffened, and bowed with shame,  
And hard of hearing, and blind of eye,  
They drive us out in the world to die.  
Yes, we are the slaves of men—  
The slaves of selfish men!  
They draft us into their bloody spites,  
They spur us, bleeding, into their fights;  
They poison our soul with their senseless ire  
And curse us into a storm of fire.  
And when to death we are bowed and bent,  
And take the bait that for them was meant,  
Alone they leave us to groan and bleed,  
And dash their spurs in another steed!  
Yes, we are the slaves of men—  
The slaves of brutish men!  
—Will Carleton's Country Fair.

### A Day's Tramp in San Luis Obispo Co.

[Written for the RURAL PRESS by D. M. D.]

"Nero" and I set out to walk the six miles of hill and valley that lie between our place and the ocean beach. "Nero" is my Newfoundland dog, and, in my estimation, a splendid creature. He is black in color, ornamented with a few white patches. He has outgrown the spontaneity peculiar to puppyhood, and is as sober and dignified in his demeanor as becomes a dog of his age and avoirdupois. He is given to roving about the country, and I suspect that he is a born tramp. I bought him of one of that kind of travelers, and, it may be, that the force of early habit and example are still strong upon him. I might scold and punish him for this fault, but, I fear, I may have encouraged him by keeping him company in some of his explorations. I have been unable to find any mention of gypsies among my own ancestors; but the wandering instinct does possess me powerfully at times, and, with my trusty dog for a guide and protector, I obey its promptings. He has tramped with me over the fields and hill recesses of this entire neighborhood. He has followed me to the heights in my search for flowers and mineral specimens; and he has led the way along the windings of these valley streams, to most charming and secluded nooks. With this four-footed friend it is pleasant to wander away from the haunts of busy men and worrying women, to hide and rest from the world's noise and confusion.

We set out on our six-mile tramp very early in the day. The gray mist had settled down during the night and hung low between the mountains and coast hills upon either side of the valley. No sharp outlines vexed the eyes; no distracting noises worried the ears on that September morning. The restfulness of the eventide brooded over the place, and the sun seemed unwilling to dissipate the mists that half concealed the lovely landscape. It was so still and cool and delightful that we walked rapidly. We might wish to loiter later in the day, when the sun's heat and glare would compel some moderation. We took a winding pathway through the fields, and kept near the railroad track that has been recently laid between San Luis and the Arroyo Grande. The same road will in time be extended down the coast to the Santa Maria valley. For some five miles south of San Luis, and through the Corral de Piedra ranches, the track is near the Santa Barbara stage road. Before the Corral de Piedra creek is reached it deflects, and hugs the hillside of the valley till it disappears around a rocky point to cross the stream lower down, and wind its way out and across the main road near the foot of the tiresome sandhill, which has long been the terror of innocent horses and the despair of merciful teamsters.

In our walk we leave the stage road and the railroad near the Corral de Piedra creek, and we take the wagon road that leads to the beach. We linger a little upon the bank of this brook before we turn to follow its seaward course. Here are half a dozen houses within half a mile, and a blacksmith shop and a school-house besides. By this time the country world had begun to wake up and make itself seen and heard. Every well-ordered family in this section has children and chickens. These emerge from their cribs and roosts and do their best to break the twilight quiet of the earlier morning. The grown up chicks and turks in the back yards cackle and crow, and strut and gobble, while the ducks and geese form into a procession and waddle and scramble down the creek bank into the water. Four and six-horse teams, with great wagons loaded with sacks of grain, are on the way to the new station. The dairy cows are starting for their daytime pastures. A steam thrasher, a mile away, gives out one of its sharp, shrill whistles, and presently we hear the scream and rumbling of a live locomotive upon the new laid track. The rails, lumber and workmen on the platform-cars hint the progress of the road farther down the valley. These platforms will go back to San Luis with plethoric bags of grain piled high upon them. Ten thousand sacks have already been carried over the road, and the first of this month—September—saw the pioneer train in the valley. It was a startling sight, in such a Sleepy Hollow of a place; but the locomotive is the best draft horse going, and is sure to be appreciated in the harvest season.

Old "Nero" raced up and down the path impatiently, while I was noting the improvements. He does not seem to care for the development of his county, nor does he sympathize with my fancies and illusions, though I would like to suppose he has some sort of a soul, because it would elevate him in my estimation. We went onward, close beside the willows that bordered the brook, through little groves of liveoak, and beneath the wide-spreading branches of the cottonwoods. We tarry a little at the pitch mine, and I see roofs and pavements for San Francisco houses and streets in the native bitumen. I remember two city boys, my guests, who attempted to perform their ablutions in the asphaltic pool near by, and how I came to the rescue with rags and kerosene. Their own mothers would not have owned them, in their blackened state. One load, each day, of this asphalt, is sent to the Pismo landing for shipment.

We now pass, clear away, from every hint of human toil and habitations; and I still find many pleasant objects for contemplation. The formation might attract the geologist, the landscape might invite the artist; but the silence and seclusion could not fail to bewitch the dreamer. It is a joy to be alive in the loveliness and loneliness, and no human voice save my own to break the absolute stillness. I miss the woody odors of early spring, but the late summer flowers look up from their mossy beds by the brookside, and I am grateful for their faint fragrance. Every sight and sound is soothing to soul and sense. The tender green of the hills has turned to a dusty drab since the last rains of the season, but the sober colors of the late summer seem to soften their outlines. Here are honey bees, miles from their hives, in search of sweets fit for hoarding. I see them on this errand—a winged procession coming up the canyon laden with their delicious stores. They have been out since 4 o'clock in the morning, and will work 15 hours a day, and will go 12 miles for their drops of sweetness. How discouraging such examples of industry must be to the weak and lazy! They do not offer me a taste of their honey, though they are said to exchange such little hospitalities with one another. A meadow lark fits on before us, and I remember the short and very sweet song which he gave me earlier in the season. And here are the beautiful crimson-breasted linnets. I recall how I fed and encouraged them, when I first came into the county. Now we have turned against them—everybody has turned against them, and only because they have dared to help themselves too bountifully from our orchards. I shall not blame them if they never sing to me again. The noisy blackbirds are trying to deafen me with their unmusical notes. There are millions of them, saucy and defiant, as if they had met in convention to discuss bird rights and privileges.

We are gradually descending as we go down beside this brooklet, which has wandered from the mountains across the wide valley, to make its way through the clefts in the coast hills. It sings its little rippling tune as it goes, and with its green border, makes a pretty picture. "Nero" gives his mind and strength to the study and pursuit of rodents. The place is alive with them; and he rushes after the bounding rabbit, and follows to its subterranean home the scampering squirrel. Then he returns to me for a word of praise and encouragement; and, for a little while, he is content to walk soberly by my side.

We approach a Portuguese dairyman's cot and corrals. We are not studying interiors, so we keep at a respectful distance. We observe the animals in close proximity. Contented cows are ruminating in the shade. Pigs, big, little and middle sized are cooling themselves in a pool of stagnant water. I ought to like pigs for there is money in them; but I do not. The oak trees here have no prejudice against them, for every branch is loaded with acorns. Later, these pigs will fatten on the nutritious mast. It is a solitary place, and we have not found that ideal

"cot in the valley," which the poet has sung. And those herders afoot and mounted, guarding their sheep and cattle, in the distance, are not the ideal shepherds and herdsmen which fancy once pictured. In a cabin near this road a sheep herder died alone several years ago. He was a stranger in the country; not even his name or place of residence was known to his employer. He lived like a hermit, as do many of these hill and valley people in the sparsely settled districts. I begin to understand why the homeless and penniless of the towns and cities shrink from such perfect isolation. These trees never witnessed the cooing of lovers. These rocks never echoed the cries of grieved and angry children. This brook never babbled the infelicities of the married life of Dinis and Kathleen. These hills never beheld the spectacle of a wake or wedding. My day's tramp here is a pleasure and a medicine which I should not care for every day in the year.

The sun, high in the heavens, had cleared the mists. "Nero" lagged, and I was growing weary. I sought a shaded spot on the brook's bank, and rested and refreshed myself with a lunch which I had brought with me. The shy quail on the ground, most aggravatingly, suggested quail on toast. They piped at me and flew away, though they were safe enough. I had neither gun nor disposition to kill, even if I had been hungry. The savage in me was so fast asleep that day, that I was incapable of a murderous assault. This might be the sportsman's paradise, for here is the loveliest place for a camping ground, with wood, water, grass and game in abundance. What could a fellow wish beside. "Nero" had his share of the luncheon, and afterward rolled in the creek and slaked his thirst. The great, dripping creature dried himself in the dusty road, and then curled himself upon the edge of my skirts and went to sleep.

After my long walk and hearty lunch, I gave myself up to a sort of listless, indolent observation of the plant and insect life about me. Peace and quiet reigned, and sitting there under the cloudless skies at noonday, sorrow and despair had no place in my heart. This rare, peaceful mood did not prevent my poking into an ant-hill near with the stick which I had in my hand. Then one busy little world was thrown into dreadful confusion. I thought, they will repair the damage, and be going on in the old way to-morrow, and I wondered if our fuming, fretting ways are of more account than theirs. In the same unceremonious fashion, by causes and persons unknown to us, are our plans and schemes frustrated, and like those insignificant ant folks, we hasten to repair and rebuild.

The best thing after looking down awhile is to look upward. I looked up, and as I did so, the same mischievous stick that intruded into the ant's home tore away a dainty spider's web. Who knows what these insect people think of me for such acts of malicious interference? If it were done in the interest of science, they might forgive me; now, I cannot even dare to hope they will. I presume their minute eyes glowered, and they cursed me in unintelligible language. I will repeat without the ceremony of sackcloth and ashes, and try to be on friendly terms again. I think this spider family one of the most interesting in nature. I do not like to spoil their pretty web work, even when they persist in decorating my best room with it. A housekeeper may have rights, but ants and spiders are not bound to respect them.

There is no artificial life here, and I look around to see a specimen of the tiniest and loveliest of all the bird kind hovering over a wild flower. It seeks a dainty repast from the heart of the blossom. Its emerald and ruby-colored feathers fairly flash in the sunlight as it darts nervously from one flower to another, in order to gratify its appetite. There is music in its little faint chirping. So small a bird could not make a great noise. I would gladly hold the wee birdling in my hand, to examine it closer than is possible when it is upon the wing, but the charming sprite defies me, and is out of sight while the wish is in my heart. The exquisite hummingbird never permits a close acquaintance until it is perched upon a lady's hat or bonnet. In number and variety of species they stand third in the classification of the bird family; and the wonder is that such small creatures can be so complex and numerous. Next below these stands the Fringilla tribe, to which our sweet-singing, fruit-loving linnet belongs.

These hillsides may be choice vine lands. The absence of midew on the leaves and fruit in the small vineyards upon the main road would indicate a favorable locality. If the grape should fail, the olive would be sure to take kindly to the soil. Olive culture here would be a revival of the industry commenced in the mission garden of San Luis more than a century ago.

I had now dreamed away two precious mid-day hours. I hope it will not pass to my account as wasted time, for in the solitude and silence of the glen had come pleasant thoughts, and a glimpse of the everlasting peace and restfulness which we hope for in the future life. I roused up "Nero," and we proceeded on our journey. A freight wagon passes us, on its way to the Pismo landing. The driver of the slow moving horses regards us curiously, as if we might be out of our senses. If it were Sunday, we might see a great many people driving upon this road—gay parties going to the beach for a day's pleasure. The attractions are: a breath of the bracing sea air; the fishing from the pier at the landing; the clams and shells, and the beautiful stretch of smooth, white sand, which we may roll over without the feeling of

speed and motion peculiar to rough roadways. I remember a point upon this road to the beach where I once came to grief. There were four of us thrown from a buggy, and ourselves and our clothing were not improved by the sudden exit. I might as well confess that this is the real reason why I prefer walking over this road. We come to another dwelling, which is only a shelter from the winds and weather, and patterned after the first and only one we had seen since we left the asphaltum beds.

We approach the cleft in the hills through which the brook finds its way, and the humid soil which borders it is the chosen place of the plenny fern—*Filices* I should say, if I were a botanist; and such a large and lovely family as they are, upon this coast! I wish I knew them better. They show us a leaf form, varied beyond that of any other tribe in the vegetable kingdom. I am only acquainted with a few of the commonest kinds, but without studying them; without knowing their orders and genera I can admire the dark green fronds, with their gold and silver linings. After I have exhausted the beauties of their visible growth, I dig the earth away from the roots and examine their underground structure. There is a dark brown, slender, wiry network which I take with me, hoping it will thrive in some damp, shady spot in my garden.

The cleft narrows as we go on, till there is only room for the brook and road. We are shut in between the hills, with no grand views to console us, and no distracting glimpses of beauties beyond, to beckon us onward. There is just the grateful shadow of the neighborly peaks and the welcome verdure along the banks of this thread of a stream that is wandering down to the great ocean. Right here my neighbor overtakes us and asks me to ride. I am not as timid about horses and sideling places as I was before I felt so tired and footsore. I thank him and take a seat in his wagon. We pass around a low hill, through the bottom lands of the Pismo ranch, and the Pacific, with its blue waters and salt smell is before us. Near the mouth of this creek which we have followed so far, is the Pismo ranch house—one of those old time structures, which are found scattered over this county. A little farther on is the Pismo hotel, which suggests good cheer for the hungry and thirsty traveler. An hour upon the beach, and the gray mists and cool shadows are creeping up the gap in the hills through which we have to pass on our homeward journey. "Nero" returns as he came; I do not. It was not a tramp worth mentioning, after all. We did not see the California lion that is said to live somewhere in these wild hills. I am not sick, or lame and miserable. I believe I shall yet go forth in some other direction and write down the thoughts and experiences of another day's tramp.

### Hints on Manuscripts.

EDITORS PRESS:—Will you please be so kind as to give answers to the following questions in your valuable paper? What kind of paper should be used for manuscripts? Is it necessary to pin or paste the different sheets together; if so, which is preferable? What is the most convenient way to a publisher for a manuscript to be done up, that is, to be sent through the mail.—READER, Bakersfield, Cal.

Different editors have different preferences. We are not fastidious. The matter of the article is always regarded by us of infinitely more importance than its manner. We can stand any kind of paper, from the smooth side of a paper bag to cream laid, gilt-edged note. We would rather not have the pages fastened together; simply number the pages carefully. Never roll your manuscript, the editor is very apt to get sickish when endeavoring to ride the billows of a rolled manuscript. We have rolled it backwards, piled all the office library on it, and in desperation have thrown it down on the floor and stamped on it, and yet the roll was there still. Fold the paper to fit the envelope; that is the only rule we know. Do not fold each sheet by itself, and then pack in the envelope. Bunch them altogether and then fold. Write only on one side of the paper and leave plenty of room between the lines. We do not care whether the writing is done with pen or pencil.

CHURCH MUSIC.—"The Herald of Praise" is a new book for choirs, singing classes and musical conventions, by L. O. Emerson. Published by Oliver Ditson & Co., Boston. Probably most choir leaders will feel curiosity enough to obtain and look over a copy of Mr. Emerson's last book. He has a very happy tact at providing music, sacred and secular, exactly fitted to the times, and to popular demand. The Herald of Praise includes a compact chart or description of musical notation, a multitude of fresh and new easy vocal pieces, sacred and secular, for the practice of the notes; this part, in fact, constituting an acceptable, easy glee and chorus book, a grand collection of new hymn tunes and anthems, and a number of well chosen pieces for concerts. We all know that new books for choirs, every year or two, used to be a necessity. Although the "Chorus Choir" seemed for a number of years likely to be numbered with the things of the past, it is now reviving in an excellent form, and will, doubtless, appreciate the excellent material of the Herald of Praise.

A SEASIDE belle left her bathing shoes hanging out of her hotel window to dry, and the next day the local paper announced "that such a hotel had put up a new awning of a unique design."



## Chaff.

AN old man who had been badly hurt in a railroad collision, being advised to sue the company for damages, said, "Wal, no; not for damages—I've had enough of them; but I'll just use 'em for repairs."

In the Dog Days.—She: "The Prince Charley is again becoming a fashionable dog."

He:—"Who invents the new fashions in dogs."

She:—"Can it be the puppies?"

"You smoke a great deal, Gus," said a friend to Gus De Smith. "Yes," replied Gus, "particularly after dinner. I have got so in the habit of smoking after dinner that the dinner don't taste right when I eat it unless I have a smoke afterward."

AN Englishman who had published his observations during a trip to the United States concludes that the most striking and thoroughly American characters he saw were Bob Ingersoll and "Maud S." Mr. Beecher is not getting a fair show this season.

"Ah! Adeliza; if you were captain of a ship in what capacity would you want me to go?" He hoped she would say, "first mate," but it was late, and she was very sleepy, and as she leaned her head against his opera spotted shirt front she murmured "as donkey—donkey pump!"

A PHOENIX girl stuffed the sleeve of an old coat with straw and then placed it around her waist as she sat in the front window wrapped in the soft August twilight. It looked all right and natural from a distance, and broke the neighboring girls all up with envy, but the satisfaction she derived from the hug was about as thin as moonlight on a shovel.

A DOTTING parent calls to see the master of the school where his son is studying. "Well, sir," he asks, "are you satisfied with the boy? Does he study hard?" "Alas, my dear sir, I regret to be compelled to tell you that the young man does not succeed at all; he is always last!" "Well," rejoins the father, good-naturedly, "you have to have a last one, anyway, don't you?"

## The Pioneer.

In a lecture delivered some time since by Thomas Fitch, he closed with the following glowing eulogy of the Pacific coast pioneer.

The gallant pioneer! He is the type of American fraternity, for he has

"Honor and courage;  
Qualities that eagle-plume men's souls  
And fit them for the sun."

He climbs like a huge fly upon the bald skull of some lofty mountain, and the primeval hills welcome his footsteps. He taps with the prospector's pick at the adamantine doors of the earth's treasure chambers, and at his demand they reveal their shining secrets. His glittering ax lays low the green-plumed forest monarchs, and on the emerald-hued prairies he marks the sites of the cities yet to be. Not for him the science of the school; not for him the graces of culture; not for him the joys of home; not for him the sweet solaces of life. But he reads the story of the ages written on the rocks and hears the tale of mysterious forces whispered by the midnight stars; and the priest-robed mountains and the smiling lakes and white-lipped sunset seas are his kindred. Southward you shall behold him, undaunted by the roar of the Colorado, or on and onward to listen to the wash of tropic waters. Northward his resolute face is turned toward the wooing mountains of crystal, until the north star gleams like a mighty diamond in its gold and crimson settings of northern lights, and the sudden sun but for an instant hangs upon the verge of the polar night, a faint reminder of the lost southern clime, while the booming artillery of the ice king hails the pioneer of polar seas. Westward—ah, there is no longer a west! The iron lace with which Progress fringes her garments reaches now to where the Golden Gate swings back upon her hinges. Asia and the Farther Indies are just beyond, and the Orient of Europe is the Occident of America.

And still from the silver and the orange blossoms of cactus-fringed and snow-crowned Mexico, northward to where the icebergs glitter against an Arctic sky, our pioneers are marching and toiling. In the track which their fierce feet are breaking, our country is marching onward to her greatness. The army of civilization swells upon their pathway. Art, science, progress, the wealth of nations, the power and glory of the Republic follow. All honor and all hail to those brave hearts who lead the vanguard!

A WAGON THAT CARRIED 4,500 TONS OF GOLD.—The little old "gold wagon" in New York that carried gold from the Custom House to the Sub Treasury has been put aside. Sometimes it made as many as a dozen trips daily, carrying as much as \$90,000 in glittering gold coin each time. The money is usually put up in bags of \$20,000 each, which are placed in heavy oaken boxes with massive rod iron handles. These boxes are then put into the wagon-box, and a lid with clamps of iron is locked down over it. The wagon is pushed like a hand-cart by two Custom House porters, accompanied by an armed watchman, whose duty it is to see that the load is not interfered with by thieves. The little used-up wagon has carried in its time probably not less than \$500,000,000, or about 4,500 tons weight in gold.

## Young Folks' Column.

## At Breakfast.

A gay little bird  
That wanted some fun  
Flew in and lighted  
On the baby's bun.

He pecked at a currant,  
He slipped from the cup,  
Then hopped on the loaf,  
And thus piped up:

"Peepsey weeps! Baby, say,  
What'll you give if I will stay?  
Peepsey weeps! Baby, O,  
What'll you give if I will go?"

He splashed the milk,  
He nibbled the bread,  
He spread both wings,  
He stood on his head.

But still the baby  
Said never a word—  
And out of the window  
Flashed the bird!

"Peepsey weeps!" loud sang he,  
"Such a stupid baby I never did see!  
Never a smile, never a word—  
Peepsey weeps! I'm glad I'm a bird!"

—Babyland.

## Darkey Jim.

"Where under the sun is Darkey Jim," said Pinkie to herself, as she turned over and over in bed trying to find him. "I don't believe Kitty put him to bed at all."

Kitty was the nurse, you know, and Darkey Jim was the black rubber doll that Santa Claus brought last Christmas time. I don't know why Pinkie always wanted Jim to sleep with her, because he was torn most to pieces. The big dog got him once and ate a whole leg off, and one night Jim was left outdoors in the rain, and was dreadfully soaked out of shape. But Pinkie had a little sister, Ruth, who slept in another room, just through the doorway, so when Darkey Jim wasn't found that night, Pinkie called out:

"Ruth, are you asleep?"  
But no answer came.  
"I believe she's got him herself, and won't tell," said Pinkie.  
So she got out of bed and went into the next room.

"Ruth, have you my Darkey Jim?" she asked, as she came to the crib. Ruth didn't answer, and so Pinkie began to feel all about for the doll, and at last she found it. But do you suppose that Ruth was really asleep? Not a bit more than you are at this moment; and when Pinkie tried to lift Jim out of the crib to take him to her own bed, she found out that Ruth was wide awake and had tight hold of Jim's leg.

"Go way!" cried Ruth, sitting up in bed and tugging with all her might to keep hold of Darkey Jim.

"He's mine, Ruth Vail, and you know it," answered Pinkie. "So give him to me."

They were both dreadfully cross, it seems to me, but they were dreadfully sleepy, too.

Well, the end of the quarrel was that mamma, who was down stairs, came running up to see what the noise was all about. Ruth was crying, but Pinkie wasn't—because she had the doll.

"He's mine, and I want him," said Pinkie crossly.

"I got him first, and I think I might keep him, I do," sobbed Ruth.

"Now look here," said mamma, taking Darkey Jim away from Pinkie, "this is too bad, to make all this noise and fuss, and neither one willing to give up to the other. I tell you what I must do. I'm going to stand Darkey Jim up here against the door between the rooms and have him sleep there all night. He'll be just as near one of you as he is to the other, and I hope both of my little girls will be satisfied—although I must say that I think Ruth shouldn't have taken Jim at all, because he didn't belong to her."

So that was the arrangement made, and mamma went down stairs again, leaving the children in bed, and Jim standing on his one leg against the door.

Pinkie hadn't been in bed two minutes before she began to think:

"I don't see what use Jim is to anybody, over there."

Then she thought a little more:

"I don't think I was very good to Ruth, particularly as she gave me half her peach to-day. I know what I'm going to do. I'm going to get Jim and put him straight in Ruth's crib."

Now it happened that Ruth hadn't been in bed two minutes either before she began to think:

"I expect I was real cross to Pinkie."

Then she thought some more, too:

"I don't see what good Darkey Jim's doing over there all alone by himself. I know what I'm going to do. I'm going to get him and put him straight in Pinkie's crib."

So both the little girls got softly out of bed at just the same time, and went carefully across the floor.

"I must be very careful so Ruth won't hear me," said Pinkie to herself.

"I must be very careful so Pinkie won't hear me," said Ruth to herself.

So they felt along the wall, and put out their hands, and ran bump against each other in the dark.

"You take him," said Pinkie.

"You take him," answered Ruth. "He's yours, you know—and I'm real sorry."

"But you gave me the peach, and I was cross," said Pinkie, holding out Jim in the dark.

And how do you think they made it all right?

Why, they both got into the same bed, and Darkey Jim slept between them. —N. Y. Tribune.

## GOOD HEALTH.

## Concerning Mountain Cures.

There is one feature connected with mountain cures which should not be overlooked. There are, speaking broadly, two classes of persons to whom the mountains offer health. One class comprises those who have been overworked in the city, whose lungs, digestive organs, eyes, etc., are out of order, and want air and exercise. This class of persons, we may say at once, could get cured as well on a plain or on the sea as in the mountains, so long as they get air and exercise. But there is another class to whom the mountains offer special advantages. They are afflicted with a kind of phthisis which needs bracing, rare, stimulating, dry air. To go to Colorado, New Mexico or Arizona is new life to them. But cures of this character are conditional. A young man left Philadelphia for Minnesota some time ago in an almost hopeless condition, and in a short time his constitution was built up by the new air. The most hating cold of the Minnesota winter did not harm him. He wanted to exhibit his health to his Philadelphia friends, but a return to the City of Brotherly Love brought back all his old alarming symptoms. He had to flee to Minnesota again, where he once more found perfect health. Then he took a trip to the far West. But at San Francisco his old trouble returned. We repeat—the man who wants air and exercise and goes to the mountains, where he recuperates, is different from the man who needs air of a peculiar kind to aid him in warding off consumption. This latter, when he gets where he finds vitality in the air, must follow the advice Sumner gave to Stanton, in that expressive word "stick." —Herald of Health.

WILL-POWER IN SICKNESS.—Had Mrs. Dombey only "made an effort," she would not have died. But, poor creature, she was so impatient, so listless, so effortless, that soon as ever her breath began to show signs of leaving her, she resigned to what she regarded as the inevitable; and, as a reporter would picturesquely say, turned her toes to the daisies. When her windpipe became obstructed, she should have jumped up, coughed, jocularly remarked "never say die," and perhaps she would have lived to this day. She chose, however, the more serene and becoming course of conduct, and slid down into the grave. Time and time again people have, when on a bed of sickness, come up to a point when they might easily have died, only that they were determined to live. They have set their feet, as it were, on a trap-door that covered a dark hole, but rather than sink into the hole they have summoned up a deal of courage, made a leap and passed the fatal spot. A little courage and will-power at such a time as this is worth as much as life itself, because it will often be the means of saving life. —Herald of Health.

DEATH FROM PRICKING A SORE.—Recently a young married lady of Albany died in the Adirondacks under circumstances of the most singular nature. Before going out driving she pricked with a brass pin a cold sore on her upper lip, and rubbed it with camphor. Before she reached her hotel her lip commenced to swell, and before night her face was swollen to an abnormal size. Her husband was telegraphed for and arrived before the unfortunate lady died, but she could not speak to him, such was the condition of her face. Erysipelas had set in of the most virulent type, and death resulted within 48 hours.

FRUIT IN TIN CANS.—The English authorities are taking active cognizance of the dangers to which consumers may be exposed by using food contained in cans or boxes soldered in the inside and made with other than refined sheet tin. The French canneries have been prohibited by their government from soldering their cans inside, and also from using any but refined sheet tin. It has also been decided, in order, not only for the purpose of protecting the public health, but so that French trade may not be put on an inferior footing with foreign competitors, that all cans imported into France which do not comply with the new regulation will be detained by the customs authorities.

TO REMOVE A FINGER RING.—Thread a needle with a strong thread; pass the head of the needle, with care, under the ring, and pull the thread through a few inches toward the hand; wrap the long end of the thread tightly around the finger, regularly all down to the nail, to reduce its size. Then lay hold of the short end of the thread and unwind it. The thread pressing against the ring will gradually remove it from the finger. This simple method will remove a very tight ring without difficulty.

## DOMESTIC ECONOMY.

SOUP.—Cut in small pieces one pound of good beef; cover with cold water, and boil gently for three hours; let it stand over night; remove all the fat; bring to a boil, and add one can of lobster, cut fine. Prepare one cauliflower, sliced; cut the corn from one dozen ears; break in small pieces one quart of butter beans; slice one onion; cut fine 3 or 4 radishes, and add all to the soup, with one whole green bell-pepper, one half-teaspoonful of black pepper, one teaspoonful of salt. In one hour add one quart of tomatoes sliced. When tender, carefully remove, without breaking, on a skimmer, the bell-pepper. Simmer the rest four hours longer. Add no more water before the tomatoes are put in than necessary to keep from burning; after they are in, none will be needed. Half the above quantities can be used. Some like potato with the other vegetables. Add salt to taste before dishing. A little rice can be used, if liked, in the soup.

PEACHES A LA CONDE.—Cut in two, blanch in syrup, and peel eight large peaches; drain them on a hair sieve. Wash a pint of rice; put in a saucepan with three pints of milk; boil; add two ounces of butter, six ounces of sugar, and lemon peel; cover, and cook half an hour; remove the peel; add four egg yolks, and mingle well. With part of the rice make a dozen small, peach-shaped croquettes; dip in beaten eggs; roll in fresh crumbs; smooth nicely; fry light brown; drain on a cloth, and roll in powdered sugar. Dress the rest of the rice on a dish; arrange the peaches in a dome-shaped form upon it; ornament with fancifully-cut pieces of candied angelia and citron, Malaga raisins and almonds. Reduce the peach syrup, until pretty thick, with a glass of Madeira wine and four tablespoonfuls of peach marmalade. Pour over the peaches; surround with the croquettes, and serve hot.

HOMEMADE ROLLS.—Put two quarts of sifted flour into a deep dish, rub a half tablespoonful each of butter and lard into the flour, make a well in the center and pour in a pint of cold hoiled milk; stir in enough flour to make a thin batter; then mix in a half cup of good homemade yeast, a half cup of sugar and a little salt. Let become light, knead down, let rise again, then mold; roll one-fourth inch thick, cut into rounds with a cake cutter; put a little melted butter on one-half and lap nearly over on the other. Place on the pan nearly an inch apart.

COCONUT CAKE.—Take the whites of five eggs, one small cup of sweet milk, one cup and two-thirds of another of granulated sugar, two-thirds of a cup of butter, one teaspoonful and a half of baking powder, about three cups of sifted flour; flavor with almond extract; bake in layers. Beat the whites of two or three eggs to a froth; add pulverized sugar enough to make rather thin frosting, and put between the layers; on this scatter coconut; put on enough to make a nice layer. For the top and sides of the cake the frosting should be a little thicker.

WHITE SPONGE CAKE.—In order to make white sponge cake, one has only to leave out the yolks, and use the proportion of eggs needed, entirely of whites. Take two pounds of pulverized sugar, two pounds of whites of eggs, one and a half pounds flour, and the gratings of the yellow rind of one lemon, or a drop or two of lemon oil, or a teaspoonful of lemon essence. Beat the eggs to a staunch froth, then add the sugar, then the flour, and last the flour. Bake in buttered pans, and in a moderate oven.

PLAIN STEAMED PUDDING.—Two cupfuls of sour milk with some cream in it, three cupfuls of sifted flour, one-half cupful of finely chopped suet, a little salt and a large teaspoonful of soda dissolved in a little hot water. Stir the milk into the flour, beat until free from lumps, add the suet and salt and at the last moment heat in the soda. Steam two hours. Eat at once with a hard sauce—sugar and butter beaten together and flavored.

DELMONICO PUDDING.—A quart of new milk, three even tablespoonfuls of cornstarch dissolved in a little cold milk, the yolks of four eggs, six tablespoonfuls of sugar. Heat the milk, add the sugar, then the starch, and last the beaten yolks. Flavor, pour into a pudding dish and bake in a slow oven (the top must not brown) 30 minutes. Have the whites beaten stiff, sweeten, flavor and spread over the pudding. Return to the oven and let it just brown.

APPLE BAKED PUDDING.—Pare and core six tart cooking apples and place in a buttered baking dish. Pour over the following batter: A pint of milk, two beaten eggs, a little salt, two teaspoonfuls of baking powder sifted with flour enough to make a batter thicker than for pancakes.

MUSH MUFFINS.—Cold mush is not a very promising mixture to the eye, but when thinned with milk and thickened with a little wheat flour and eggs, in the proportion of four to a quart, it makes very good muffins.

PUFF PASTE.—An easy way of making puff paste is to mix the flour with three-quarters of its weight in butter, and milk enough to make it easy to roll. It should not be touched with the hands.





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## The Week.

The season advances. Already the snows have blown about the foothill towns and the frosts have come thick and fast upon the lowlands, shriveling the vines of tomatoes and cucumbers and tending to shorten the season of the canner and pickle maker. The north wind has begun to make his charges against the southern gales, and his signs will ere long be washed out by the rains which will accompany the southern forces, for it is said

The south wind never dies indebted to the norther.

Already the new growing season has begun in some interior districts where the recent rains were heavy. Colusa county reports the volunteer in growth and expresses the fear that the present moisture may not be enough to hold the plant until the coming storms. There is always this danger with early rains, but there are certain feelings which assure the sensitive and prophetic soul that rain will not be long delayed.

If all goes well we shall have an enlarged issue of the PRESS next week in which matter pertaining to the plowing, planting, and seeding season will be presented. We hope every reader will send us some note of experience which may be of interest or assistance to others in the doing of autumn or early winter work. Any items concerning plows or plowing, cultivators and cultivating, seeds, seeders and sowing, plants and planting—in short any paragraph with a—ring or a—sting to it will be well received.

The low stage of water on tributary streams of the Yellowstone, has prevented the floating down of large numbers of ties cut for the Northern Pacific. The extension of the road up the valley has been delayed in consequence.

## Ocean and Rail.

This issue which we have frequently mentioned as approaching, is drawing nearer day by day. It is now announced that the Southern Pacific will be completed to New Orleans next July or August; that the people of Galveston have agreed to improve their harbor, and that when this is done a branch of the Southern Pacific will take off at some convenient point and find its terminus at Galveston. It has been reported that the managers expected to take our wheat to the Gulf of Mexico and thence ship it to Liverpool. The latest authoritative statement on the subject is one given to a reporter last week by Charles Crocker, the head of the enterprise. He said:

It's too soon yet to talk about rates, but one thing can be put down as certain—we are going to carry the wheat. We don't say how much we are going to carry it for, because we are not ready yet to carry it. When we are, we will talk, and talk loud. The business of the road will be conducted as is any other business which the managers seek to make successful, on business principles. A business man buys his goods as cheap as he can and sells them as dear as he can. That's business! The man who tries to "run" it in any other way won't be long in the business.

Mr. Crocker thus gives notice that they propose to carry wheat for the money they can make out of it, which is all right. Then his intimates that they will make as much money as they can out of it, which is certainly to be expected. Now, as we have often remarked before, this enterprise of opening a new route for wheat is commendable, and will, we trust, prove remunerative to those who are carrying it out. They are entitled to fair reward for their effort and enterprise. But Mr. Crocker says, that like any other business venture, this one will be carried on for all there is in it. As the merchant sells for as much as he can get, so it is to be inferred the railway will carry wheat for all they can get.

Herein lies the danger plainly. Let Mr. Crocker get his business-like railway at work, "buying as cheaply as possible," i. e., carrying the wheat at first as low as ships cannot afford to touch it, and afterward "selling as dear as possible," i. e., getting as much as he can for the transportation, where will the wheat grower be? The railroad will continually menace the ships and prevent their coming this way for wheat, for they will understand that if they come to compete for the high rates which will prevail, the railroad will drop its charge to the low price at which it "bought into the business." It seems to us that this is a fair inference from what Mr. Crocker has to say about a railway conducted on business principles.

As we have said before, the enterprise toward the gulf is commendable, and, used for the general good, will aid greatly in building up and developing the Pacific coast. But it is highly essential that there should be other establishments in the "business" of transportation. It is quite to be expected that foreign ships will hardly risk the competition of the railway which has such dropping propensities, especially as there is little which the ships can bring on their voyages to this port. But if the capital of the coast should be enlisted in home-built ships, there would be something which could be relied upon to stand in constant and healthful competition with the rails. It is possible that this present local agitation of the subject of ship-building may effect something, and if so, one can rejoice without hesitation at the rapid progress and zeal of the railway projectors.

At the last meeting of the Pacific Social Science Association in this city an essay was read by Hon. C. A. Washburn, ex-Minister to Paraguay, on "The Restoration of American Commerce on the Seas." He recommended abolishing the navy of our country, which he characterized in unmeasured terms as an utterly useless cause of expense, and, in its place, substituting private ships and lines built in this country with such Government aid as may be necessary for their successful establishment, the vessels to be built in this country and so constructed that they may readily be converted into war vessels in case of our becoming involved in war with any naval power. The average appropriation for our navy since the war, except for the last two or three years, had been \$22,000,000 per annum. The plan he proposed was, dismissing the term subsidy, to let Congress make the usual appropriation for the navy, and let only one-half of it be spent by the Secretary of the Navy in keeping up the old-fashioned, ornamental and so much of the useless navy as could be kept afloat with that sum. The balance he should be authorized to spend in a way calculated to build up a merchant marine by private hands, of vessels for commerce in time of peace and for war in time of war—fast and destructive craft. These steamers should be under the control of the Secretary of the Navy, as a part of the naval force should be sailed by naval officers, who now do really nothing for their salary, and it should be a condition that they be so constructed that they might readily be converted into vessels of war, and in case of war, be taken for such uses at their actual value.

This is an interesting proposition. Marine experts say that it is not possible to build a vessel fitted to act as a warrior and a merchant. Of that we do not know, but it would be fair to presume that inventors could bring out some kind of a craft which could carry guns and wheat, and if need be the guns could be made of wood so that they would be light. But we are not expert in marine affairs and refrain from further suggestion.

At the same meeting, C. T. Hopkins presented statistics showing that during the last three months 120 English ships have cleared from this port, carrying cargoes on which the freight amounted to \$3,443,355. Five ships could be built here for \$40 to \$45 per ton, and notwithstanding the advantages of iron ships, could be built in California, and would pay for the building and running. The railroad monopoly had announced its intention of carrying wheat lower than ships do. Their object was to run off the foreign fleet now carrying our wheat, and when that is dispersed they can fix freights at their own figure, and the farmer will be at their mercy. The only way to avert this was to have a home-built fleet. Such a fleet could be built and make 20% to 30% per annum, and would effectually protect the farmer from extortion in European freights.

This is about the present situation. We like ships and rails so well that we cannot spare either of them.

## Treatment for Thistles.

In a recent issue we had a letter from a reader about the need of rising as one man and putting down the thistle evil, which seems to be advancing. We said then that the thistle which we see most of in this State is not the worst thistle in the world, but it has been reported once in a while that the true Canada thistle had taken root here. We have never seen it, and we rather hope it may still be absent. However, if it has come, it should have a basty and a warm reception. Perhaps the best place to hear of a man's weak points is to go to his own town and start the tongues of his neighbors. As with men so with thistles; hence we go to Canada to see what are the vulnerable points in the Canada thistle. Fortunately there is being held a farmers club meeting at the home of Wm. Rennie, the well-known Toronto seedman. Fortunately they have chosen for discussion a patriotic subject—the Canada thistles. We listen to Mr. Rennie's account of his experience with the thistle, in which he says that, when he came on the place in the spring he found it as full of thistles as it could be. The members of the club had that day walked over a part of his fallows where there was not a single thistle to be seen. He had killed every one of them by repeated cultivating, as he would afterwards explain. He and his gardener, Mr. Burgess, had started experimenting with thistles; had found that a dense shade would kill them; also that stripping the large leaves off would kill them, but that merely cutting out the tops would not. As the result of the experiments he had become fully satisfied that three or four cuttings just under the surface was sure death to thistles. So he purchased a new set of shovel teeth for his cultivator and ran that over the field. It cut the thistles and left them standing; but in a few hours they wilted beautifully and dropped. In ten days they were up again and received another dose of the cultivator. This time the thistles grew again, but weak and soft, and one more cutting finished nearly every one of them. He expected that a crop of harley and clover would finish off whatever seedlings might spring from seed left in the soil. For thistle land from which a grain crop had just been taken, he would first go over the ground with a grubber to loosen it and give the weed seeds a chance to germinate. Then he would run his scuffer and cut off the weeds; let the seeds grow again and cut again. One of the greatest mistakes a farmer could make was to plow under land foul with seeds without doing something to germinate the weeds. He thoroughly believed that plowing was of no good against thistles. Besides, the saving effected by using a cultivator instead of a plow was immense. A man can cultivate three times as much as he can plow. So that even if plowing were as effectual as cultivating, which it is not, cultivating would be best.

RECLAMATION CONTRACT.—It is announced from Stockton, that adjacent to the southwestern boundary line of the city, Capt. Moss, formerly proprietor of the San Francisco Examiner, has a large tract of land, a portion of which has not yet been reclaimed. A contract has just been let to reclaim 2,400 acres by levees surrounding the whole tract. The contractors are to have a deed to one-half the land, and it is expected that the whole  $7\frac{1}{2}$  miles of levee will be completed in 8 weeks. The levee is to be 30 ft. at the base and 6 ft. high. Capt. Moss has also let a contract for reclamation of 900 acres, opposite Limestone Ferry, on the San Joaquin, on similar terms to the above, the work to be begun at once.

FRUIT IN MENDOCINO COUNTY.—N. Wagon seller, of Ukiah, who lately made us a call, is the pioneer fruit grower of his region, and he has a fund of richly bought experience concerning the success and failure of different fruits. He assures us that the apple, the pear, the plum and the gooseberry may be relied on to produce excellent fruit; but that the peach, the cherry, and other similar fruits do not succeed. The fruit impulse which is now general throughout the State has reached Mendocino, and the result will be the planting of many trees. Ukiah now thinks she hears the snort of the coming iron horse and the anticipation is pleasant.

## The Debris Committee.

The committee appointed at an open meeting of the citizens of San Francisco to visit the debris districts and report upon their observations is now in the field and at its work. The committee is representative of our business interests and manufactures. It consists of W. N. Hawley, Chairman; James A. Gordon, Secretary; Wm. Blanding, J. Cerf, Moss Heller, J. S. Taher, C. L. Taylor, James B. Stetson, Irving M. Scott and P. B. Cornwall. Proceeding first to Sacramento the committee was met by a committee of citizens from Marysville, representing the Anti-debris Association, composed of N. D. Rideout, Mayor Stone, Dr. Rodgers, C. E. Sexey, Peter Decker, C. H. Hampton and Thos. Dougall, who are to point out to them the effects of the pouring down of continuous torrents of slickens on the valleys.

On the way to Marysville the train ran for several miles on a side track, where the regular track is being raised seven feet by a large force of men. That was on the Bear river bottom, and the track across the river bed has already been raised 15 feet, all necessitated by the raising of the river, changed by the debris, which whitened the country for miles around. Reaching Marysville, the committee was shown that the town, which was built on the highest ground in the valley, is now in a hollow. This was explained by the fact that the levees had protected the town sits from debris deposits, while the surrounding country has, year by year, been gradually raised, until the river itself is now on a level with the streets it was originally 25 feet below.

On Monday evening a public meeting was held at Marysville. Mr. Sexey, President of the Anti-debris Association, said: "The farmers in this section are looking forward to this visit of the San Francisco committee with very great interest. They have appealed so often, and always in vain, that they expect us to make an active showing this time, which will result in some measure of relief to them, failing in which they must desert their homes."

The plan of operation, as outlined in Marysville, on Monday, was as follows: Tuesday, the committee go down to the west side of the Feather river to Nicolaus, inspecting the protection works along the banks; Wednesday, down the east side of Feather to Bear river and Whasland, inspecting devastated country; Thursday, over in Butte county, inspecting the country comparatively uninjured, but claimed to be in rapid process of ruin by debris; Friday, along the north side of the Yuha to Smartsville, and into the mining country, showing what they claim to be the cause of the injury.

The San Francisco committee will then proceed over the mining country to Nevada City, returning to San Francisco Sunday by way of Colfax. In the evenings the committee will meet farmers and other interested parties, for an interchange of views. This will be the most determined effort to get the exact facts of this great question before the public the anti-debris men have ever made. As full a hearing will be given to the miners.

This visit of citizens of San Francisco to the debris regions is a movement of great importance, and we trust nothing may occur to interfere with a full sight of the land and its troubles.

## The Industrial Character of the Fairs.

There has never been so general a demand for the improvement of our agricultural fairs as now. The leading journals in all the places where the large fairs have been held so far, have spoken forcibly about the lack of representative quality in the exhibitions which have been held, and demand that the industrial value of the fairs shall be increased. This is a hopeful indication, for the popular demand must in the end obtain what it seeks, especially as the societies are now in direct charge of the State. Let it then go upon record thus early that the people demand a better class of fairs, and it will give the directors an opportunity to see what they can do in this way of improvement during the coming year.

The Santa Clara and San Mateo District fair, which was held at San Jose last week was, according to all reports, a great improvement over recent exhibitions in that district, and creditable to the new board of directors, who went into office last summer. But it still fell far short of the possibilities of a fair in the rich region adjacent to the lower arm of the bay. The San Jose Herald says:

We have had no agricultural fair; we have had no exhibition of the material wealth and prosperity of our country; we have had no competition between our home factories; no exhibits that are calculated to give a stranger the slightest knowledge of the resources of our country. It is true that the displays have been better by far than on previous years, but this is a poor compliment indeed. We hope that the present society will see that they can attract the public to their grounds with something besides horse racing, and at a trifling expenditure of money, that they can fill the pavilion with visitors without sporting men, gamblers and horse racing, and will be persuaded next year to give more encouragement to the material interests of the country.

This now seems to be the "universal language" throughout the State, and if there does not arise a truer industrial exhibition than has been usual in California, we shall be surprised.

THE ladies at Ashland, Oregon, were so anxious to have a saloon closed that they lately asked the proprietor his price, and then sat to work and raised the necessary sum by subscription, and closed the place up.



## Scale Insects in California.—No. 2.

We conclude in this issue the showing of scale insects made by M. Cooke, Horticultural Officer, in his pamphlet, to which we referred at length last week:

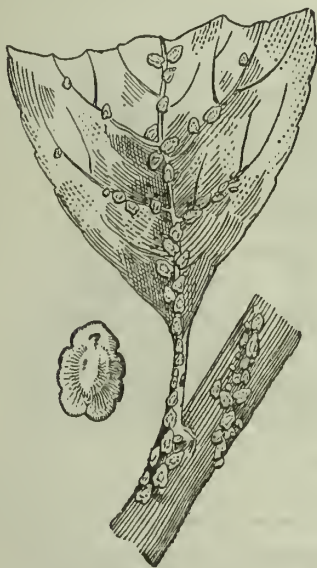
Broad scale or soft orange scale: *Lecanium hesperidum*, Linn.—This scale (Fig. 1), is one of the largest of the genus *Lecanium*, that is found on fruit trees. Its food plants are principally citrus trees, and it can be found on the young growth, leaves and fruit of trees infested. A few species of deciduous and ornamental trees are also infested by it.

Description of scale and insect: Scale ovoid; a little wider at one end than the other; length from one-twelfth to one-seventh of an inch; color, dark brown on convex part, and a lighter brown surrounding margin; it has two indentations on each side, and one on posterior end; eggs, from 75 to 125 under each scale. Larva: Length, about one-ninetieth part of an inch; color, yellowish, slightly mottled; seven-jointed antennae; two anal setae as long as body. The viscera can be readily seen through the scale while maturing; color of viscera, yellowish red; male, winged.

To destroy this scale use one pound of commercial concentrated lye, or one and one-third pounds of commercial potash, dissolved in two gallons of water. Wash or spray with a solution of the above proportions before pruning. After pruning and before the tree puts forth the fruit blossoms, wash or spray with a solution, containing same amount of concentrated lye or potash as above, dissolved in three gallons of water. If a third washing is required during the summer use whale oil soap and sulphur mixtures.

Oyster-shell bark louse, or common apple scale: *Aspidiotus conchiformis*, Gmelin; *Mytilaspis pomitortica*, Riley.—Description of Fig.

Fig. 1.



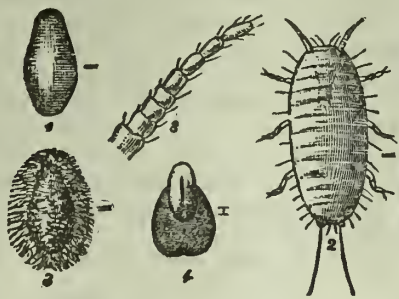
2: 1. Egg. 2. Young insect (larva). 3. Appearance of secretion as it hardens and forms shell over body of insect. 4. A form of the scale before it reaches maturity. 5 and 6. Appearance of insect after casting skin, limbs and other appendages. 7. Scales (cover) at maturity. 8. Antennae. All of these figures highly magnified. Description of insect, etc.: Eggs, number under each scale, 30 to 75; length, one one-hundredth of an inch; form, irregularly ovoid; color, snow white; when near hatching, yellowish. Larva: Length of body one one-hundredth of an inch; form, ovoid; three times as long as wide; color, pale yellow. Antennae, sometimes six-jointed, but generally seven-jointed. Anal setae, two, about two-thirds as long as body. Male insect (perfect): Length, one forty-fifth of an inch; color, flesh-colored gray; abdomen and thorax, about same length as seen from above; wings, nearly transparent. The last joint of the abdomen narrowed into a large tubercle bearing four bristles on the under side, and sending forth the genital armor in the form of an awl-shaped stylet as long as abdomen. This scale (shown life-size in fig. 3) can be found on nearly all the deciduous fruit in districts infested. (Use remedies A. page 43.)

Cottony cushion scale: *Icerya purchasi*, Maskell.—This species of scale insect has infested an orchard in Santa Barbara county to a serious extent, and can be found on the orange, lemon, fig and apple trees. If allowed to spread from the locations already reported, we have no hesitation in stating that it can only be exterminated at an immense outlay of labor and money. We are informed that this species of scales is to be found in a garden in Los Angeles, and that it has done some damage to ornamental trees at San Rafael, in Marin county. Our opportunities for investigating the natural history of this insect have been limited; but, from what we have learned of its habits, etc., we advise that whenever this pest appears it shall be exterminated, regardless of cost.

Description: Fig. 4. natural size; length, about one-half of an inch; greatest anterior width, about one-fifth of an inch; narrowing gradually posteriorly; the anterior end is of a denser color, and represents the matured insect (or larva); the rest of the body is composed of a cottony excrecence of a yellowish white color and marked with longitudinal corrugated bars, giving the insect somewhat the appearance of a beetle, as seen on the tree; in the cavity of the cottony

mass are deposited the eggs, from 200 to 500 in number; color, pale red; form, elongated ovoid. Larva (Fig. 5): Length, one twenty-fifth of an inch; body, red; long bristling hair growing from posterior edge; two antennae, color, black; six-jointed; apex clubbed, with long hairs growing on club joint; six legs, color, black, and spined. Larva, matured (Fig. 6): Nearly one-fourth of an inch in diameter; ground color, reddish brown with yellow and white cottony markings, with long hairs extended. For general appearance of insect at maturity see Fig. 4, and for larva at maturity, see Fig. 6. Fig. 7 represents this pest on a branch. This insect is accompanied by smut on the branches and foliage, as described in the article on black scale. Male, winged; color body, red; long an-

Fig. 2.



tennae; wings, color, light brown. (Use remedies given farther on under red scale).

Red scale (Los Angeles): *Aspidiotus aurantii*, Maskell.—This species of *Aspidiotus* has infested several citrus orchards in one district of Los Angeles county to a serious extent. It has been claimed by residents of other districts of the county, that it is only to be found in the locality referred to, but such is not the case; we have found it in some other districts of the county, though not to any serious extent as yet. It has lately been found at Marysville, Yuba county, on a few trees. Only the strictest attention to quarantine rules and regulations will keep it from spreading to every citrus orchard in this State.

Description of scale and insect: Scale, ma-

Fig. 4.

Fig. 5.

Fig. 6.



tured, one-twelfth of an inch in diameter (in a few cases it exceeds this); color, center yellow, margin light brown; eggs, from 20 to 40 under each scale; form, ovoid; color, bright yellow. Larva: Length, one-hundredth of an inch; form, ovoid; color, bright yellow; antennae, six jointed. Female insect, color, yellow (see Fig. 8). Male insect (perfect), winged (Fig. 9), about one forty-fifth of an inch in length; wings clear, nearly transparent; color of body, amber yellow, with slight dark markings; anal stylet appendage nearly as long as body. It feeds upon the foliage (Fig. 10), and fruit (Fig. 11), covering the fruit to such an extent as to unfit it for sale in the market.

Remedies for Cleaning Citrus Trees Infested by Scale Insects and Smut.

To procure the aid of nature to assist in exterminating the scale insects, smut, etc., infesting citrus trees, should be the ambition of every citrus grower.

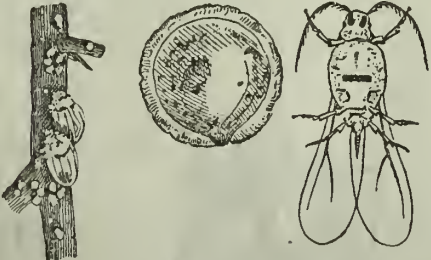
First.—At a season of the year before the trees bloom, make a solution of one lb. of commercial concentrated lye to three gallons of water, and thoroughly wash or spray all the foliage of the tree. If practicable the washes should be applied at a temperature of 130° Fahrenheit.

Second.—After using this wash as directed, thin out the

Fig. 7.

Fig. 8.

Fig. 9.



branches by pruning, so that the air and light may have free access to the foliage and fruit on the tree. The branches left on the tree should not be allowed to reach near the ground.

Third.—All prunings and foliage taken from the trees should be destroyed as soon as possible, then repeat the washing or spraying as above.

Fourth.—About three weeks after pruning, or as soon as the larva of the insect appears, wash or spray with an alkaline wash made from a soft soap containing at least nine per cent. of potash. This soap, when made, mixed with 25 per cent. of its weight with flour of sulphur. One lb. of this mixture to each gallon of water used for washing trees.

Fifth.—The fourth washing may not be necessary; if it should be, repeat the above, as it will not injure the foliage or the young fruit. Mr. G. M. Holmes of Orlando, Florida, writes that for the destruction of a scale insect *Chrysomphalus ficus* (similar to the red scale), he had "been most successful in the use of a strong brine of salt and water applied twice, at intervals of two weeks. It is heroic treatment, and takes the leaves off, but the scale comes with them, and if done just prior to a growing season, they soon send out a luxuriant new growth and seem more healthy than before. I think if potash was mixed

with salt and water it would be an improvement, and I am going to use it in that way."

Sixth.—The solution recommended will clear the foliage, fruit and branches, of scale insects, smut, etc., if properly applied.

Seventh.—The foliage should be thoroughly saturated in the first washing, so as to remove the smut.

Eighth.—For immediate extermination of the red scale, *A. aurantii*, on citrus trees, we think if the foliage be thoroughly washed or sprayed with a strong brine of salt and water, to which add one lb. of concentrated lye to each three gallons of brine, and, if necessary, repeat the washing as directed by Mr. Holmes, it will take off all the foliage and scale, which should be carefully gathered and destroyed by burning. This is certainly worth trying. An orchard can be cleaned in this way by operating on the trees most exposed to the winds, etc. It is preferable to the method of cutting away all limbs of the tree above the crotch, as practiced by some growers.

Scales found on elm and locust trees, etc.—We have found that the elm trees (especially

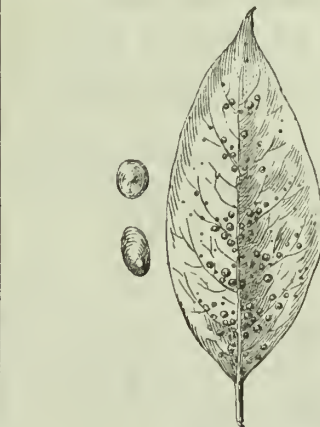
Fig. 3.



the cork elm) and locust trees, in the City Hall park, in Stockton, and also many shade trees on the streets, are infested by a large scale (*Lecanium*). It is also reported that some orchards on the islands below Stockton are infested by scales. Those who own fruit trees cannot be too particular in watching for scale insects, as a great deal of the damage done by them can be attributed to their introduction on ornamental trees. The authorities of the City of Stockton, or the Supervisors of San Joaquin county, should attend to the matter of abating the nuisance.

Description of insect and scale: Scale (Fig.

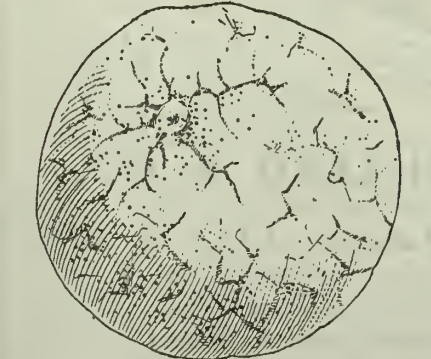
Fig. 10.



12), one-eighth to three-sixteenths of an inch in length; form, oval; color, brownish black; eggs, from 200 to 300 under each scale; color, yellowish white. Larva, one-ninetieth of an inch in length; scalelike; form, elongate ovoid; antennae, seven-jointed. These insects may be destroyed by washing and spraying with the potash solution.

Mealy bug: *Dactylopius adonidum*, Linn.—This species of the genus *Coccides* may be said

Fig. 11.



to be a universal pest of the hothouse. It is also found in the gardens, nurseries, and citrus groves.

Description: Male insect has two long filaments protruding from anal segment rings, instead of the anal stylet in some other species described in this work; length of insect, from one-twentieth to one twenty-fifth of an inch; wings, nearly transparent; color of body, brownish yellow. Female, full grown (Fig. 13): length, about one-seventh of an inch; color, yellowish white; two antennae; two anal setae, nearly half length of body; a fine, mealy-like substance covers the body, hence the name. Larva, when hatched, about one-fiftieth of an inch in length; color, yellowish white. Eggs deposited on leaves, etc., and covered by a cotton-like substance.

This pest is very prolific, and brings forth its young, or broods, at all seasons of the year. Remedies which destroy other species of scale insect have no effect on the mealy bug. How-

ever, the danger of its spreading is such that it should be exterminated wherever found, regardless of cost.

Remedies: Mr. Ashmead writes: "The usual methods seem to have no effect. I would, therefore, recommend kerosene, diluted with three parts of water. This should be syringed over the plants infested. Great care should be taken to shake the wash well before applying it, for unless this is done the oil will rise to the top of the water, and wherever pure kerosene is ejected upon the tree the leaves and twigs are sure to die."

To obviate the trouble of shaking, etc., of the wash recommended by Mr. Ashmead, we recommend one quart of kerosene mixed with three-fourths of a pint of any animal oil (Neats foot oil, lard oil, or whale oil). In three quarts of water, dissolve three-fourths of an ounce of borax. Then mix all together, and a solution

Fig. 12.



Fig. 13.



will be produced, thoroughly mixed and ready for use.

Scale Insect on the Norfolk Island Pine: *Uthelia araucarie*, Comstock.—This species of scale insect is only found on the Norfolk Island pine (specimens from Santa Barbara). Description: Scale, one-sixteenth of an inch in diameter; form, irregularly round; color, white. Larva (Fig. 14): Length, about one one-hundredth of an inch; color, light amber; two antennae; two long anal setae—appears to be covered with very fine, armor-like plates or scales.

Fig. 14.



Female: Color, yellow. Male (Fig. 15): Color, dark brown; wings nearly transparent; antennae ten-jointed; two long filaments protruding from anal segments, instead of the anal stylet in some species described in this work.

To destroy the scale: Make a solution of one pound of commercial concentrated lye, or one and a third pounds of commercial potash to each two gallons of water. Wash or spray thoroughly with this solution before pruning. For second washing, if before the trees bloom, use same amount of lye or potash to three gallons of water.

A species of scale insect of the genus *Aspidiotus* is found on the currant bush, and also on

Fig. 15.



the grapevine; by use of this wash the pests can be destroyed.

We find in various sections of the State, that many varieties of trees and plants, such as the acacia, bay tree, manzanita, oleander, willow, osage orange, etc., are infested by scale insects, and nearly all belonging to the genus *Aspidiotus*. All such trees infested by scale insects should be thoroughly cleansed, by washing or spraying, as soon as the scale insects appear on them, with the last mentioned remedy.

AN AGRICULTURAL DEPARTMENT IN JAPAN.—The institution of an Agricultural Department by the Japanese government is announced. The matters submitted to it for consideration by the assembly of local officers charged with the development of agriculture in their respective provinces are reported to be—(1) Revision of the methods employed in preparing agricultural statistics; (2) exchange of seeds between the different prefectures, and their transport; (3) supply of manure; (4) establishing a society for investigating fishery affairs, and the protection of marine productions, fish, seaweeds, etc; (5) subject of rewards granted for meritorious conduct calculated to improve agriculture.

VARIOLA IN POULTRY.—Prof. James Law, in the *Bulletin of the National Board of Health*, states that in Europe and Hindostan variola is so common in pigeons and poultry as to constitute a veritable plague.



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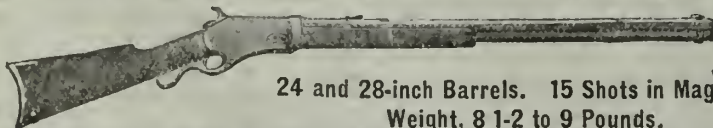
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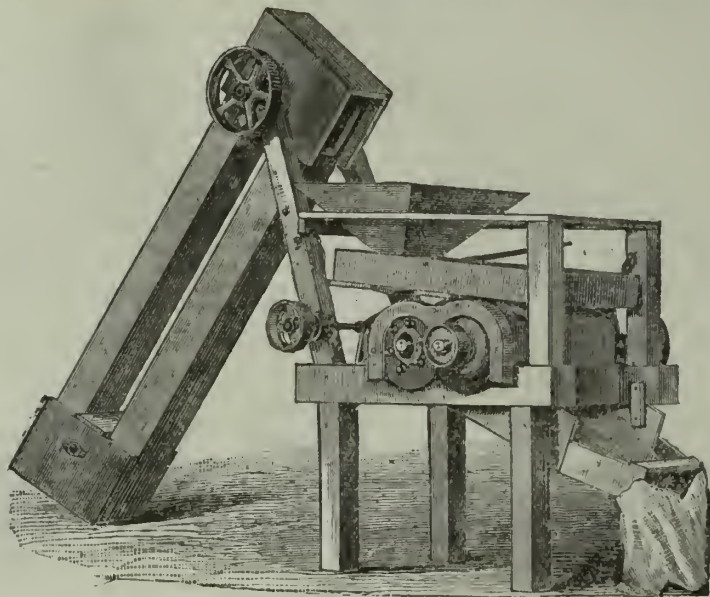
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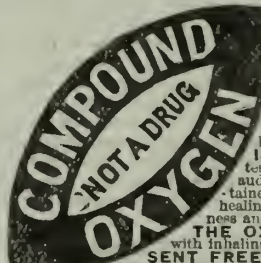
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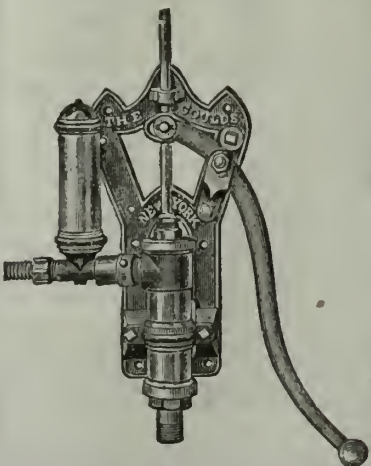
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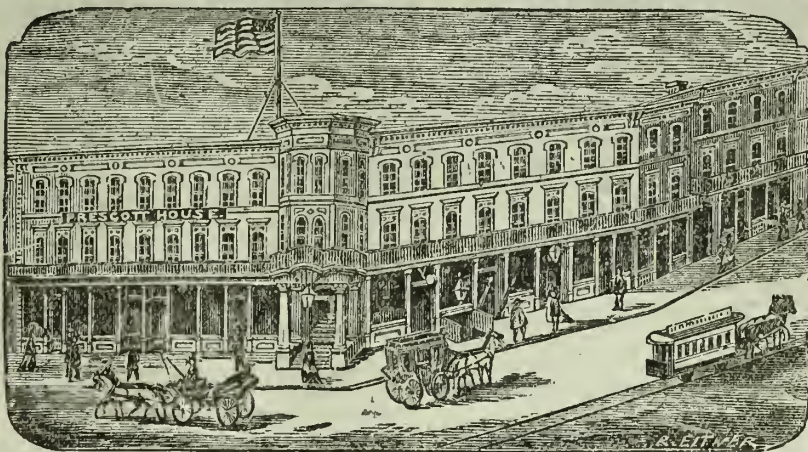
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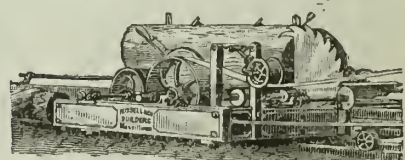
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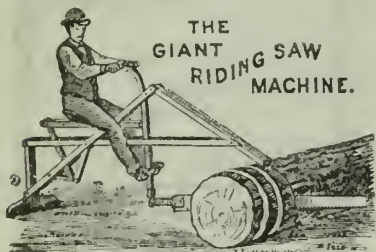
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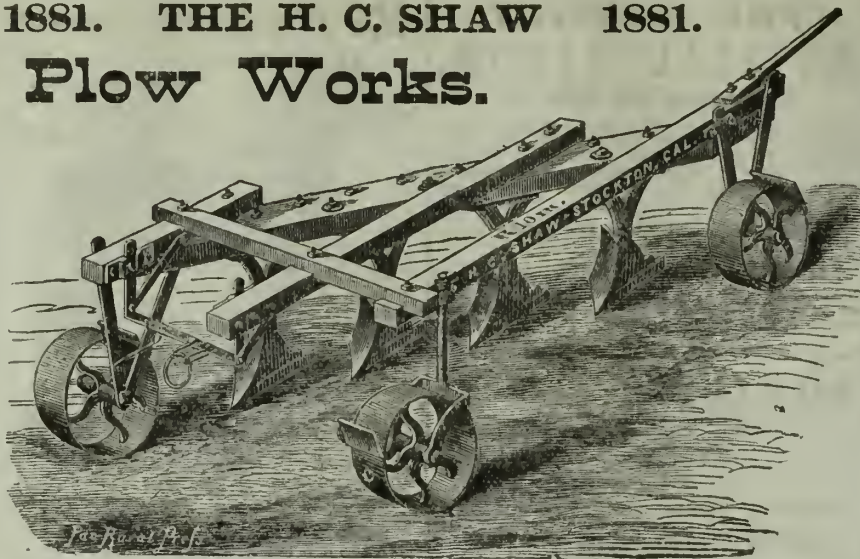
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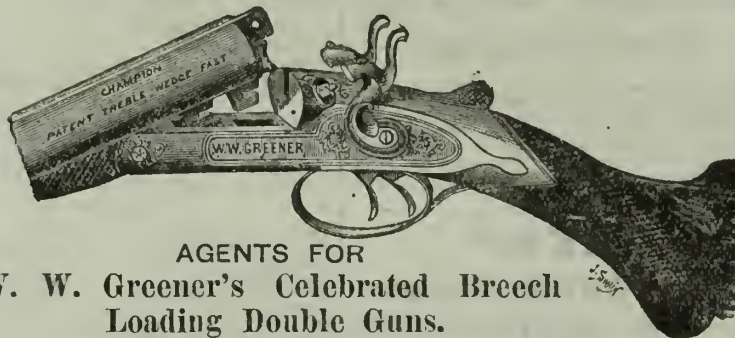
## THE STOCKTON GANG PLOW,

Over 2,000 of H. C. Shaw's Improved Patent Stockton Gang Plows Sold in Five Years

Caloon and Gem Seed Sowers, Harrows, Etc. Extras for all Plows and Machines I have sold for the past TWENTY YEARS in this valley. Send for Circular and price list. Always on hand a full stock of Single Plows. Have used these Gangs for over 15 years. Now using 70. Adapted to all soils.—JOHN W. JONES, Atlanta, San Joaquin Co., Cal.

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## W. W. Greener's Celebrated Breech Loading Double Guns.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS. Ammunition in quantities to suit. A liberal discount to the trade. Price List on Application

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821 Kearny Street, - - - - - San Francisco, Cal.

SOLE AGENT FOR THE PACIFIC COAST FOR

## THE BALLARD RIFLE, AND MARLIN'S NEW BALLARD REPEATER.



A FULL LINE OF WINCHESTER and KENNEDY, SHARPS, BALLARD, and REMINGTON RIFLES.

Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to suit. Liberal discount to the trade. Send for Special Price List for Marlin's New Repeater and Ladd's Improvement on the Kennedy Rifles.

SEND FOR 1881 PRICE LIST.

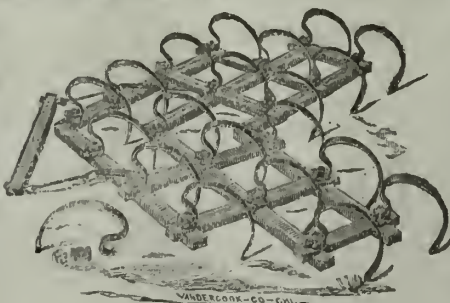
## THE PATENT IMPROVED SPRING-TOOTH HARROW!

The Best Harrow Ever Put in the Field!

The accompanying cut represents our Improved Adjustable Spring-Tooth Harrow

—the Latest and Best in the Market. It has all the good points and none of the defects of other Harrows. It is Very Easy to Adjust. It does not Trail.

The strain likewise on a spring tooth is often very great. If a tooth rests in a Wooden chair or seat it will soon wear the work loose; it cannot be held in place very long. This tooth rests in an iron chair and cannot wear, nor move sideways.



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ARTIFICIAL STONE.

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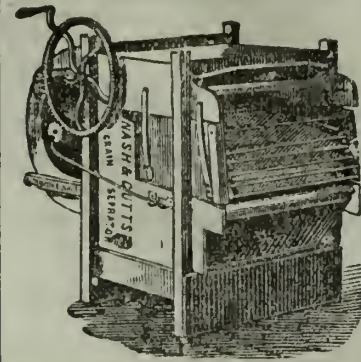
And Still We Take the Lead.

-THE-

## Nash &amp; Cutts' Grain Cleaner

Improved Again for 1881.

Five sizes, warranted to clean from 50 to 200 bushels per hour, perfectly. The fact that we have taken EVERY Diploma that has been offered by the State Agricultural Society for 11 years proves that we have the best.



OUR NEW WHEAT GANG,

Composed of perforated zinc and patent rolled wire. The zinc is not punched as of old, with all holes of a size, but they grow gradually larger as they reach the lower or out end of the Gang, thus allowing the wheat to pass through more readily. The patent rolled wire that we use is more instrumental to the efficiency of the cleaner than one would at first suppose; being rolled after it is woven, it is perfectly smooth, thus allowing Barley and Oats to run over more rapidly, while the Wheat being smooth will pass through readily, thus increasing the capacity both in speed and quality.

Notwithstanding the extra expense incurred by the purchase of this patent Wire and Zinc, the prices are reduced this season, thus giving the farmers the benefit of this new combination.

Farmers and Dealers are particularly cautioned against spurious imitations. Be sure that the one you buy bears this Trade-Mark: "THE IMPROVED NASH & CUTTS' GRAIN CLEANER." All others are frauds. See that it is manufactured by "H. D. NASH & CO., Sacramento, Cal."

We mention the above for the protection of our customers who want the GENUINE. Every Cleaner fully warranted. Prices at Factory.—No. 1, \$30; No. 2, \$40; No. 3, \$50. For further particulars address

H. D. NASH &amp; CO.,

906 K Street, Sacramento, Cal.

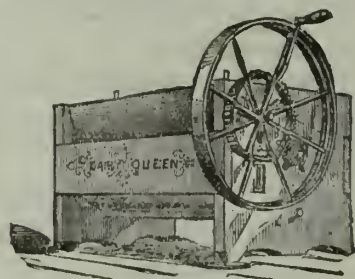
Sole manufacturers of "The Improved Nash & Cutts' Grain Cleaner" on the Pacific Coast.

Also we make a Cleaner to attach to Threshing Machines that will clean ALL any machine can thresh.

## "THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years study and experiment, by a practical dairymen. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars, address the Inventor and Sole Patentee,

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The largest and deepest milking herd of Holsteins in the world. 225 head, pure bred, mostly imported, males and females of different ages.

A Large and elegant stud of imported Clydesdale Stallions and Mares of all ages. Hambletonian Stallions and Mares of superior breeding. Personal inspection invited. Separate catalogues of each class, and milk records of cows mailed free on application. All inquiries promptly answered. State that you saw this advertisement in the PACIFIC RURAL PRESS.

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Growers, Importers, Wholesale and  
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FLOWERING PLANTS, BULBS, FRUIT AND OR-  
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Catalogues mailed to all applicants. Address

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**60,000 HALF-YEARLING TREES,**

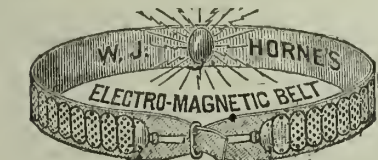
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For sale coming season, from one to three feet high, con-  
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My buds are taken from bearing trees and true to name.  
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Patent, Nov. 11, 1879.

Patent, Nov. 9, 1880.

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GUARANTEED ONE YEAR. BEST IN THE WORLD.  
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It is Superior to any Lini-  
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RINGBONE, SPAVIN,  
SWEENEY,  
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And OLD SORES, apply  
freely so as to blister, from  
three to five days in suc-  
cession, and in four or five days  
if not cured repeat as at first.

SPRAINS, STIFF JOINTS, BRUISES, WIND GALLS,  
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to blister. SADDLE SORES, CUTS, and all other sores  
where the skin is broken, mix the Liniment half and half  
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THE BEST!

AS A  
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We are safe in making the  
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curing the following diseases:

**RHEUMATISM,**

Apply freely to the parts af-  
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from 10 to 20 drops in from  
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3 times a day. **DIARRHŒA,** dose, as above. **COLIC,**  
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Price—Small Size, 50c.; Medium, \$1; Large, \$2.50.

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Manufacture the Well Auger that will bore any kind of earth—makes a well any size required—and is a perfect suc-  
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These Mills and Pumps are  
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THE BEST AND CHEAPEST PREPARATION FOR  
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The General Health and Condition of the  
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**Non-Poisonous.**

One Gallon (making 60 gallons of dip) is sufficient to  
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Sold by all Wool Commission Merchants in San  
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We call attention to following testimonial from **J. H. Kirkpatrick,** breeder of fine sheep:

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**C. E. WILLIAMS & CO., STOCKTON.** Gentlemen: I have  
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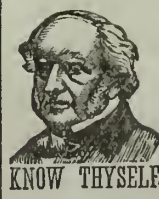
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Weight carried to the extremities of the Axles. Long,  
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Using the Celebrated "Davis Wheel." Took First Pro-  
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With Hardened Steel or Oliver Chilled Bottoms. Manufactured by the SAN LEANDRO PLOW COMPANY, at San Leandro, California.

In the above named implement is combined the

### Best Gang Plow Carriage Yet Made.

With the very best form of steel or chilled bottoms known to the trade.

The steel bottoms are in shape an extra reproduction of the celebrated John Deere Moline No. 7, 12-inch plows.

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The simplicity and neat appearance of the Carriage is unequalled and yet it possesses with but a single lever all the advantages claimed by the most complicated implements, with their numerous levers, spiral springs, cog wheels, racks, segments, etc., besides some very important ones that are peculiar to this alone.

1st. It will strike out lands simply by throwing the lever well forward.

2nd. It raises very high out of the ground (seven inches).

3rd. One wheel can be raised at any height above the other so as to plow at any depth desired.

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4th. The seat is high and comfortable and is placed on an easy spring.

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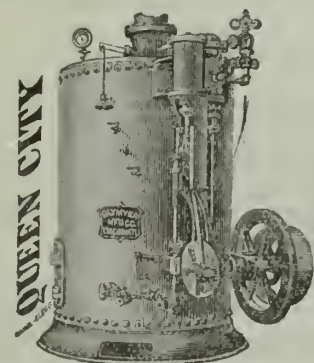
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VICTOR, GREAT WESTERN AND NILES' SUGAR CANE MILLS from Blymyer Manufacturing Co.



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Depot for Pacific Coast,

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## VINE CUTTINGS.

I SHALL RECEIVE EARLY IN THE WINTER, from Messrs. Brush & Son & Meisner, a carload—about 500,000—wild Riparian cuttings, the most approved at the present time in France for Phylloxera-proof grafting stock on account of vigor, adaptability to all kinds of soils, excepting very moist bottoms, and facility of rooting. Orders will be taken at reduced prices if received in advance of shipment.

I am also prepared to receive orders of the choicest French, Spanish, German, Persian and Hungarian varieties of cuttings and rooted vines, among them being, Grenache, Carignane, Matore, Folle Blanche, Sanvignon, Semillon, Cadillac, Folle Noire, Petit Pinot, Chausche Noir (or Pinot de Poitou), Chausche Gris, Black Burgundy, Cabernet and Malbec, Charbono, Trousseau, Merlot, Muscat of Frontignan, Orleans Reising, Johannisberg Reising, Sylvaner (or Franken Reising), Burger (so-called), Golden Chasselas, Rose Chasselas (so-called), Zinfandel, Malvoisie, Blau Elbling, Fehér Zecza, Verdelho, Verdel, Muscats, Emperors, Seedless Sultan, etc. Some of these varieties are scarce, and orders should come in early.

**CHARLES A. WETMORE,**  
111 Leidesdorff St., S. F.

70 All New Style Chromo Cards no two alike, name on 10 cents. Clinton Bros., Clintonville, Conn.

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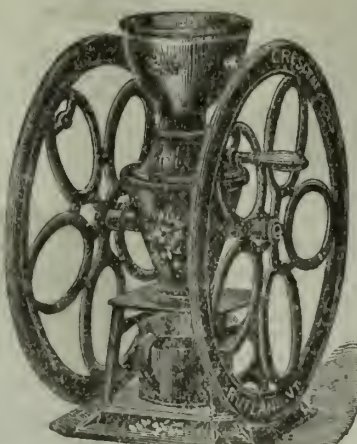
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All kinds Farm and Spring, Open and Top Bug-

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EXCELSIOR COFFEE MILL.

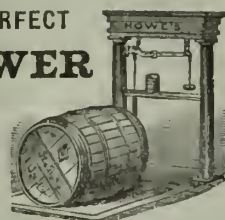


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TEN COMBINATIONS.

SIMPLE AS TO USE.  
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## PLOWS,

Both Gang and Single. Myer's, Napa and Dalton Gangs.  
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THE PIONEER IN MIXED PAINTS. Is prepared ready for im-

mediate use, and of any shade or Color desired. Any one who can handle a brush can apply it. It is impervious to our damp atmosphere, and is equally as good on Wood, Stone or Iron Work.

It does not Crack, Chalk or Peel Off, but retains for years that beauty of finish for which it is so justly celebrated.

Sample Cards of Colors, Testimonials and Price List furnished free, on application to

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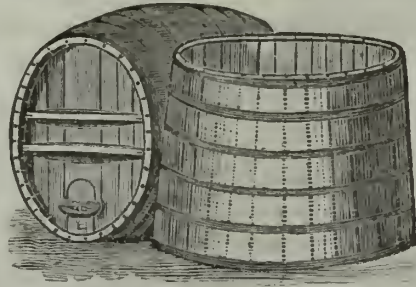
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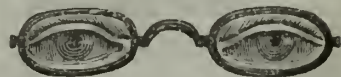
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FLOWING, SEEDING AND PLANTING EDITION—24 PAGES.

Volume XXII.]

SAN FRANCISCO, SATURDAY, OCTOBER 29, 1881.

Number 18

### The Water Garden—No. 1.

From irrigating ditch or windmill tank, or even from city hydrant, the chief material for a water garden is obtainable even in those parts of the State where the clouds are shyest workers. In other parts there are the springs and rills and brooks, which give increasing comfort to the water gardener. With a view of aiding our readers to a pleasant variation of their ornamental cultures, we have secured from E. D. Sturtevant of Bordentown, New Jersey, who is the leading propagator of aquatic plants in this country, some practical suggestions and some inviting deductions concerning the making and the charm of water-plant culture, also some beautiful engravings of the rarest water lilies, to ornament the discourse withal. Mr. Sturtevant's catalogue furnishes full information concerning the commoner varieties with which the water gardener would do well to begin.

Although water lilies may be cultivated in tubs, they may be grown to much greater perfection if allowed plenty of room, especially the larger-growing tropical species. Those who wish to cultivate a number of kinds and have complete success, should build a tank about 20 by 30 ft. and 2 ft. deep. If sunk entirely in the ground, it would be more easily protected from frost in cold climates. But it may be partially sunken, and the soil which is taken out used as an embankment around the outside, sloping it up to the top. I prefer that it should be sunken to the level of the surrounding surface. It may be built of either brick or stone. The bottom may be laid with rough stone, cobblestone or old brickbats, and grouted with cement. The walls should be nine inches thick, and laid in cement. If it is desired to grow *Nymphaea dentata* or *N. Devonensis* to full size of leaf and flower, then it will be necessary to sink a pit in the center, one ft. deep and four ft. square, to hold soil for them. Provide means for emptying the tank of water when desired; also, a waste pipe near the top for overflow. After the walls have been built and the bottom laid and grouted, the whole must receive an additional coat of cement. About four ft. from each end of the tank build a partition wall about 10 inches high. Bricks laid on edge will do, if laid in cement. These spaces can be cut in two by another partition. The compartments thus formed are for the purpose of confining the roots of the different kinds of *Lotus* within proper limits, and for planting out those kinds of *Nymphaea* which do better in such a position. The remaining portion of the tank can be taken up with pots and large shallow boxes, which will be movable at will. After the cement has properly hardened, fill the compartments and boxes with soil, and cover with an inch or two of clean sand. Fill the tank with water, and let it get well warmed before planting anything tender. As warm weather approaches, run a stream of fresh water in, for an hour or two each day, to prevent stagnation. When the surface of the water is covered with leaves, there is less tendency in this direction; and all that seems to be necessary is to replace what is lost by evaporation.

The lily tank must be placed in a warm and sunny position, for these plants will not do their best unless the water is thoroughly warmed. My own is on the south side of a

large viney. At the back is a border, in which are planted tall cannas, bamboos, grasses, caladiums, etc., which form a fine back-ground for the lilies, and give the whole a tropical appearance.

It may be asked, "Why all this trouble and expense? Why not grow the lilies in ponds with a bottom of natural earth?" We answer, that for the hardy kinds this is undoubtedly the best plan, and very fair success may be had in the same way with the tender kinds; but in a pond with a cement bottom the water is more readily heated by the sun, and retains its heat better.

The best soil for growing all kinds of aquatic plants in gardens, we have found to be good, rich loam and the best decayed stable manure, in equal quantities. It should be well mixed, placed in the tank, and covered with about an inch of good, clean sand, to keep the manure from rising; then let in the water several days

in occasionally, to prevent stagnation. Such a tank would need to be well protected from severe frost in winter. Aquatics may also be grown in the basin of a fountain, but they will not flourish if the spray is allowed to fall upon the leaves. Water enough to keep that in the basin fresh, may be allowed to run in, but no more, as that would lower the temperature too much.

The *Nymphaea Devonensis*, shown in the engraving, is pronounced by Mr. Sturtevant the choicest water lily in cultivation. Under liberal treatment it produces flowers from 10 to 12 inches in diameter, and leaves two ft. across—the plant having a spread of 20. If confined in pans, tubs, or boxes, the flowers are smaller, but otherwise just as fine. The color is a brilliant red, glowing by lamplight with indescribable color. One of the flowers would make a sensation wherever it has not been seen. The cut flowers sell at \$1 each. As they open

### Good Tools and Machines.

No subject is more important during the season of plowing, cultivating, sowing, harrowing, etc., than the consideration of the quality of tools and machines contrived for tillage. There has been most rapid progress during the last few years in the mechanics of agriculture; and California has made notable advances in this line of invention and manufacturing. In the matter of plows, for example, California has secured a class of implements peculiarly her own, both by influencing the ideas of Eastern plowmakers, and by the triumphs of her own mechanics. The California race of plows has been the outgrowth of her peculiar conditions of soil and styles of culture. For we have plowing to do where the loosened soil is almost

prone to roll down the sharp slopes and when the land as far as one can see is almost as level as the sea. We have plowing to do in all kinds of earth, from tough peat and tule roots to pasty adobe and to the lightest loam. We have areas where the teams could draw the plows straight forward all day without reaching a barrier and we have plowing to do where the encroachment of a few inches would ruin a tree or a vine. We have also all degrees of power to apply, from the small pony to the eight-mule team. It is plain to see then that we have need of a great range of style in plows, and it is greatly to the credit of inventors that they have met the various requirements and have given us effective implements under all conditions. We mention these points merely to call the attention of those who have plowing to do, to the advantage which they may derive from a careful and comprehensive study of the various styles of plows which are brought forward. There is no doubt great variation in their designs and their construction and in their cost. They should all be examined and their record as working implements secured if possible. This edition of the *RURAL PRESS* gives abundant data concerning the many plows now in the market, and if one will follow these



A GORGEOUS WATER LILY—*NYMPHÆA DEVONIENSIS*.

before putting in the plants. Rich mud from the bed of a pond or sluggish stream will answer in place of the loam, but I do not consider it essential.

Those who have means to build large lily tanks in spacious glass houses, with hot water pipes placed in the water, can no doubt obtain very desirable results. The tender species can be planted permanently, and a longer period of bloom be enjoyed. But a good degree of success may be attained by planting them in large tubs or half barrels in the open air, either on the surface or sunk in the ground. They should be placed where they will receive the full benefit of the sun for at least the greater portion of the day. If for the whole day, so much the better. Fill them about half full of the compost recommended for all aquatics. The large-growing kinds would do better in large half hogheads or tierces sawed in two. The next best arrangement for growing aquatics is to build of bricks and hydraulic cement, a basin two ft. deep and six ft. in diameter, either round or square. This can be sunk on the lawn in a sunny position, or on the south side of a building or fence. If convenient, provide means for emptying the tank from the bottom, and a waste pipe near the top, for overflow, so that fresh water can be run

at night, they are serviceable for evening parties. They can be sent by mail several hundred miles with success.

In regard to Oregon railroads, Mr. Villard, in speaking at Portland the other day, said: "Within three years from to-day you will find yourselves here in Portland, the focus, the center, the very heart, so to speak, of a local system of transportation lines, aggregating fully 2,000 miles of standard-gauge road; not only that, but Portland will be the Pacific terminus of a system of railroads reaching from Chicago—a system representing 6,000 miles." As soon as possible he proposed to build a dry dock and a rolling mill and iron works.

ALMONDS.—In a recent letter to the *PRESS*, a correspondent visiting the lower part of Alameda county wrote that Mr. Henry Curtner, a leading almond grower at Harrisburg, preferred the almond worked on peach stocks. Mr. Curtner informs us that his preference is just the other way. He wants almonds on almond stocks, and not on peach.

up with a personal examination, the attractive advertisements will prove of practical value. The remarks concerning fitness for special needs in plows, are to a degree applicable to the whole range of farming implements. The various harrows, cultivators, vehicles, etc., etc., which are advertised, have points of excellence, which are worth searching for, and we shall not be surprised if our advertisements are sometimes found the most instructive portions of our journal.

And there is another point beyond special adaptations. The greater general efficiency of the newer implements, is a factor in farm economy which none can afford to overlook. Probably there is no set of farmers in the country who have less tolerance for poor tools than the agriculturists of California. There is a general disposition to adopt improved and more effective implements and machines, and to this is attributable a part of our agricultural advancement. No one who is anxious to succeed in this active age and country can afford to use poor tools. It is only by securing the best and using them to the best advantage that the worker can expect to maintain himself in the presence of the brisk competition and small margins which now prevail in all lines of production.



## HORTICULTURE.

### Propagation of the English Gooseberry.

EDITORS PRESS:—In your issue of the 15th inst., a correspondent of yours, hailing from Alameda county, and signing "Horticulturist," and a proud son of the White Albion by the way, if I should judge by the tenor of his communication, takes me to task for having the audacity of telling our California horticulturists how to propagate the English gooseberry from cuttings; and as the method I described in a late number of the PRESS is so much at variance, it seems, with that of the old Briton from Alameda county, the latter without any further discussion simply treats it as "unphilosophical nonsense."

Your correspondent asserts that in the "old country," gooseberry cuttings are struck or rooted just the reverse of my statement. It may be it is so. I even admit on your correspondent's word that it is; well, what of it? Does that mean that the method I described, and which has been so successful with me, *here in California* is not a good one? I will say to your Alameda horticulturist, if the propagation of gooseberries in England is one of the most simple of hard woods known, I will here say, aye, affirm, that it is not so in California. My own experience with the propagating of English gooseberries from cuttings has been as follows: It is as your English correspondent describes it, I did take the cuttings off early in winter, that is in December, as I always do with currants, grape and mulberry, leaving to the cutting every time it was practicable a little of the old wood, or "heel," as we call it in nursery language. Then I placed the cuttings in bunches in the cellar, the butt end stuck in sand, and in the spring dug little trenches six inches deep, and set the cuttings in rows and six inches apart, threw in a good supply of manure, for my ground is rather poor, filled up with dirt, and watered well during the summer. Well, as your correspondent says, "that was an end of the operation," and I will add, an end also of the cuttings; for I must, though unreluctantly, admit that not a cutting did grow, while with grape, currant and mulberry I always met with a complete success. Surely something was the matter with those confounded English gooseberries; and after repeated failures, I had to resort to the old French way of layering or division of old plants for propagating the English gooseberry. If at that time, I had been so fortunate as to meet with our friend from Alameda county, it may be that I had got out of my trouble; but no, I didn't have that luck. However, three years ago, I met up here an English gentleman from the old country, and who had come this way to look after some mining interests. That gentleman being an amateur horticulturist, was told about my "pretty place" where I had the pleasure of making his acquaintance; and while showing him up my well kept grounds, says he: "Do not you cultivate the English gooseberry?"

"Yes," said I; and I named him the main varieties that I imported from Europe, and which were all quite familiar to him.

"How do they do with you?" he inquired.

"Very well," I replied, "if I only give them enough manure and water, though I am rather unlucky in propagating from cuttings those English kinds."

"It may be that you don't do it right," he remarked. After describing to him the way I did, "Oh! of course," said he, "the way you do it, you will never root English gooseberries from cuttings. Now, my friend, you just listen to me; this is the way they do it in England: Cuttings must be taken from the old bushes, not early in the winter, nor through the winter, but right in the spring, and when the bushes are fully out and green with new leaves. You then dish all that part of the cutting that has to be buried in the ground, split the butt end half an inch to an inch, set them out at once, and keep the ground constantly moist, if you do it as I have just described, said he, you will root 90% of your cuttings."

I thanked the gentleman for his valuable information, and the ensuing spring I did it as directed, and at last met with a complete success in propagating English gooseberries from cuttings. I did it again this spring, though it was getting very late in the season, and succeeded as well. Such is my experience in propagating the English gooseberry.

Now, whether this was the method followed in England at the time your correspondent was there, I am unable to tell; for I never struck a gooseberry cutting out there, though having been through that country years ago. The gentleman who gave me the above method said: "This is the way they do it in England;" which country he was just from. So I took it for granted it was the method practiced there by English nurserymen in propagating gooseberries.

Your correspondent says positively that it is not; then I have to take that much back. But as long as the method is a successful one, I do not see why your Alameda horticulturist would object, for what is the difference whether cuttings are taken from the bushes through the winter or in the spring, as long as they root? I say, leaving the *un* out, away with such "philosophical nonsense."

I seems, after all, that it is not such an easy job as your correspondent claims to propagate the English gooseberry from cuttings; for when that question was before the Horticultural Society for discussion in May last, it was handled by some of our most experienced horticulturists, such as Messrs. West, Smith, Coates, Dwinelle, Jessup, etc. Mr. West, who is an old hand in the nursery business, admitted that he had much trouble in propagating the English gooseberry from cuttings. Mr. Jessup, a man of considerable horticultural experience, seemed by his remarks to entertain the same idea. I, myself, as stated through this communication, repeatedly failed in rooting the English gooseberry in the usual manner, no matter how much care I took of the cuttings. I therefore came to the conclusion that it would not do, at least, in California, to propagate the English gooseberry by the same method as we do propagate the American kinds, and also grapes, currants, etc. I do not care how many thousands of gooseberry cuttings your Alameda horticulturist struck in England, but I say that "here" his system will not do.

Says he: "In this country put in cuttings as soon as the leaves are off, and as soon as the first rains will warrant moisture in the ground all winter." Well, I tried that a long time ago, heel and no heel, and failed; one year, as the ground was too lightly mulched, my cuttings got pulled right up from the ground by that old scoundrel, Jack Frost. The ensuing year I mulched the ground more heavily, but in the spring I found my cuttings all rotten, and that was an end of it.

Still some of your readers in the valleys might give the old gentleman's method a fair trial, for if it didn't succeed with me, for the reasons stated above, it might succeed with them. I say there is nothing like trying, and especially on the principle that two heads are better than one. But I will say again to your readers, give the method I got from the old English gentleman a fair trial, too, and you will have no more trouble in propagating the English gooseberry from cuttings. Never mind whether it looks a little odd, whether it is at variance with the old English system; do with the gooseberry as we do with the rose and pink and lots of other plants when we want to propagate them from slips. All you care is to succeed and to have rooted plants, and that's all.

With this communication I send you by mail a rooted cutting of the Princess Royal variety, which was set out late in the season, and when the fruit was already formed on the bushes. You can see by yourself how well it did root. Perhaps you have room for it in your garden, as it is a valuable kind, on account of its prolific qualities, hardiness, and of being entirely free from mildew.

NEVADA CITY, CAL.

[The cutting is perfectly rooted and in fine condition. We shall plant it with pleasure.—EDS. PRESS.]

## THE VINEYARD.

### Considerations in Vine Planting.

(Written for the RURAL PRESS by W. G. Klee.)

#### The Bisulphide and the American Vine.

Grape culture has, no doubt, during the last two years, found more encouragement than any other branch of horticulture. The great success attained by some experienced growers, has led many people into it who formerly never dreamt to invest in fruit raising—people who know something about the business, but perhaps more who know nothing about it save that they can figure that it must be a paying investment, according to the prices now paid for grapes. Many have invested largely and paid high prices for land, and no doubt borrow money on high interest. The rush into the business amounts to nothing short of an excitement, and no doubt a great many will not realize their great expectation. The cause of the rise of the price must be attributed to the destruction of the French vineyards, which for the last five years has reached enormous figures and opened a chance for the formerly despised American vines. It rests largely with California wine growers whether the reputation of California wine and the subsequent good demand shall increase or not. If they are kept pure, it bids fair to become the most important industry of California. But a most serious question in this connection is this: Are we sure that we shall not share the fate of the vineyards of France? Two-thirds, perhaps, of the persons interested have not given this any thought, and if they have, they have most probably reasoned this way, I will get my money out of it before anything will happen. As we all know who have followed the report of the Viticultural Commission, the dreaded phylloxera is right in the midst of us. To be sure by all appearance its progress has been very slow, this being attributed to the extreme scarcity of the winged form so common in France. There is, however, no telling when this might change, and in the many new localities now being planted the conditions favorable to its development may be found. At any rate a sufficiently large number of vine growers have seen their own vineyards destroyed or those in their immediate neighborhood, to

make it a vital question. How shall we preserve our vineyards, and how shall we plant new vineyards, that will be safe from the impending danger? We have profited by the sad fate of the French vineyards, and we owe it to ourselves to take warning from the hard experience they have and are still passing through. People there as here flattered themselves that they were protected by some means or another, but one by one this imaginative barrier disappeared. California has made a great and good attempt to protect the wine interest by the appointment of a commission to guard it from its enemies and encourage its growth. It is to be hoped that the officers of this commission are able for their most trying task, that of enforcing the strict quarantine laws, and guide and help the people to a true understanding of the great danger that is at their door. Let everybody interested in grape growing do their best to aid and assist them in finding out and stamping out the dreaded enemy. But let us all hope that they will not allow themselves to become too personal because others have an honest doubt of the efficacy of the remedy adopted by them; true understanding is never arrived at where the discussion of a subject is interwoven with personal insinuations, truth is too often lost sight of, and scientific progress has hereby been retarded for hundreds of years.

#### The Bisulphide of Carbon.

In France, where for the last 12 years all kinds of remedies have been tried, the bisulphide of carbon has at last been adopted, and as its steadily growing consumption seems to indicate, must be considered the most efficient remedy yet proposed. Nevertheless, there is here evidently a large party who have but little faith in the bisulphide, but their reasons are, chiefly, that it is much more expensive than their vineyards will bear, and they naturally accuse the defenders of bisulphide of giving inaccurate and false statements in regard to the cost of treatment. As has been stated by Prof. Hilgard, too little attention to the soil has heretofore been given to the applications, and no doubt many of the failures that have given the anti-bisulphide party reason for complaint must be attributed to following blindly the rules laid down, or rather to the fault of the commission of being ignorant of this and not warning people.

An article published the 15th of June last in the *Revue des deux Mondes* by the Duchess of Fitz James, entitled "The American Vine in France," though taking the title as the general subject of discussion, clearly shows that people in France differ considerably on the subject of bisulphide of carbon, the writer herself, a great vineyard owner, has a rather poor opinion of its usefulness, though she admits its comparative efficacy. As the article is lengthy and contains much that perhaps is well known and published before in the report of the California State Viticultural Commission, we shall only make such extracts that may be of interest to the viticulturist, and of matter perhaps new to a great many. The writer commences with the statement, that phylloxera, since its invasion of France in 1868, has ruined 1,500,000 family vineyards, without speaking of the 2,000,000 of people indirectly depending on the industry. She speaks about the trials and disappointments of the viticulturists, of the deplorable ignorance of the spreading danger even yet found, and of slowness of the people to guard themselves in newly invaded districts and profiting by the experience of others. Passing to the remedies, the writer differs somewhat from others in the value she places on them. She says:

"The means of defense known to-day are either palliative or defensive—palliative by prolonging the existence of those vineyards still vegetating, and defensive by raising vineyards resistant to the attack of phylloxera. The first and most lasting palliative is submersion; the second, still in an experimental state, is the employment of insecticides, wherever the yield of the vineyard will bear this additional expense."

"The defensive means are: 1st—Grafting, by which the French vines are converted into American resisting vines. 2d—By planting of French vines on resisting roots. 3d—By planting French grapevines in sand. From an economic standpoint the best is the transformation by grafting; it gives the quickest results, for the sacrifice of one crop will suffice to insure the resistance of the transformed vine, for in this way the productiveness due to the age of the French vine is preserved for the benefit of the American vines. The only serious inconvenience is the presence of the old French vine, and the danger of the old roots affecting the constitution of the young vines. But the advantages are so great that they counterbalance the inconvenience, if the graft is a very resisting species. *Estivalis* holds the highest rank, while *Labrusca* succumb. The French root nourishes the young graft before its death, and for sufficiently long time to enable the graft to make resisting roots."

"The second defensive means is the planting of American vines, either to obtain their direct product or as stocks for French kinds. In this manner the first crop may be obtained the second or the fourth year after planting, according to whether the vines have been planted after having been first in nursery or directly on the spot."

"Finally, the planting in sand has a doubtful duration, but for those that are fortunate enough to be enabled to practice it, it is the source of a considerable fortune."

Passing to her own vineyard in Saint Benezet, in the department of Gard, the Duchess relates how, in 1872, her 400 hectares were invaded by

phylloxera; how, by planting Carignan and Aramon, she sought to get a phylloxera-proof vineyard, and how, in spite of her sad experience of their succumbing, people, even this year, have planted these kinds. In 1873, she planted the Clinton, which in its turn was replaced with Taylor, Herhemont and Jacques. After having used various insecticides, among others a compound containing bisulphide of carbon, which kept her vineyard alive, while resisting stocks were being raised, she abandoned insecticides, except on a lot of Aramon, trusting to the renewal of the vineyard by grafting. She asserts that 3 or 4 applications were necessary, and that the effects though the experiments continued for two years, were not lasting, and concludes that it is not practicable on a large scale, while she admits that it may be so in small valuable vineyards.

Continuing she says, "I have not used the bisulphide, manufactured by the Paris-Lyon-Mediterranean railroad company, for I am too well satisfied that viticulture cannot be restored save by the American vine. A recent and minute investigation has proved that the treatment is only practicable in vineyards that are very productive; that its application requires much care, for not alone is the insecticide enough dangerous to kill the grapevines, but it has also killed mulberry trees. Two experiments made in 1879, by the employees of the company, have produced this result. The vines treated died before those that were not treated at all. I choose these examples among others more favorable for the company's insecticide to clear the rural laborers from the idea that the death of the vines was caused by their had intentions, and that a certain apparent success attained was due to the owners employing the manures\* more holdly than the bisulphide, while the company's agents employed the bisulphide much more vigorously than the owners themselves. The bisulphide seems to make the soil sterile and injure the vine, while the manure makes up for these bad effects."

"What is certain is that the bisulphide may kill the vine which we intend to cure, and though we may admit arsenic in prudently administered doses in medicine, we nevertheless do not admit this poison among the family medicines along with quinine. Bisulphide of carbon seems to come in same category as that of the dangerous remedies, and that is the reason that I interest myself very deeply in an inoffensive remedy made for the present by M. Tichet, near Bergerac."

#### Relation between Treatment and Yield.

Speaking about the yield relative to the cost of treatment, the writer says:

"In the department of Gard, the vines on the hills give, on an average, 25 hectoliters of wine, valued at 25 francs, which makes it 625 francs per hectare. The expenses of culture are 300 francs per hectare, leaving 325 francs for interest and insecticide. Theoretically, the cost of treatment is 150 francs per hectare per year, but by adding up the figures, furnished by the official documents for the chief work and manure, I find 251 francs for summer, and 297 francs for winter treatment, making a total of 554 francs per hectare. It appears that after the end of 3 years, 150 francs are sufficient, but the conclusion drawn from this experience finds it still rejectable, when, after 3 years, the total cost exceeds that of raising a resistant vineyard, and it seems logic to me to plant something sure rather than to maintain tenderly a theoretical hope."

From 1866 to 1875, the plains of Heranldt gave an average yield of 175 hectoliters per hectare, which sold at a price varying from 10 to 30 francs per hectoliter. With a product like this of 1,758 francs, 50% of the vines may support the expenses of an insecticide, even with a high interest represented per hectare. At this time the price of from 10,000 to 20,000 francs per hectare would not astonish anybody, even as high as 45,000 francs was offered and refused in the year 1868. The yield of small places was 325 hectoliters per hectare, the maximum, I believe, having been attained by M. Magel, at Castelnau-de-Guers, namely, 476 hectoliters; and this in the year of 1873, when the price reached the maximum of 30 francs per hectoliter; but such cases are exceptional, and it generally is far better to transform or replant the vineyard than to repeat year after year the same expense when, by resorting to one or another of these means, it can be left out altogether. One thing that may surprise the reader, but it has been proved, is that Aramon grafted on *Riparia*, has produced 25% more than on its own root; it is not the same if a very productive French sort is transformed into an American vine. Jacques grafted on Aramon lessens the quantity; but it gives more alcohol and color, and the price compensates for the loss in quantity."

This statement will no doubt astonish a good many, as the general belief is that the French never thought much of the American vines, and, in fact, few wine drinkers in any country, and it naturally suggests itself to ask, why cannot the Eastern States successfully compete with other countries, when hardy American vines are so valuable?

#### Economic View of Americanizing.

Speaking again of the transportation from an economic standpoint, the writer says:

"Let us put in first line of the table of expense the loss caused by the crop being more or less

\*A certain amount of fertilizers is always prescribed to go along with the application of bisulphide.

†Hectoliter equals 26 gallons, 1 quart, 1 pint.

‡Hectare equals 2 acres, 75 rods.



affected by the phylloxera; then the price of scions according to variety—the sale of the wood produced the first year pays for the scions, or more; finally, the grafting of a number of stocks varying from 2,500 to 4,000 per hectare, makes from 37 50 francs to 60 francs per hectare. At present Herhemont and Jacques are the kinds best known and established. The wood of Jacques would yield more than that of Herhemont, if its taking of graft was more regular. The latter takes and releases itself easily; its wine is less harsh, and it contents itself with poorer soil. On the whole, Herhemont is less appreciated than Jacques, still it is less subject to the antracnose than this, a tendency which prevents the latter from becoming generally planted in America, but nevertheless cannot take it away from the place it holds in France; for it is easy to fight this tendency by a solution of iron, or proper modification in our methods of culture.

"It is interesting to know what yield we may expect from Jacques. I give as my authority M. Aurran at Decapris, who obtained from canes four years old, of those cut on long wood, 13 kilograms of grapes per vine, while those cut short only gave 3 to 4 kilograms. \*\* The yield has been a little less than two-thirds of the weight of the grapes, of colored wine of 12% estimated at 45 francs per hectoliter. This brings us to 150 hectoliters per hectare for the long wood and 50 hectoliters for the short. M. Lallimand estimates the yield on an average of 90 to 100 hectoliters, which appears to me to be too high, compared with that of M. Aurran, whose vines are in an exceptional soil, and received a pruning and propping and care as intelligent as painstaking."

The Submersion Treatment.

Passing to submersion, the writer recommends it, wherever it seems possible. She says: "It is not sufficient to have water. It must be possible to maintain a covering of from 40-100 to 50-100 meter \* in depth during 40 days. If the soil is very porous the water will be lowered and cause the inundation of the adjoining land. If, on the contrary, the soil is too strong it will retain the water too long and kill the roots, causing anthracnose, which threatens the French vines as well as Jacques. At Graveson (Bouches-du-Rhone) Mr. Fancou, an intelligent advocate of submersion, has obtained excellent results. From a production that in 1869 had fallen to 35 hectoliters it was raised to 849 hectoliters in 1872, and to 2,480 hectoliters afterwards. The wine is rather weak but is plentiful and finds buyers."

The Sand Method.

Turning to sand, she says: "All deep sand that contains two-thirds of silica defies the phylloxera, and may be planted with French vines. But it is necessary that this state be preserved, that the roots do not encounter either humus or salts, nor accumulation of leaves or manures, which cause the cohesion of silicate particles, for this mechanical modification makes it inhabitable for phylloxera. "As proof for what is advanced there is mentioned a plantation at M. Gross' at Aigues-Mortes, where it was believed that the soil would be bettered by depositing on top of it some mud from a canal. The result was bad, the roots suffered as if they were surrounded by a soil accessible to phylloxera. The result in the long run is apt to be this.

Returning to the American Vine.

After having discussed insecticides and plantation in sand, she returns to the special subject of the treatise, "the American vine." "We will try," she writes, "to meet what is most serious in the objections raised to its progress in France. Some want to exclude the American vine, because it has brought the phylloxera; others find the price of such a plantation beyond their means. I will first answer the question of price, because it is by far the most serious, and generally falsely represented. If we say that 800 francs is a large sum of money for a hectare, even for a good piece of work, this is the price accepted by farmers, experts and others for laying out for labor, planting and three years' cultivation and manure, and we are at the truth. Let us see now:

Planting and support, etc.....	800.	francs.
Cost of 2,500 fine <i>Riparia</i> cuttings.....	200.	"
Grafting of 2,500 vines (at 15 francs per 1,000).....	37.50	"
Cost of 2,500 French grafts, at 15 francs.....	37.50	"

Total.....1,075 francs.

"Compare this with the statement of costs of the Paris-Lyon Mediterranean Railroad Co. of the plantation of Clinton made in 1881, at the hills of Thu Ermitage, by Mon. Thiollere de Isle.

Cost of 12,000 Clinton cuttings, 37 francs per 100.....	4,200
Setting out (chief work).....	140
Culture the third year.....	270
12,000 cuttings @ 60 francs per 1,000.....	720
Interest in 3 years of 4,500 francs.....	675

Total.....6,005

TRUE COST FOR 2,500 OR 4,000 VINES.

	Francs.	Francs.
Purchase of cuttings.....	300.00	to 440
Chief work.....	200.00	" 200
Culture 3 years.....	300.00	" 300
Grafts.....	37.50	" 60
Grafting.....	37.50	" 60
Interest 3 years.....	120.00	" 150
Total.....	1,004.00	1,210

"I will end with one question," says the writer, "Why did M. Thiollere de Isle prefer the Clinton, the value of which there were al-

\*Kilogram equals two and one-fifth lbs.

\*\* 16 to 20 inches.

†It is impossible to plant more than 4,000 vines per hectare. In 1877 the price of Clinton was per 100—120 francs per 1,000.

ready, in 1877, doubts about—doubts which became certainties on the most important points?"

We pass over her remark of the small probability of ever getting rid of the phylloxera, and the reason why it has taken so well on the European vine, which she suggests is due to its large medullary rays, in which it resembles *Labrusca*, the only non-resistant American vine. She points out the fact of its spreading in the Eastern States, attributing it to the crossing with *Labrusca* and the European vine; she admits that the so-called phylloxera-proof vines even will succumb under trying circumstances; that their resistance is not absolute, but for all practical purposes may be considered so.

After having dwelt on the probable time of the phylloxera importation, and discussed at length the various theories of its origin, she says: "The origin of the phylloxera has no practical interest, as the victims of the introduction cannot reconcile themselves to the insect. As this is impossible, let us forget the odious and bitter discussions and work for the true and good; concentrate our efforts toward a useful aim, that is, to live with an enemy that we cannot destroy. By exchange of truly brotherly observation let us advance the science of viticulture toward the only goal worth seeking, the creation of resistant and early productive vineyards. In this spirit I have brought my stone to the structure, hoping to shorten for others the long way which I have passed over before arriving at material certainties of which I commence to reap the fruits.

"One of the conditions

For Success With the American Vine

is the adaptation of the various varieties to climate and soil. The obstinacy with which some insist on the impossible acclimatization, is one of the causes of the under-valuation of the American grapevine in Charantes. Jacques and Herhemont do not here find the heat they require and suffer from mildew, while the northern group of *Aestivalis* does not thrive in the olive region, for instance, at Saint Beneszel. Norton's Virginia is very vigorous, but at the age of six years has not borne fruit."

The existence of an intermediate group is dwelt on, as being less particular in regard to climate, and the necessity for more exact data in regard to the American species. For dry soils she recommends the smooth varieties and the hairy for moist and rich soil. To the neglect of sorting the different lots, very often badly mixed, one of the chief causes of failure is attributed.

Passing to grafting, the writer especially recommends the treatise of Mme. Pensot, whose careful way of undertaking the process she praises highly, describing it thus:

"On a fine cutting of *Riparia* rooted in nursery, Mme. Pensot grafts on the table the French scion. This scion perfectly joined with the root and properly tied is left another year in the nursery. To complete an operation so well done there is a union so complete, that there will hardly be any trouble the following year, when planted on the final place. With such a plant the release of the scion is hardly to be feared. The graft already united need be less deeply buried in the soil than a fresh graft, and such a plant set in good soil will produce the second year the cost of its placing in the vineyard."

The American Scion on the French Root.

"I have spoken of the 'release' (*Laffranchissement*), but I do not know if any of the readers know the exact signification of this word. In the case of the transformation of a French grapevine into an American, the aim desired is the rooting of the American scion, for it is American roots produced by the scion, that give it individual life and resistance. The rooted scion is released from all bond with the French root, for it does not depend on it for nourishment. As for the stock, it has not its sap absorbed and succumbs to its uselessness and phylloxera. To favor this release the grafting is done very deep, and the earth raised up around the graft as much as possible, while the French suckers are carefully destroyed as their absorption of sap would be a detriment to the American scion.

The contrary is sought for when American root and the French graft is in question. It must favor the development of the American root and the checking of the French, which would create a provisional life for the scion and smother the American root. We succeed in maintaining the American root as stock by pinching the American suckers as fast as they appear, while a careful uncovering of the roots in the winter allows us to cut off the French roots that have been formed during the year. The fault by this last precaution is that it is nothing but the old-time uncovering of the roots practiced every winter to destroy weeds, suckers and superficial roots. I have seen fine grafted vines die just at the moment they were expected to produce. This fact, that has been repeated several times, scared those badly who have not searched for the cause, whereas the pulling would have proved to them that the scion had created an independent, precarious life on its own roots, and that the phylloxera, finding itself in the presence of French cane on a French root, had taken up its claim. As for the stock, it had perished by the gorging of the sap."

Discussing the fundamental principle of grafting, remarking that the objections to the grafting of the grape are those generally made to grafting and not to grapevines in particular, and dwelling at length on the changes of the sap, as passing from the root to the graft, on its functions, she returns to the discussion of modes of

graft, giving, as her opinion that the English cleft graft on young canes is preferable for three reasons: "1. The vegetation is most lively; 2. The bark is very thin and easy to rennet; 3. The ligature most perfect. At Castel Pignan a large number of vines are grafted, but those most remarkable are those grafted in 1880. Eight thousand canes planted in 1878 and 4,000 planted in 1879, all grafted in 1880, are as good as united, and will produce this year, according to appearance, 6 to 8 kilograms apiece. This is cited to show early bearing, while the plantations planted in 1876 and grafted in 1877, having produced last year 16½ kilograms apiece, are cited for productiveness.

The cost of grafting, as done at Pignan, is given thus per 1,000 vines:

	Francs.
Two grafters, at 4 francs per day.....	8.00
Two men to cover and uncover.....	5.50
One woman to put on wax, to tie.....	1.25
Tying material.....	.62
Total.....	15.35

Cuttings or Rooted Vines.

After having discussed various questions in relation to grafting, advising those who have not much practice in grafting and do not have any very large vineyards, rather to buy grafted vines than to allow themselves to get discouraged by the probably bad success through inexperience, she concludes thus: "The following question presents itself to all beginners: What shall I plant, cuttings or rooted plants? After having expended considerable, I advise all to make half the planting of rooted vines. They give, it is true, a dearly bought revenue, but it is rapidly acquired; the other half employed to plant cuttings gives a more or less quick return, bought cheaper, but the absence of which is compensated for by the rooted vines that give morally and materially courage."

In the above I have tried to make such extracts from the French writers that I thought would be of general interest to vine growers. No doubt some of this is far from being new to many, but I had some difficulty in selecting just what was wanted without working over the whole material. What I want to call the readers attention to is the clearly shown absolute preference by the two opposite parties in France; that of the American graft party on one hand, and the bisulphide on the other hand, for their remedies. For while the writer by her statements shows how the opposite party tries to give people a too high estimate of the cost of a grafted vineyard, she admits at the same time that others have been pretty successful with bisulphide, and what I want to lay particular stress on, she states clearly, that she has never used on her own premises the liquid bisulphide of carbon made by the Lyon Mediterranean Railroad Co. The truth here as in most cases lies in the middle, and the moral from the discourse is, it seems to me, "let us adapt our remedy to our circumstances."

Berkeley, Cal.

†We must not compare this with California yields, but, for instance, with the French yields given above.

POULTRY YARD.

Hints on Raising Chickens.

From advance sheets of the second edition of Wm. Niles' "Pacific Coast Poultry and Stock Book" we take the following practical suggestions on the early care and feeding of young chickens:

Rearing Chickens.

When the chickens commence hatching let them alone for 24 hours, then remove them with the hen mother to their coop, at the same time apply a little melted or soft lard, with the finger, to the top of their heads and under their throats; it will prevent the large headlice or ticks from annoying them. This should be repeated two or three times a month; three-fourths of all the chicks that die before they are two months old, are killed by vermin. Yet the owner will pick up a droopy chicken, examine it, and say there is none on it. But, if he would apply a drop of lard under the throat, he would probably observe a dozen or more large fat fellows back out to the end of the feathers and drop to the ground dead. It is unnecessary to repeat, that success in rearing chickens depends upon keeping them free from insects. The first feed should be a hard-boiled egg, chopped fine. After that, scalded meal or shorts mixed with bran and scalded; and after three or four days of age, cracked corn or wheat the last thing at night. Pure, fresh water should be kept before them all the time. Feed only what they will eat up clean, as sour food will bring on disease; milk, both sour and sweet, is most excellent for chicks, as well as grown fowls. Another item deserves special notice, being of the greatest service as an article of diet for young and growing chickens. I refer to bone meal. It supplies an abundance of bone-making material, and counteracts any tendency to diarrhoea, from which large numbers of chicks die, by keeping their digestive organs in good condition. Green food must be had in the shape of grass or vegetables, in order to have them do well. I use freely Imperial egg food, and find it almost indispensable for rearing young chicks. By its use you will save enough more chicks to pay for the expense of using it, twice over.

The First Food for Chickens.

Just before the chick breaks from its narrow cell, the last of the yolk is taken into the stomach, which gives it the strength to make its own grand effort for freedom. This food will certainly last 12, if not 24, hours after it is free. During that time no other food is needed; only rest is required after its exhausting labor.

Dry Feed for Young Chicks.

It is absolutely indispensable that the cooked mash given to any young chickens should be mixed dry. By this we mean to convey the suggestion that the meal mixture should be of a crumbly consistency, rather than that of the soggy kind of mash that nine out of ten careless, inexperienced persons give to the young broods in their infancy.

I frequently receive complaints from persons who have appealed to me to tell them why it is that their little birds drop off at 10 to 20 days old so frequently, when they "feed them with plenty of soft meal, properly scalded," and give them "all they can eat four or five times a day."

The cause of a large share of the mortality among the young broods is attributable to this very kind of feeding. Wet, sloppy dough or meal sours in their crops before beginning to digest, and they are destroyed by this means. I again insist that their early food must be dry—for the first three or four weeks especially. Whenever they need drink, if shallow pans of milk or fresh water be left within their reach they will avail themselves of the opportunity to take all they need. But for their meal feed, the too common practice of drowning digestion by offering young birds three-quarters of water to one-quarter of grain is injurious. Give the natural solvents, the gastric juices, a chance, and don't dilute them till they are too thin to act on the food.

The Most Critical Period

For young chicks is between the time they drop their downy coats and before they put on a full dress of feathers. At this time they must have the very best care and attention, or they will drop off with little warning. After the young chicks are fully feathered, they are strong enough to help themselves and will get along finely if they have plenty of good food and are kept well sheltered.

The extremes of dampness or heat are very severe on young chicks in the transitory state, especially on the Asiatics which stay bare of feathers for so long a time, not feathering up as quickly as the Leghorns and other smaller breeds, and for this reason they should be well cared for, if you expect to raise a fair proportion of them. If the skin becomes parched or burned, a little glycerine or fresh lard or mutton tallow rubbed on the skin, will greatly relieve the young chicks.

Separating Broods of Chickens While Feeding.

After the hen has left the chickens and also where there are broods of various sizes, the larger ones are likely to domineer over the smaller; and if all are fed together, the smaller ones are generally robbed of their share of the food. A separate run for each brood is therefore of great service, but when this is not practicable, and where a large number are to be fed, a very simple arrangement can be made for keeping them separate while eating, the expense of which is only a bundle or two of three-foot lath. In a convenient corner of the yard for feeding let a row of lath be driven into the ground across the corner and at such distances apart that only the smallest chickens can pass between. Another row is to be driven about two ft. further back, and an inch or so further apart, so that the medium-sized chicks can pass, but not the largest ones. The food for the youngest broods may then be thrown behind the closer row of lath, that for the medium broods between the two rows, and that for the largest broods outside of all. This plan not only prevents quarreling, but enables the attendant to favor the youngest broods with more expensive food without their being robbed by the older ones. Where adult fowls have the run of the same yard as the chickens, such an arrangement will allow of the chickens being well fed, without the danger of overfeeding the old fowls.

Potatoes for Growing Chickens.

Give the growing chicks a taste of boiled potatoes and notice how they enjoy them. In many places the potato crop is large and this vegetable cheap. It is even cheaper than corn, but if fed in connection with corn and other articles of diet it is a great help in raising young stock economically and successfully. Give the chicks freely then of boiled potatoes, skins and all, that is, provided you live in a section where they are cheap enough to afford it. Chicks we thought much of we would give a "relish" of potatoes, cost what they would, for an occasional change of diet. I feed annually several tons of potatoes to my fowls, and find them an economical food for this section of country.

Fresh Water, Daily.

It must not be forgotten that it is highly important to keep before our fowls and chickens, constantly during the trying heat of summer, a supply of fresh, cool, clean water. For their size, no animals drink as much and as frequently as will poultry. If a running stream pass through the yards where fowls are limited to range, so much the better. If they are compelled to drink such water only as can be conveniently supplied to them in vessels, it should be renewed twice a day, if possible, while the summer heat continues.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports transactions of subordinate Granges are respectfully requested for this department.

### Roll Call of Grangers.

We continue the "five-minute" reports made by representatives at the roll call of subordinate Granges at the recent State Grange meeting, aiming to give the substance rather than the language given:

#### Franklin Grange, Sacramento Co.

Bro. Wm. Johnston, Master, said that his Grange was in much better working order than for several years. We have reached the foot of the Grange hill and our columns are moving upward. We have six more members than at this time last year. We own our hall which is fully paid for, and some money on hand. Most of our members own stock in the Sacramento Grange store, which we consider good property. We always have something in reserve for discussion or looking toward joint action in essentials. In good weather the Grange meets twice a month. For our membership, our meetings are well attended.

#### Florin Grange, Sacramento Co.

Bro. C. Toole said that the Grange was in a better condition and more prosperous than for several years; the membership is between 60 and 70. We have interesting discussions at every meeting of the Grange. The subject of phylloxera has received much attention, for it is one in which many of our members are directly interested. We have added to our numbers by initiation, 11 or 12 new members during the past year, and have plenty of good Grange material left, on which we propose to work the present year.

#### Healdsburg Grange, Sonoma Co.

Bro. W. H. Gladden, W. M., said Healdsburg Grange was organized in 1873, and since that time has had quite a checkered life. Our numbers increased until we had about 90 members. Subsequently, Windsor and Geyserville Granges consolidated with ours, giving an aggregate membership of over 200. Then we started the Grangers' Business Association of Healdsburg, which has been running with some mishaps and drawbacks. The membership subsequently decreased, until we have at present 26 brothers and 24 sisters. There are always plenty of members in town on Grange day, but many of them are disposed to hang around the street corners rather than attend the Grange meeting. We have recently introduced courses of lectures, aided by outside talent, which works well and creates much interest.

#### Lodi Grange, San Joaquin Co.

Bro. J. D. Huffman said Lodi Grange still lives. At one time there was a proposition made to surrender our charter, but it was voted down. Losses were sustained by the failure of Morgan & Sons, which injured the Grange very much. Late Grange re-unions have created a new interest in our Order, which has given us several new members. We have two Granges in close proximity, that of Lodi and Woodbridge, with 60 or 70 members in the two. There are about 150 farmers in our section of country, the greater portion of whom we hope to have join us soon. A proposition is now on foot to establish a co-operative association. We have \$3,500 of the stock already subscribed, but the most difficult matter is to agree upon its location.

#### Montezuma Grange, Solano Co.

Bro. T. T. Hooper said that Montezuma Grange was organized in 1874. It never has been a large Grange. Material for good Grangers is scarce in our district. Many times we have found it difficult to get a quorum; in fact my wife and I have, virtually, to carry the Grange along on our shoulders. I am the Grange Treasurer, often paying State Grange dues from my own resources. We want a Grange revival in our midst. We will never give up our charter so long as it is possible to hold on to it; so long as the Grange ship floats we are bound to be on board.

#### North Butte Grange, Butte Co.

Wm. T. Lamb, Master, said: We have a live Grange, of 65 members, and have added 10 or 12 members this year, by initiation or card. Our subordinate Grange dues are 10 cents per month; our members take an interest in the Grange; its social features are highly appreciated. The Grange has enabled us to get acquainted with our neighbors. The community has been drawn closer together in all matters pertaining to the common welfare.

#### New Castle Grange, Placer Co.

Bro. S. L. Threlkel responded. He said New Castle Grange is still alive. A proposition was mooted some time since to surrender the charter, but the motion was promptly voted down. Something over a year ago, the Grange bought an organ which was not yet paid for. We have a number of good members who come to stay. The Grange prospect for the future is better than it has been for years. Active work in the lecture field, and more unity of action upon the part of the members, will bring about good results in our Grange and elsewhere.

#### Pescadero Grange, San Mateo Co.

Past State Master I. C. Steele said Pescadero Grange still lives, with a prospect of a ripe old age. Its membership is small. Good Grange

material with us is scarce. We have many Portuguese settlers, who cannot appreciate the Grange or its principles, and are consequently unfit for membership in our Order. We have had our ups and downs, great hopes and little expectations. Much good has been accomplished. We propose to stand by our principles and endeavor to work up to a greater degree of utility and usefulness.

#### San Luis Obispo Grange, San Luis Obispo Co.

In the absence of its Master, Bro. I. C. Steele responded. He said: I am well acquainted with the conditions of San Luis Obispo Grange. At one time it was just about to give up the ghost. A meeting was called, that I might be heard before the charter should be surrendered. I talked to them more than an hour, urging the members to stand by their charter—pointed out the advantages of so doing. The proposition to surrender the charter was voted down. The membership has since doubled, with plenty of good material left, out of which to make other members.

#### Sacramento Grange.

C. A. Hull, W. M., reported the present number of members at \$0; at one period numbered 100 and over. Some of our good members have been withdrawn by death; others by card and some otherwise. Meetings are held on Saturdays, and a quorum, at least, is always present, and a goodly interest is manifested. To make the meetings profitable and interesting to all, the Matron's Offering, a manuscript paper, is prepared and read regularly; essays are read by the brothers. These, with speeches and frequent rendering of music and joining in songs make up good times, and make the young (as well as old) members like the Grange. Finances sufficient. Fifteen have received the fourth degree in seven months; five are on the way. In summer seasons frequent visits are made from 5 to 30 miles, visiting other Granges. This enlivens and benefits both the visitors and visited. [The success of the Sacramento Grangers' Co-operative Business Association has no doubt added constantly to the success of this Grange. For specimens of the "beauty" (Sister Hull referred to), as well as "strength" and "vim," we can refer Patrons confidently to the newly elected Worthy Master, Pomona and Executive Committee men from Sacramento Grange.]

#### Santa Rosa Grange.

Owing to the fatal illness of Sister Stacey's mother, and the consequent absence of Bro. Theo. Staley, W. M., E. W. Davis, W. L., stated that the Grange has been organized eight years. About one-half of the charter members still stand firm. Have several petitions. A number of new candidates have been mentioned since the commencement of the State Grange meeting. We will make good Grangers of them. Although small in numbers, we are full of life, and "no surrender" is indelible upon our banner. The treasury has \$150. Meetings are held on the second and fourth Saturdays. No suspensions or expulsions are occurring. [A hopeful feeling seems to prevail. Of the generous, self-sacrificing qualities of Santa Rosa Grangers, every attendant at the meeting will bear strong testimony.]

#### South Sutter Grange.

Bro. Spilman, P. W. M., said, in the absence of the Master, that he knew the Grange to be in good condition. They own a fine organ and hall. Also, a four-acre cemetery well fenced, etc., which is a credit to the members. Their finances are in good order and the membership an earnest and all worthy one.

#### Sutter Mill Grange.

Bro. Spilman also reports them a live Grange with 65 or 70 members. It is located half a mile from the old mill where gold was first discovered, and followed with the wild mining excitement of '49. Now the vicinity is covered with fine vineyards, orchards surrounding peaceful cottages, alternated with schools and churches. They carry out Grange principles with true and enjoyable sociability. Annually this Grange leads in decorating the graves of our fallen heroes, and all other graves in their beautiful rural cemetery. On its good work it builds up the life and strength of the Order. Ten new applications quickly followed last Decoration Day. Its finances stand well. Isolated in borders of the mountains of our State, where diversified farming prevails, the elevating spirit of the Grange advances more free and lofty than in districts devoted to a single branch of agriculture, with fewer farms and more owners holding more stock in banks and corporations. Hundreds of such little Granges ought to exist, and bless and elevate their members and all the community around them.

#### Temescal Grange.

Christian Bagge, W. M., reported a membership in good standing, rising 30 fourth degree members. The Grange was organized in July, 1873, and has been harmonious. Too much parliamentary "usages" or "parleyings," do not mar its workings. Co-operation (on the Rochdale plan) is attracting much favorable attention, and we look hopefully for its successful introduction. Five new members have been initiated during the year; two have removed; a class of two are now approaching the fourth degree. Ten (including five charter members), are present at this session. Our meetings are better attended in the evening, than when they were formerly held in the p. m. Our regular sessions occur on first Saturday evening, and special meetings are held when needed. The facilities are convenient for Patrons visiting S. F.

to attend. All are invited at all times, harvest feast or not.

#### Vallejo Grange.

J. F. Deming, W. M.; organized in November, '73, with 22 charter members; raised to 60; some have removed, others were expelled, and 38 remain, including five charter members. All are good laborers when work is laid out to be done. This Grange field would furnish more Patrons but for the farms being worked largely by tenants of a class not available. Two meetings are held per month in winter. Much good talent is found in the Grange, which needs coaxing (with wisdom, if not to say strategy) to bring it out. By encouragement, papers have been written, read to interest our meetings and published to benefit our Order, and the good of society otherwise. We advise that more attention generally be paid to Grange correspondence for publication. We wish to hear from other Granges, and be benefited thereby. Our several meetings at the dwellings of different members have been pleasant and profitable. We select a new chairman for each, so that more may have active service and practice from time to time. Essays are read and discussions had on various subjects. Friends are invited, who gain information and favorable conceptions of the principles of our Order and its social features. We invite Patrons to visit our Grange. There are also objects of much interest to be seen at the U. S. Navy yard and Government shops at Mare Island, besides the City of Vallejo and its surroundings.

### Four Days at Santa Rosa.

[Written for the RURAL PRESS by Mrs. W. D. Ashley.]

Our hard-working but not strong Master Spilman must have felt somewhat repaid as he met October 4th, the respectful faces of 250 or more members intent on business and a good time. We were under obligations the entire time to energetic brothers and Santa Rosa Grange for reduced rates of board and travel, also to the Masons of Santa Rosa for free use of their commodious hall and also the hall for Pomona feast. Said a brother, "If it had not been for the sisters this Order would have died out." We sisters, well know what it has done to brighten our round of toil and make cheerful the labors of industry and diligence necessary to success. We know that it makes farmers more mindful of their obligations, more courteous and kind to the children, less gruff in the tone that dominates where the farmer is lord of field and stock. We feel less fretful and fault-finding now that the Grange breaks the monotony of work. The trifling addition of four cents to our (quarterly) dues will not be felt at the end of the year.

The most interesting feature of the gathering this year was the presence of several young ladies and gentlemen who were attentive to all that was said. If all our subordinate Granges could only be a little livelier so as to attract youth to their discussions, then we would have more live Granges. An excellent corps of officers went out and a promising one came in, who must be upheld while they harmonize opinions as diverse as those of two sisters there. One said, "I don't like this clashing of parliamentary ruling." The other thought it lively—liked vastly the whetting of ideas and passing down of opinions. The debates were free and independent and evinced that agreement in essential points and that diversity in many respects that was most refreshing. It gave me an exalted opinion of the character and capacity of the Grangers of our State, and brought the different Grangers into conscious and actual sympathy.

But let us not try to hold our Granges up by hanging too much to the skirts of the State Grange. Let us go to work, and depend on ourselves to revive the Order. We are far more respected than we were a year ago. Newspapers and people speak of us as a power for the good and prosperity of the State. Let us respect ourselves, and go to work and stir up the smoldering camp fires and set the pots of business boiling. Let us have a still greater gathering next year.

The Grange, through the politeness of Mark McDonald, viewed his lovely cottage and grounds, all the work of two years. The inner appointments of the house attest taste and wealth combined. On his parterre of green sward and lovely flowers a Yucca palm stood, in sweet bloom. A large mound of choice roses scented the air. A row of Cana, Calla and other large-leaved lilies stood sentinel around the piazzas, flanked by geraniums, fuchsias, heliotropes, ornamental foliage plants and, last, the deep blue lobelia. A rocky fish pond and hill, covered by creeping vines, lent wildness to the beauty of the place, but prettiest of all was the wee baby in white sun-bonnet, with chubby hands full of flowers, toddling on the lawn. Mr. McDonald and his estimable lady returned the call at Pomona's feast. To work better, 60 brothers and sisters took the obligations of Pomona, whose peerless show of fruit, flowers, nuts and evergreens made them think they had stepped into fairyland. Codling moth does not trouble them much yet, so the fruit was without blemish. We think we can give the State Grange as good pears, grapes and almonds, but their apples are finer than any I ever saw at the District or State fair. White Muscat and raisin grapes are larger, too, but our climate must be better for drying raisins. Santa Rosa has many tasteful yards, and the people seem proud and wil-

ling to work. The woolen mill sets a good example by employing 18 young ladies and most of its help from the town. The eight churches are said to be fairly attended. Altogether, it is a very moral and friendly town. I shall remember its picturesque and healthful hills as one of the prettiest spots of California.

Santa Rosa is highly romantic in the midst of its little valley 34 miles long, (opening into Russian River valley to the northwest), with its expanse of gentle slopes and level fields, screened from rough winds by mountains, some wild and precipitous, covered by the varying tints of shrubs and trees. Eucalyptus groves adorn some of the rolling foothills, others are mantled by many vineyards, some containing 75 acres or more. Men were picking grapes. The Muscates are larger and finer than with us. Isabella's are better too, others inferior. A bulkhead was being put in at considerable expense, to check a bend of Santa Rosa creek, that supplies the town with clear, soft water. Six miles northeast a road passes through the canyon, into Bennett valley. Santa Rosa and Bennett Valley Granges, often unite and hold their Granges alternately. Bennett valley furnished some of the best fruit at the Pomona feast. Great fields of corn, like those along the Mississippi, mature well, even if put in after wheat has drowned out.

What nice pork and hams they must have! What a land for pumpkin pies! Such fields of squashes!—the Hubbard triumphant. Fogs render irrigation almost unnecessary, and bring apples to a perfection that the dry air of San Joaquin cannot hope to attain. By the courtesy of Bro. Staley, Master of Santa Rosa Grange, I brought a Bellflower, Baldwin and Newtown pippin to Stockton Grange, which were tested, praised and thanks expressed. Bro. Emerson says Union Island, San Joaquin, can equal them. Santa Rosa Grange must come and judge next October.

Santa Rosa would be a quiet town to go to for health and to educate children. Two public schools and a private one are well conducted. The children seem nice. A town Normal School, Young Ladies' Seminary, Catholic Academy, English and Classical School and Pacific Methodist College are all doing well. A thrifty flower garden bloomed beside the Episcopal Methodist church and parsonage, bright with dahlias and pansies.

### Patroness Pomona.

At the late annual session of the California State Grange there was an election of officers for the ensuing two years. Among the number so elected occurs the name of Hattie E. Sprague, who was chosen to represent our worthy Patroness Pomona. Miss Sprague was born on her father's farm, a few miles south of Sacramento city, on the 28th day of August, 1858. (No breach of courtesy; we have the lady's consent to use the figures.) Her parents emigrated to California from New York State. She has one brother and one sister older than herself. Her education was obtained within the public schools of Sacramento county. At the last annual election of officers of Sacramento Grange she was chosen Secretary for the ensuing year.

At the commencement of the late session of our State Grange, Worthy Secretary Amos Adams, with his usual sagacity and good judgment, selected Miss Sprague as his Assistant Secretary, a position which her excellent penmanship and great self-possession eminently fitted her. After the election of new officers and the consequent retirement of Secretary Adams, Miss Sprague generously consented to retain the position of Assistant Secretary during the remainder of the session, for whose assistance we feel under many obligations. During the election of officers, it coming to the knowledge of Miss Sprague that a movement was on foot to elect her to the honored position of Pomona, she arose in her place and declined the honor of allowing her name to be used in connection with the office named, on the ground that she was not prepared. Neither did she wish to incur the expense of providing the paraphernalia usually required of the sister selected to personate Pomona. Some discussion ensued, and it was generally conceded that the extra rig should be dispensed with. With this understanding, Sister Sprague was almost unanimously elected as our fruit goddess for the ensuing two years. She subsequently appeared in the difficult role required of Pomona in conferring the fifth degree, with no ornament other than a few rare flowers. And without having had any considerable time for preparation, she did honor to the position in the performance of her appointed task.—*Cal. Patron.*

VISITING MR. DE TURK'S WINERY.—Several delegations of Grangers, during their stay in Santa Rosa, visited the large winery of I. De Turk, which makes a market for a large amount of grapes. The visitors beheld the processes of wine making, some partaking of the mash and some of the fine wines. Mr. De Turk expects to make 200,000 gallons this year. He has paid from \$20 to \$30 per ton for Mission and "foreign" grapes. Mr. De Turk was "among the Grangers" much during their presence in Santa Rosa and "took well."

The PACIFIC RURAL PRESS, published at San Francisco. This journal is the peer of any paper published, true to its name, it is a rural press, and is conducted by persons who are informed upon the subject of which it treats.—*Rural Spirit, Portland, Or.*



## AGRICULTURAL NOTES.

## CALIFORNIA.

## COLUSA.

EDITORS PRESS:—In compliance with your request, I will endeavor to send you one or two paragraphs, at least, ending in "ing." Since harvest, the farmers have been busy hauling and stacking straw and hauling and storing their wheat and other cereals; but at present harrowing is occupying their attention, volunteering and seeding their summer-fallows. However, some of my neighbors are already finished seeding and harrowing, and have gone a fishing. I see by the PRESS, that in some parts of the State the farmers are dry plowing. We do not believe in that way of doing it. Before we commence plowing here it has to be black all around and pouring down in the middle. That's what we consider a good sign of rain. Then, too, we wait until the foul seeds have sprouted enough to be killed by plowing. In speaking of implements, I use an old-fashioned V drag, made in the shape of an equilateral triangle whose sides are each six ft. The teeth are made of steel, and are placed six inches apart. When I first made it there were only four holts used in its construction, worth about 50 cents. The balance I got out of the woods. Perhaps some of the readers of the PRESS may consider this a droll implement for cultivating the soil with. So it is, but it works like a charm. On fresh plowed land you cannot see the mark of any but the corner teeth. It cuts every two inches, and consequently, every tooth fills the track of the preceding one completely. If any of the readers of the PRESS can furnish a more economical implement that will do as good work as the old-fashioned V drag constructed on the aforementioned plan, I will give double what mine cost to get one. In manufacturing the V harrow, it may be made any desired length, to suit the strength of the team, but the angle must be preserved if good work is to be ensured; i. e., at 6 ft. from the point it must be 6 ft. wide.—SUBSCRIBER, Olimpo, Cal.

## EL DORADO.

A MOUNTAIN DAIRY.—*Democrat*, Oct. 22: Filippini & Co., of Garden Valley, Georgetown township, this county, have a dairy of about 200 cows, which they keep during the summer months in the higher altitudes above Georgetown, and remove to the valleys during the winter. They brought their stock down last week, arriving at Garden Valley, Sunday night, and report the following as the result of the season's operations. They made something over four tons of cheese, at which business, being native sons of Switzerland and trained to it from childhood, they are adepts, and for their cheese they have an active demand. When we were at Garden Valley on Wednesday, Mr. Filippini and his assistants were packing a number of cases for shipment, several of which were destined for Eureka and other points in the State of Nevada. They also put up something over three tons of butter of remarkably fine quality, equal to the best we have over tasted, not excepting the famous products of the dairies of Orange county, New York. To these two products we may add 168 calves, many of them very high grades; also about 100 sleek shotes that have been reared and fattened principally on the huttermilk and whey that would otherwise have been wasted. Such butter as they exhibit will readily command 35 cts. per pound, equal to \$2,100 for their product for the season; their cheese, best and poorest, will probably average 12½ cts. per pound, or \$250 per ton, \$1,000 for the year's product; their 168 calves would be cheap at \$1,000, and their 100 hogs would probably swell the total close upon \$5,000.

## FRESNO.

MAMMOTH TUBERS.—*Republican*, Oct. 20: In our office may be seen what we call "some potatoes." The tubers are of the Peabody sweet variety, and were grown by Mr. I. N. Parlier, near Kingsburg, in this county. One of the potatoes weighs 13 lbs., and with three others from the same hill, turn the scales at even 30 lbs. The grain is not coarse, and the flavor, which we mean to try, is represented as very fine. Mr. Parlier secured the seed from South Carolina, and hopes to have some plants for sale in time for next season.

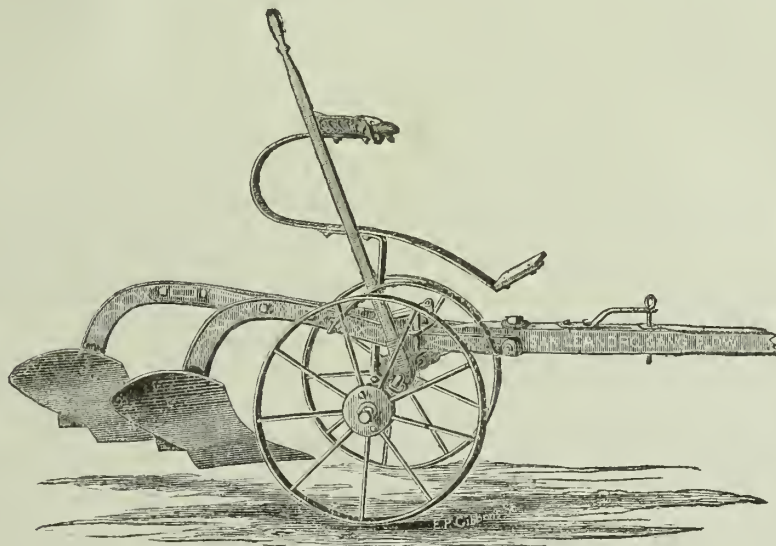
## KERN.

ALFALFA.—*Record*, Oct. 22: It is but a short time since the cry was spread in this valley that planting of alfalfa was being overdone; that the market was being glutted with hay. Farmers would surely starve to death on alfalfa. The price of alfalfa seed went down to 4 cents per lb., while in 1875 it was worth 40 cents. All said, "We must not put in more alfalfa." In spite of the cry, however, wealthy farmers, who saw the worth of the valley for stock raising, kept on planting, and not less than 4,000 acres were planted in the last two years by about three farmers. The result of their management is as plain as prosperity itself. They are now supplying fat cattle, sheep and hogs to the amount of the whole value of their farms every year, and increasing their breeding stock in the most studied manner. Alfalfa again is all the rage. The price of seed has advanced to 12½ cents. New ground is being broken, and the hurry is to get grass enough under way to meet the next year's demand. Every stockman who has made buying and selling a part of his business, states that the farmers of this valley have neglected their opportunity. A prominent horse dealer, W. P. McCord, who has traveled over

a great part of the State during the past summer, and who, from a long residence in this county, is well prepared to judge, says this valley beats anything he has found anywhere for stock of all kinds. He says it is the best horse breeding county in the State, for there is no grass equal to alfalfa for horses, and no county that can compare with Kern in quality and quantity per acre of that crop. Every farmer here who has made the breeding of horses a business, he says, is getting rich, and he gives the names, the extent of their farms, and sees and shows the certainty of their success. Those who have made their clover fields to carry hogs have reaped a harvest. We can mention several who have sold already for amounts ranging from \$450 to \$1,700, and some who are waiting for still higher prices are carrying this stock to the value of \$4,000 to \$6,000. Hogs of good breed will turn out 200 lbs. to the head in a year on alfalfa alone. At present prices of hogs suitable for market, those would bring \$10 per head, and a 40-acre field of alfalfa will carry 300 of them for that length of time. A San Francisco butcher loves to look over into a clover field and sort out stock for his market. He is sure of gentle animals, and such as have never been stunted for want of feed. The demand must increase for an indefinite period. Now is the farmer's opportunity; and, as the stock buyers say, if the Kern county farmer can't make a fortune raising stock in this valley, he would be a failure in any part of the world.

## MERCED.

FARMING OPERATIONS.—*Argus*, Oct. 22: Farmers generally have their crops housed or marketed, and many of them have their volunteer and summer-fallow fields sown and harrowed in, and are ready for plowing when the rains set in, however soon they may come. The wheat crop of the present season has been the most profitable for farmers of any for several years past, having placed many who were



NEW GANG PLOW OF THE SAN LEANDRO PLOW COMPANY.

deemed hopelessly in debt, in independent circumstances. Another such a season with fair prices will make California more prosperous than ever it was in the palmy days of placer mining and cattle raising.

## SIERRA.

SIERRA VALLEY ITEMS.—*Truckee Republican*, Oct. 20: D. B. Patterson, of Loyalton, was in town Monday, and from him we get the following Sierra valley items: All the farmers are through threshing, and are now busy hauling their produce to Truckee. The past season has been the most prosperous ever known in the valley. A careful estimate shows that over 200,000 bushels of grain were harvested. The hay crop, while not as good as last year, is far above the average. Hunting in the valley is good at this time. Ducks, geese and rabbits are very plentiful, and back in the hills deer and the larger game can be found.

THE BECKWITH EXHIBITION.—An exhibition of dairy and vegetable products was held in Beckwith, Sierra valley, on the 8th inst. Mrs. W. A. Sperry was awarded the first prize, \$15, for the best butter; Mrs. E. P. Dolly, of Sierra valley and county, second prize, \$10; and Mrs. A. P. Huntley third prize, \$5. Mrs. E. P. Dolly took the first prize for the best display of apples, cabbages, carrots and rutabagas; Mr. Debnam, of Humburg, first prize for best parsnips and beets; Mr. A. Trimble first prize for best potatoes and turnips; Miss A. F. Hubbard first prize for best onions, gooseberries, currants and jellies. Twelve contested for the butter premium, and six have agreed to let it remain as presented for one year. Two lots arrived too late for the exhibition, and were not examined by the judges, and one presented too small a quantity, and was ruled out by the judges.

## SONOMA.

EXPERIENCE WITH A SUBURBAN VINEYARD.—C. R. Livcy has one acre of land just outside the city limits of Healdsburg, for which he originally paid \$50. He had it thoroughly grubbed, cleared and fenced, and then planted it to grapevines. When the whole work was completed the acre stood him in \$300. That was nine years ago. He has at least 10 varieties of foreign grapes, which he procured from Sonoma and San Jose, at a cost of 10 cts. per

cutting. The one acre yielded him eight tons of grapes this season. Seven tons were sold to the Optimus winery for \$18 per ton only, or \$126, making a total yield to the acre of \$144, a profitable investment surely. Mr. Livcy takes a great deal of pains with his vines. After his first plowing he cultivates the ground about the roots of the vines very carefully with a spade or fork before the soil is too dry. Later, he plows again, throwing the dirt back against the vines. After this he harrows between the vines once or twice, as is found necessary; when he is done cultivating, the surface of the ground is left perfectly smooth. When the vines are in full blossom he sprinkles them with pulverized sulphur, and when the berry is half grown he pours a little carbolic acid on to the crown of each vine, allowing it to run down the main trunk and penetrate to the roots. By this means all insect life appears to be destroyed. The result of this careful treatment is, his vines remain in a healthy, thrifty condition. His vines are 8 ft. apart or 600 to the acre. He prunes at least twice a year, once in February and again during the summer. He does not permit the leaders to run all over the ground, and so run to wood, and waste the substance of the soil. By this method of pruning he believes a larger quantity of fruit is realized. Some bunches weigh 7 lbs.

## TUOLUMNE.

EDITORS PRESS:—We are daily reminded of the ravages of the codling moth, by the absence of fruit wagons going to and from the San Joaquin plains. There is not one now to 10 in former years. Apples are consequently bringing a good price to those fortunate enough to raise them successfully. A few days ago one load of very superior fruit was brought from Groveland, above Oak Flat. Not one moth had made its mark, proving apparently that the future apple region will be toward the high latitudes, where it is too cold to propagate the destructive insect. [This is a vain hope; the

## The San Leandro Plow Co.'s New Gang Plow.

We present on this page a cut of the San Leandro Plow Co.'s new gang plow, which certainly looks like an elegant and efficient implement. As will be seen, it is very simple in construction, having but a single lever. The seat is attached in such a manner that the weight of the driver assists in raising the plows instead of preventing it, as is the case where the seat is attached directly to the beams. Another peculiarity of this plow is that the driver pulls the lever back to raise it instead of pushing it forward. It is claimed for this method that he can exert his strength to much better advantage when so doing. Cuts of other new implements of their manufacture, including their new seed sower and their new reversible gang, will appear soon in our pages. The goods of this vigorous and energetic young company are attracting much attention, not only for their good workmanship and finish, but for the excellent and practical improvements embodied in their construction. Samples of their gang plows and other goods may be seen at David N. Hawley's, 37 Market street, San Francisco, at Holman, Stanton & Co.'s, Sacramento, and at the principal interior towns.

## News in Brief.

DEER are plentiful in Mendocino, Humboldt and Trinity counties.

FRANCIS A. WALKER, superintendent of the census, has resigned.

A GRADUAL reduction in the custom tariff is proposed in Spain.

GEESSE, ducks and cranes are making their appearance on the San Joaquin.

UPPER Calaveras county has a fine belt of comparatively untouched timber.

MINOR peculations have been discovered in the U. S. Treasury Department.

WILD pigeons in great numbers are reported in Putah canyon, Solano county.

THE Chinese quarter of Dutch Flat was entirely destroyed by fire last week.

THE American Humane Association have decided to bring into the Supreme Court of the United States a test case of the cruel treatment of stock in transit on railroads.

WITH a view to cover the deficit in the Hungarian revenues, it is proposed to introduce a tax on petroleum, revise the customs tariff and increase the tax on alcoholic spirits.

THE Putes are bringing in wild ducks from the Sink of the Humboldt, which they peddle about Virginia City. The say wild fowl are very abundant at Humboldt and Pyramid lakes.

SHAW, United States Consul at Manchester, has visited Oldham to inquire into the grievances of mill owners regarding the alleged presence of sand in bales of American cotton.

THE Socorro News says: The turquoise in the crown of Russia came from the mines of New Mexico nearly two centuries ago. It is the largest and finest stone of the kind in the world.

THE Lower Lake Bulletin says: Lake county abounds in mineral wealth, yet there is scarcely another portion of the State that has been so little prospected.

THE Chico Record says: Some days since a party of hunters on the Liano Seco ranch, broke camp, leaving their camp fire burning, and 400 or 500 acres of pasture land were burned over.

TRICKETT, the Australian oarsman, has sent a formal challenge to Hanlan to row a three-mile race on Crevecoeur lake for \$1,000 a side and the championship of the world, at about the end of November.

THE Cloverdale Reville says that the recent fires on the coast have driven a great many deer and fawn into the adjacent valleys, and the stages either bring them in or report them as numerous all along the line.

ADVICES from Panama of the 15th says: The Inter-oceanic Canal Company has bought the Grand hotel of this city for \$206,000, and it will be converted into offices for all departments of the company.

THE movements being made on the Donahue railroad survey between Cloverdale and Ukiah, are of that positive nature that the residents of this upper country are beginning to draw long breaths. The survey between those two places is completed, and every assurance given that the work will be commenced early in the spring.

SPRING WAGONS.—A. W. Sauborn & Co., of this city, who have been importing and selling wagons in California for 22 years, have an attractive advertisement in another column. They have the largest and most complete stock of wagons on the coast. Their specialty is first-class spring wagons, of which two handsome designs are shown in their advertisement. Those vehicles are made at Manchester, N. H., out of the finest materials, and by the best workmen.

THE Aetna Insurance Company.—Reports of the suspension of the Aetna Insurance Co. of New York have sometimes been applied to the old Aetna of Hartford. This is a great mistake. The Aetna of Hartford is the same staunch old institution as ever, as may be learned from an advertisement in another column.

COMMISSIONER of Pensions Dudley says that the next fiscal year the pension payments are likely to reach \$79,000,000, and the deficiency this year will be \$20,000,000, and everybody is astounded at the growth of the claims.





### The Planting of the Apple Tree.

Come, let us plant the apple tree,  
Cleave the tough groundward with the spade;  
Wide let its hollow bed be made;  
There gently lay the roots, and there  
Sift the dark mold with kindly care,  
And press it o'er them tenderly;  
As round the sleeping infant's feet  
We softly fold the cradle-sheet,  
So plant we the apple tree.

What plant we in this apple tree?  
Buds, which the breath of summer days  
Shall lengthen into leafy sprays;  
Boughs, where the thrush, with crimson breast,  
Shall haunt and sing, and hide her nest;  
We plant upon the sunny lea  
A shadow for the noontide hour,  
A shelter from the summer shower,  
When we plant the apple tree.

What plant we in this apple tree?  
Sweets for a hundred flowery springs  
To load the May-wind's restless wings,  
When, from the orchard row, he pours  
Its fragrance through our open doors;  
A world of blossoms for the bee,  
Flowers for the sick girl's silent room,  
For the glad infant, sprigs of bloom,  
We plant with the apple tree.

What plant we in this apple tree?  
Fruits that shall swell in sunny June,  
And redden in the August noon,  
And drop when gentle airs come by,  
That fan the blue September sky;  
While children come, with cries of glee,  
And seek them where the fragrant grass  
Betrays their bed to those who pass,  
At the foot of the apple tree.

And when, above this apple tree,  
The winter stars are glittering bright,  
And winds go howling through the night,  
Girls, whose young eyes overflow with mirth  
Shall peel its fruit by cottage-hearth,  
And guests in prouder houses shall see  
Heaped with the grape of Cithra's vine,  
And golden orange of the line,  
The fruit of the apple tree.

The fruitage of this apple tree,  
Winds and our flag of stripe and star  
Shall bear to coasts that lie afar,  
Where men shall wonder at the view,  
And ask in what fair groves they grew;  
And sojourners beyond the sea  
Shall think of childhood's careless day,  
And long, long hours of summer play,  
In the shade of the apple tree.

Each year shall give this apple tree  
A broader flush of rosy bloom,  
A deeper maze of verdurous gloom,  
And loosen, when the frost-clouds lower,  
The crisp brown leaves in thicker shower.  
The years shall come and pass, but we  
Shall hear no longer, where we lie,  
The summer songs, the autumn's sigh,  
In the bough of the apple tree.

And time shall waste this apple tree.  
Oh, when its aged branches throw  
Thin shadows on the ground below,  
Shall fraud and force and iron will  
Oppress the weak and helpless still?  
What shall the tasks of weary he,  
Amid the toils, the strife, the tears  
Of those who live when length of years  
Is wasting this little apple tree?

"Who planted this old apple tree?"  
The children of that distant day  
Thus to some aged man shall say;  
And, gazing on its mossy stem,  
The gray-haired man shall answer them:  
"A poet of the land was he,  
Born in the rude, but good old times;  
'Tis said he made some quaint old rhymes  
On planting the apple tree."

—William Cullen Bryant.

### Coming Garden Art.

[By CHAS. H. SHINN.

California, musically named, crowned with so many wildling flowers of field, ravine, and hight, possesses as yet no garden art. There is here no widely recognized and pleasurable triumph of gardens for their own sake; no unutilized successes of hybridizers of lilies, growers of seedling roses, believers in flower shows each month of the year's glowing circle. These things must come slowly, with wealth and leisure, and with the general development of other horticultural pursuits.

Gardening, as an art, needs quite as much study, if one would properly succeed with it, as is required to have choice music in one's house, or nice yachts to sail in, or swift horses for driving or riding, or fine hounds to course with. It offers many pleasures, and of varied grades. The needed expenditure can rise to almost any figure, as the departments of the gardening establishment are increased. The millionaire can find endless enjoyment in the living landscapes pictures which grow up under his thought and skillful direction; and the man of lesser means can produce the same beauty on a smaller scale.

The perfect and typical garden, the world over, is the result of human love for both fruit and flowers. No distinct line is drawn. An old pear tree is picturesque; the scarlet buds of the apricot, pink-tinted quince flowers, and fragrant apple blossoms are floral triumphs; fig leaves and olive boughs may even find place on the lawn; the purple amethyst and beryl of grapes—clusters peeping through luxuriant

leaves—is surely a source of as much artistic pleasure as one can gain from damask roses or heavy-petaled dahlias. The perfect garden has many departments, none of which are in any wise neglected. There are rosariums, and lily beds, and a corner for chrysanthemums, and nooks for pansies, and places where shrubs are massed. In Europe, names are found for each of these departments, and for many others. The pinetum is devoted to conifers, or trees with resinous sap; the aquarium contains water-plants, and is very pleasant when a true water-garden; the arbustum is occupied with shrubs; the arboretum proper is for trees; the vino garden has ivies, species of vitis, and vines of various countries. In each of these departments the class named is predominant; but (and here the true art is revealed), they must all be so arranged as to form a part of a harmonious whole.

If, as an enthusiast must surely wish, plant-house and conservatories can be had, another realm is revealed. One house can be devoted to orchids, another to cacti, others to ferns, succulents, camellias, azalias, heaths, foliage plants, palms, begonias and many other fine classes. With the growth of these, the artistic arrangement and the excellence in growth displayed are most important. Conservatories should furnish flowers for each day in the year, and the planthouses attached should each express its distinct and beautiful meaning. The propagating houses should be so managed as to keep the grounds amply supplied, without waste or worry, with a succession of bloom and foliage. And it takes a great deal of care and judgment to do this. Knowledge and patience must go hand in hand with an abiding and tireless enthusiasm on the part of the gardener. If a wealthy man were searching for some one to create landscape forms, and beautify his chosen home with bloom, fragrance, shades of emerald, he should choose the gardener of culture, of education, of botanical knowledge, and of personal affection for plants. For there are some men who can coax and persuade flowers into all sorts of sudden wonders.

The first lesson for people to learn is, that each home must have a garden. The second lesson is, that it need not be costly, to give a constant pleasure. But the most important lesson of all is the old lesson of prudence, of not being hasty, of cutting according to your cloth, as this saying is. A small garden well kept is better for one's self, and has a better moral affect upon the outside world, than a grand place gone at last to ruin, or spasmodically taken care of. An acre garden can be made to keep many men employed, and bless hundreds of the sick and poor and friendless with ersam-tinted roses, frail cups of anemones, star-eyed delphiniums, and hosts of old-time favorites, here to be nameless. A plot but 10 ft. square, if sunnily located, and of rich, kindly soil, can be developed into so dainty a flower-nook that passers by shall smile, and feel warm-hearted toward the world for many hours after. The cherished and successful garden becomes a social element in the life of a community; it is the type of order, beauty, usefulness, triumphs of eternal good; it sets forth hourly to all the world those harmonious laws of form, color, and fragrance which have appealed in every age to the art and literature of humanity.

Because soil and climate have given Californians so many advantages in making artistic gardens, it is to be hoped that they will not content themselves with being merely optimistic talkers, sybaritic revelers in climate; but will patiently endeavor to make the gardens of the Pacific coast pre-eminent for their loyalty to landscape arts, their truth to the requirements of the age and place, their splendid successes, and their wise originality. Let us be an out-door, garden loving, horticulturally inclined people, in these years to come; not imitating too servilely from the gardens of more rigorous climes, but having here in well-guided but untrammeled perfection a school of landscape gardening second to none other in this world.

Already one begins to find the promise of coming garden art. It is not so much in the cities as it is in the towns and villages, and fragrant nooks in the heart of the pine-clad hills. San Francisco, though it has florists and many gardens, and a profusion of flowers on grand occasions, is not intensely floricultural. The few flower shows that have been held here were rather haphazard, ill-advised and badly managed affairs, in which the plants were not more than half labeled; the wealthy amateurs were notably absent; and professional jealousies of a few plant growers were brought vividly and unpleasantly to the front. San Francisco likes to talk about flowers, but her enthusiasm is a trifle antique, pedantic and conventional. San Rafael, Oakland, San Jose, Santa Barbara, and any one of a dozen other places, could fairly shame and bewilder her with their revelations of "garden art," for careful, painstaking and accurate labor with that queen of flowers, the rose. No other group of people anywhere on the Pacific coast have done so much as the Santa Barbara rosarians. Within the past two years their well-earned success and fine enthusiasm and hearty self-helpfulness are notable, and should act as a tonic to this sleepy peninsular city, which is so large and so indifferent to horticultural progress. In the coming days the use of trees, shrubs, hardy vines and grass will turn the desolate sandhills into charming garden homes. It is only the most ignorant neglect and selfish stupidity which prevent newer streets of San Francisco from being made into

locust-lined avenues, to check the wind-blown sands and to make this a more genial world in which to live.

But while a few hopeful ones are preaching and trying to practice such reforms in this cities of the State, the rural and suburban dwellers have begun the beautiful work. In these autumn days the parents and children are planning for new gardens; are buying seeds and bulbs; are gathering the autumn asters, chrysanthemums, and immortelles, for gifts of an hour, remembrance of a lifetime. Though their gardens are now small, and limited in variety, yet the children thus trained in the alphabet of blossoms will hereafter shape them into whole sonnets, lyrics, and epics of the future. This one shall make in the heart of some great city a garden nook, perfect as a milk-white cameo; to that one it shall be given to weave flower bells, trailing vines, and traceries of fern and foliage in the midst of sloping hills, by the rippling of a glimmering stream and the laughter of waterfalls; in the hands of yet another, with wealth and judgment his, all the multitudinous notes of Nature's vegetable world shall be shaped to a supreme utterance, a landscape almost as perfect as that which was planted in the Garden of Eden. If only the children of California will learn to love the flowers of earth, the floricultural triumphs of the next century will center in this State, and cluster about the palaces of our coming realm.

It is time to begin in good earnest the planning of that coming garden. Only a few more weeks of this golden autumnal weather, and the dark rain clouds will rise from the south and drift through our hollow canyons, and fill the broad vales, and moisten the brown stubble-fields till they brighten into emerald. Already the orchards are growing leafless; and busy hands gather the Baldwins, Newton Pippins, and Winter Pearmain apples, and hard-cored Easter Beurre pears. Tis, high time, to consider thy garden, lover of bloom, believer in the saintliness of lilies, the music of hyacinth bells, the delight of the earliest yellow crocus, and rich purple anemone peeping shyly through the damp soil in February and March.

The shrubs must soon be pruned. The horticultural manuals are dull and weak, and rather hopeless reading. Imagine a person going out to prune a rose bush, and sitting down beside it with shears in one hand and the "Professional Gardener's Handbook of Pruning" in the other, trying to spell out the process, as one would look for words in a dictionary. One may read the manuals somewhat, but it is best to live in the garden, and watch the plants grow. Then, standing beside the rose bush in autumn, you shall know its needs, and guide it rightly, and help its innate desire to blossom freely and beautifully. For in the nature of plants, as in the nature of human beings, there is a desire, oft thwarted, oft ill-guided, but never quite lost—a desire to "make the best of themselves."

The liberal and judicious application of the most approved fertilizers to the surface of the garden beds is properly the next operation after pruning. It is quite marvelous to observe how much one can strengthen poor or worn-out soils, and ameliorate those of a harsh and stiff nature, until by constant care that rich, friable, easily worked combination, retentive of moisture, yet easily drained, is secured. The dwellers near the hills must gather up the precious layers of decayed leaves and vegetable matter from the hollows of the shady ravines where ferns find happy homes. The turf from old pastures, fertile dust from this highway, sifted sand from the nearest stream, tufted moss from the forests, (for hanging baskets) and many other needs of the garden world must be obtained as opportunity offers, and stored up for use. After a while, one will learn how to make a compost heap, taking the clippings of vine and bush, the fallen leaves, the soap-suds, and vegetable refuse, and spreading it in layers with wood ashes and hone dust, until the whole is fit for use. Here is conservation of energy exemplified. The same vast yet simple laws which rule the changes of seas and continents are at work in the rod-square garden. Wherefore, be reverent; it is no small thing to be absolute ruler of the destinies of so precious an epitome. Neglect your chrysanthemums, and is not the Celestial Empire wounded? Leave the irises untended, and falls there not a shadow on the knightly fleur de lis? Let the roses perish, and is not the spirit of poetry from Boccaccio to Tennyson sore dismayed? Forget the needs of the pansies—bust who, indeed, has ever forgotten those lovely, appealing faces? You should meditate on these things while you are clearing up the littered walks and applying the best of fertilizers to the waiting soil.

It may be noted that the people who come the nearest to true garden art in their homes nooks are lovers of pictures. There is nothing like the glance of a landscape painter for combining real glimpses into a no less real whole. From many half suggestions the ideal landscape is developed. Effects of mingled light and shade, influences and interdependences of different classes of foliage and form of growth, are shown best in paintings and engravings. No unaided imagination can produce half as good results.

These bits of combination shown in the illustrations of the better class of horticultural journals are of the same nature and equally helpful. Grow into this mood, and you shall not open a magazine nor read a book of travels, nor visit an art gallery, without strengthening and broadening the garden spirit alike from

Thibetan pines and Alpine gentians. The foundation of garden art is to know how Nature plants her "wild gardens" and groups her indescribable fascinations of form, color and fragrance. This is the lesson so well and wisely taught by that leader in preaching the gospel of the coming garden realms, William Robertson of Loudon, editor of *The Garden*, author of no end of artistic and practical books on horticulture in its higher phases. When we study Nature's way, there can be no more characterless gardens, but each will tell its own sweet story of individualism, and the world in that millenium will abandon phrenology and physiognomy; for, to know a man's character, you shall only have to study his garden.—*The Californian*.

### The Glorious Sunshine.

How California is blessed with continual sunshine during the summer months, we, who have lived here and enjoyed her glorious climate so long, almost fail to realize. In Merry England, so called, as in Ireland and in other parts of the world, the lack of sufficient sunshins is the greatest drawback to prosperity, and in consequence the crops the past season have been a failure. We are brought to these reflections by the perusal of a published letter of the Hon. John Bright, of England, who is one of the best friends of the poor on earth, and who is ever ready to do what he can to ameliorate their condition. In this letter, addressed to complaining tradesmen and mechanics, Mr. Bright says:

"Prices are high enough and good enough; what we want is sunshine and more heat, and about that there is no remedy. But if the want of sun and genial summer affects and impoverishes the farmer, it is the impoverishment of those connected with land that causes a general falling off in our home trade, and depression, more or less severe is felt through almost all the industries of the country. It is not foreign tariffs, it is not commercial treaties, it is not what resists or is being done by foreign governments, which is now or has recently been doing us harm; it is the diminution in the wealth of the country, owing to the reduction in the produce of the soil, and this only, which is the cause of the depression that has prevailed here during the last four or five years. The best authorities calculate that during the harvests of the last three years a sum of not less than £200,000,000 sterling has been lost to the country as compared with the result if we had the blessing of genial summers and of average harvests."

Compared with the laboring classes of Europe, those of California have no cause to complain. With the richest native soil, capable of producing anything that will grow in the temperate zone, almost continual sunshine, every condition the agriculturist and horticulturist could desire more favorable than elsewhere—under such circumstances we ought to be the happiest people under the sun. But still we have some who are discontented. We wish they could go to Europe and see the differences. They would never, never growl again.—*Yolo Democrat*.

ON TRAINING.—The one who can keep a cool head in times of excitement always has the advantage. It is sometimes mistaken for indifference, but it is a very different trait of character. Mothers, in training their children, should begin as soon as possible to teach this to a child. Temper, if allowed to go ungoverned, soon holds complete sway. Men, in training animals, take care that nothing shall make them vicious or ugly tempered; but how many think of that in training a child? How long would a horse stand quiet if some one stood behind and constantly goaded him with a small, sharp instrument? And yet children are expected to be as amiable as possible under a constant fire of nagging, teasing, and a parent's ill humor. Days go by without a kind word spoken to them. When asked to do things, it is a rough command. Yet they are expected to be deferential, obedient, careful, thoughtful and kind in all their address to a parent.

SEWING.—It is not the unmitigated evil we sometimes think, this overflowing sewing-basket. It is a very good anchor sometimes for girls who would otherwise put in this time in a giddy, trifling way, neither giving or receiving good. Better a quiet sewing hour at home than a handkerchief flirtation in the street. Where the women of the family sew together for an afternoon or evening, it is often the pleasantest portion of the day. I know families where one reads an interesting book while the others sew, thus beguiling the time and taking from it all sense of weariness. The reading time is looked forward to as real entertainment and much profitable information is thus obtained and idle gossiping talk is kept from entering in. Such a system tends to bind in harmony mother and daughter, and is "a tie of home" that will look always dear in the retrospect.

A RECENT article in the *New York Tribune* says that the oleander is such a deadly poison that a horse which had eaten a bunch of its leaves died in a short time. Persons picking and eating its blossoms have also died from the effects. The branches divested of bark and used as skewers have poisoned the meat roasted on them and killed seven out of 12 persons who partook of it.

THEY begged him to play a little. He seemed to feel bashful at first, but after a while began to paw the ivories vigorously. "What power!" said a listener to the owner of the piano. "Yes," exclaimed the latter in alarm, "he seems to have considerable muscle; but he ought to know that this isn't a gymnasium."



## Chaff.

We know a man who is such a fanatic in the belief that continual progress is essential to his happiness that he will not drink milk because he thinks it is going back to "first principles."

"BEAUTY is ever young," sings the poet. It is—it is. Look at us. Only 23 thirty years ago, and not a union-to-day. Photographs for sale at all the principal news depots and drug stores.

"DOMESTIC BLISS—kissing the maid of all work." We have forgotten the exchange that is so far out of the way as to make the above remark. Bliss forsooth? Is being "snatched baldheaded." What he calls bliss?

A YOUNG lady admitted to her mother that her beau had kissed her on the cheek. "And what did you do?" asked the old lady, in a tone of indignation. "Mother," said the young lady, "I cannot tell a lie; I turned the other cheek."

"Is there an opening here for an intellectual writer?" asked a seedy, red-nosed individual of an editor. "Yes, my friend," replied the man of quills; "a considerate carpenter, forseeing your visit, left an opening for you; turn the knob to the right."

THE following "notis" was pasted on the door of a Virginia blacksmith shop: De copartnership here to fore resisting betwix me and Mose Skinner is hereby resolved. Dem what owes de firm will settle wid me, and dem de firm owes will settle wid Mose.

## The Child Hero.

The statue of the child hero, Joseph Bara, has been erected in the church square at Palaiseau, on which a chateau of the Condes, in which he was born and reared, looks down. Joseph Bara's father was a woodranger on the Palaiseau estate of the Condes, and his mother was a domestic in the chateau. She was a widow when her son, at the age of 12, enrolled himself as a volunteer. His head had "taken fire" at a patriotic meeting where Carnot's appeal for 450,000 men was read before him.

The boy learned to play the fife and drum, and furnished the arms and cleaned the horse of a major of Spahis who had fought in India under Bussy. This officer, this little drummer, followed to La Vendee. To harass and throw the enemy off the track, this major often sent his little drummer running through the brush to beat here and there the drum, or sound the fife. Bara was one day surprised by a band of peasants. He was a boy of delicate features and aristocratic air. The Vendean thought him some nobleman's child who had been perverted, and told him that if he cried "Live the king!" they would let him off. He answered by beating his drum. "Are you deaf?" roared a country brute, who took aim at him. "I am a republican," replied the boy. "Ah! young brigand, have a care! Give up your drumming, and, like us, cry, 'Live the king!'" "Live the republic!" cried Bara. Twenty firelocks were discharged at him, and he fell dead. Horrified at the execution, the Vendean fled. But some of them returned, picked up the corpse, and respectfully bore it to the camp of the Blues. The Convention decreed a pension to Bara's mother, and ordered that an engraving of the little drummer's execution be made and hung up in every primary school to show what a child can do when inspired by a noble sentiment. Chenier, in "La Chant de Depart," alluded to Bara's execution, and David (d'Angers), who found one of the engravings ordered by the Convention, chose his death as a subject for his chisel in 1837. The statue at Palaiseau represents the youthful hero in the uniform of a Hussar. A drumstick has fallen from one of his hands, the other he still holds. The boy has been struck with the 20 bullets, but the expression of heroic exaltation still lingers on the delicate young face.

THE LESSON FOR BOYS.—It is a grand thought that from the woods of Ohio, a boy could come forth, nameless and fortuneless, without family, without influence, with nothing but his strong arms, quick brain and the bold hopes which are the birthright of American boys, and challenging the rough world for a contest, at the call of duty, as a soldier, he could win for himself a glorified name; that, following that same duty, he could for 18 years, as a representative in Congress, so bear himself as to become the acknowledged leader of that august body; that lifted still higher he could assume and wear with a grace and dignity all his own, the highest honors of the republic; that at the very pinnacle of his power, and with the full fruition of his hopes almost within his grasp, receiving the stroke of an assassin, he accepted the decree without a murmur; and while anxious to live, without a protest or complaint, with the same gentleness and dignity which gave a charm to his life, waited, with unblenching eyes, while death drew near. There is nothing loftier than this in all history. It exalts American manhood everywhere, and makes men exult, even while they weep. The country sorely needed more years of the life of its dead President; but he who has gone needed nothing more, for though from poverty and obscurity, he had not 50 years in which to do his work, he so lived and wrought that the measure of his life is full. Beside Lincoln and Washington he takes his place, and around his dust all Christian peoples stand as mourners.—*Judge Goodwin.*

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of sixteen letters.  
My 16, 15, 12, 9, is an animal of rather irregular motions.  
My 3, 2, 7, 8, is a woman's name.  
My 10, 15, 4, 13, is a numeral.  
My 1, 13, 11, 5, 6, is a city in France.  
My 6, 2, 14, 16, 5, are much used in war times.  
My 1, 7, 13, 9, is a poet.  
My whole is a part of Wolsey's advice to Cromwell.  
E. H. B.

## Transpositions.

1. Transpose a period of duration and form a portion of an account.
2. Transpose a pipe for conveying water and form a covering for the foot.
3. Transpose an English nobleman and form genuine.
4. Transpose to devour and form a plant.
5. Transpose a part of the body and form to injure.
6. Transpose a boy's name and form a falsehood.
7. Transpose a measure and form an entrance.

F. J. B.

## Cross-Word Enigma.

My first is in beach, but not in shore;  
My second is in much, but not in more;  
My third is in birch, but not in maple;  
My fourth is in lock, but not in staple;  
My fifth is in watch, but not in time;  
My sixth is in eagle, but not in dime;  
My seventh is in song, but not in ditty;  
My whole is a large western city.

LEO. P.

## Floral Acrostic.

I've a message first for thee,  
Ere thy transient beauty fade.  
Sweets to the sweet we freely give  
For friendship's sake, sweet maid.  
Now your blush has won my heart,  
Cruelly pray do not use.  
But come down to me sweet maiden,  
And my chaste love don't refuse.  
Will you pledge me, fairest lady,  
As my love I offer thee?  
Thy health and truth I'll ever cherish,  
And solace in adversity.  
My initials you will see,  
Show I attach myself to thee.

JENNIE.

## Conundrum.

Why is the letter G like a great noise?

JERRY.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—Intoxicating liquor.  
HIDDEN RIVERS.—1. Obl. 2. Lena. 3. Dwina. 4. Ural. 5. Oxus. 6. Don.  
PROBLEM.—Add one to nine and ten (X) is the result; take X from IX and I is left.  
CROSS-WORD ENIGMA.—North Carolina.  
FLORAL BOUQUET.—1. Mar-i-gold. 2. Lie-lac (Lilac).  
3. Verb-e-na (verbena). 4. Chrys-an-themum.

## Aunt Louisa's Pudding.

"One, two, three, four, five! O what beauties! Which biddy do you think laid 'em? I'm almost certain sure it was dear old Fluffy. Bless her heart! isn't she just the darlingest—"

"Whew, Mill! You quite take my breath away. But have a care; those eggs are not cobblestones!"

The warning came too late. Crash! went the eggs gathered in Milly's white apron. She had, without thinking, leaned against the barrel that held the nest, in her effort to discover additions to her store.

"O, Lenny! do you think Aunt Sice will scold awful?" exclaimed Milly, looking ruefully down at her apron. The yellow fluid was already oozing through the pretty barred muslin.

"I daresay you'll catch it," Lenny replied. There was not a spark of sympathy in his tones, yet Lenny was not a bad boy.

Milly did not quite understand what her cousin meant when he said she would catch it, but she felt that it was something to be dreaded. Two great round tears gathered in her eyes.

"I wish—papa would come and fetch me home," she cried. "Who would ever think the nasty eggs would mash so easy! O, dear! what shall I do?"

Just then the pleasant voice of Aunt Louisa was heard at the kitchen door, calling, "oomie, dears, be quick! I'm waiting for the eggs. The pudding will be spoiled if you don't make haste."

"And I do so love Aunt Sice's puddings!" cried little Milly. Choking back a sob, she answered, "I can't come Aunt Sice! I'm awful!"

She had dropped her apron, and its sticky contents were streaming down to her very toes. The soft laugh that greeted her as Aunt Louisa discovered the woful plight she was in, at once reassured her and put her at her ease.

"Am I not a funny pudding, Aunt Sice? I hope you won't get frightened and give me to the beggarman, like Mrs. Tom Thumb did, you know!"

"Run Lenny," her aunt cried playfully, "and see if there happens to be a beggar passing!"

Then she caught Milly up in her big calico apron and ran with her to the house. There she was made as clean and sweet as ever. Lenny found a new nest of eggs, and Aunt Louisa's pudding turned out a famous one.—*Our Little Ones.*

"GREET all the brethren," says St. Paul, "with a holy kiss." Now, why will so many pastors misinterpret the word "brethren?" asks the *Chicago Journal*. Simply because they are aware that the brethren include—or rather, embrace the sisters. (Somehow this don't go right. It should be *vice versa*.)

## GOOD HEALTH.

WHAT IS Pepsin?—The *Scientific American* answers the question as follows: "Pepsin is a nitrogenous substance existing in the gastric juice, and as a viscid matter in the peptic gland and on the walls of the stomachs of animals. The mucous membrane of the stomach (of the hog, sheep or calf, killed fasting) is scraped, and macerated in cold water for 12 hours; the pepsin in the strained liquid is then precipitated by acetate of lead, the deposit washed once or twice by decantation, sulphureted hydrogen passed through the mixture of the deposit with a little water to remove the whole of the lead, and the filtered liquid evaporated to dryness at a temperature not exceeding 105° Fah. As met with in pharmacy the strength of pepsin varies greatly. It is often prepared by simply mixing with starch the thick liquid obtained on macerating the scraped stomach with water, and evaporating to dryness. The composition of pepsin is not positively known."

SIXTY-FIVE DAYS IN A BATH TUB.—Dr. D. Prince in the *St. Louis Med. and Surg. Journal*, describes the treatment of a case of rheumatism with necrosis of the femur, bed sores and great emaciation. He was suspended in water by means of straps so as to be completely submerged except his head, and kept in this condition 65 days and nights. He screamed with pain if taken out, but was comfortable in the water. Some improvement took place, particularly in the sores, which were partially healed, and though high hopes of a cure were excited, he died at the end of 65 days from exhaustion. Two grains of quinine were given daily, and two quarts of salt put in the water, which was renewed daily, besides whenever defecation or urination occurred, but strangle to say the temperature of the water is not mentioned.

EXPECTANCY OF LIFE.—Insurance companies are aware of the incredulous weakness of those whose lives they assure, and have therefore compiled numerous tables of expectancy of life for their own guidance, which are carefully referred to before a policy is granted. These tables have been the result of careful calculation, and seldom prove misleading. Of course, sudden and premature deaths, as well as lives unusually extended, occasionally occur, but the average expectancy of life of an ordinary man or woman is as follows: A person 1 year old may expect to live 39 years longer; of 10 years, 51; of 20 years, 41; of 30 years, 34; of 40 years, 28; of 50 years, 21; of 60 years, 14; of 70 years, 9; of 80 years, 4.

THE JAPANESE.—The Japanese have much to learn concerning health and disease. If we may credit the statement of the *New York Herald*, they do not believe in such a thing as contagion, and would be as willing to live in a house with a friend who had even so virulent a disease as the small pox, as if he were sound and in perfect health. Thus, when cholera is declared by the board of foreign physicians to be an epidemic in Yokohama, and the Japanese government, at their instigation, take measures to prevent the spread of the disease, the natives object to be placed in quarantine, and use every method in their power to escape from their houses.

DEATH CAUSED BY NEWS OF DEATH.—The death of the President caused the death of two persons in the town of Flint, Michigan. One, a carpenter, who had worked as usual during the day, and to all appearances was in good health. He heard the bell tolled and exclaimed: "The President is dead," and died almost instantly. The other, a young lady who had been sick for some time, said, when she heard the bells, "The President is dead and I shall soon be with him," and died before the bells ceased tolling.

INTELLECTUAL WORK ON THE CIRCULATION.—What are the effects of different kinds of intellectual work on the cerebral circulation? This question M. Gley, a French physiologist, has attempted to answer by experiments made upon himself. When he applied himself to a subject which he had a difficulty in understanding thoroughly, and had, therefore, to concentrate all his energies upon it, the rhythm of the heart was far more accelerated than when he took up some matter with which he was well acquainted.

CALOMEL IN THE HUMAN SYSTEM.—Considerable doubt has been expressed whether calomel is or is not liable to decomposition in the human system, with production of corrosive sublimate. According to experiments described by P. Hoglan (*Chem. News*) calomel is slowly changed by the action of water at the temperature of the body with formation of corrosive sublimate; and this change is accelerated by the presence of citric acid, sodium chloride, or sugar.

MARRIAGES BETWEEN RELATIVES.—A Berlin professor is authority for the statement that among Roman Catholics who prohibit marriages between persons who are near blood relatives, the proportion of deaf mutes is 1 in 1,000; among Protestants, who are less strict, the proportion is 1 in 2,000; while among Jews, who encourage intermarriage between blood relatives, the deaf mutes are as 1 in 400.

CARBUNCLES.—It is recommended to treat carbuncles and boils with pure carbolic acid, injected hypodermically in sufficient quantities to thoroughly saturate the swelling.

## DOMESTIC ECONOMY.

## Hints.

A correspondent of the *Germantown Telegraph* says that the following are a few of the things she has learned in her own house:

That if we wish to prolong our lives we should put one day between washing and ironing.

That a tough beefsteak may be made eatable by mincing it pretty fine with a chopping knife and cooking quickly in a pot with a close cover, to prevent the steam from escaping.

That salt pork will be as nice nearly as fresh, if soaked in sweet milk and water, equal parts.

That clabbered milk is better than water for freshening salt fish.

That half a cup of vinegar in the water will make an old fowl cook nearly as quickly as a young one, and does not injure the flavor in the least.

That liver should be thrown into boiling water after being sliced thin, and then fried in lard or dripping.

That piecrust will not be soggy if it is brushed over with white of egg before the fruit is put in.

That a piece of cork is better than cloth for applying brick dust to knives.

That ripe cucumbers make a good sweet pickle.

That apples which take a long time to bake should have a little water in the pan.

JUGGED RABBIT.—Skin, dress and wash the rabbit, cut it into pieces, dredge them with flour and fry in boiling butter. Have ready a pint and a half of gravy, made from a pound and a half of beef gravy, and thicken with a little flour. Put this into a jar, add the pieces of fried rabbit, an onion stuck with a few cloves, a lemon peeled and cut in half, and a good seasoning of pepper, cayenne and salt; cover the jar down tightly, put it up to the neck into a steppan of boiling water, and let it stew until the rabbit is quite tender, taking care to keep the water boiling. When nearly done, pour in a gill of wine, and add a few forcemeat balls; these must be fried or baked in the oven a few minutes before they are put to the gravy; serve with currant jelly. This is a rather troublesome dish to prepare, but if carefully attended to it will be found "to pay" twice over.

CABBAGE ROLLS.—Parboil a cabbage whole; pick out all the leaves, lay them flat on a cloth, and cut off the thick part of them. Take some well-flavored sausage-meat, put a small portion on a piece of leaf, and roll it up into the shape of a sausage; roll three or four more leaves round it neatly, and tie up with thread carefully. Having made a number of these rolls, which should all be of the same size, line a saucepan at the bottom with fat bacon, dispose them on it close together, and add enough stock just to cover them, with an onion stuck with cloves, a bundle of sweet herbs, pepper and a little salt. Let the whole simmer gently for a couple of hours. At the time of serving remove the strings, dispose the rolls on a dish, make a sauce with some of the liquor, and pour it over them.

PAPERING WALLS.—Papering and painting are best done in cold weather, especially the latter, for the wood absorbs the oil of paint much more in warm weather; while in cold weather the oil hardens on the outside, making a coat which will protect the wood instead of soaking into it. Never paper a wall over old paper and paste. Always scrape down thoroughly. Old paper can be got off by damping with saleratus and water. Then go over all the cracks of the wall with plaster of Paris, and, finally, put on a wash of a weak solution of carbolic acid. The best paste is made out of rye flour, with two ounces glue dissolved in one quart paste; one-half ounce powdered borax improves the mixture.

TO DETECT ADULTERATION IN 'GROUND COFFEE.—Place a few grains in a saucer and moisten them with a little cold water. Chicory will very soon become soft, while coffee will take a long time to soften. Again, fill a tumbler full of water and gently drop a pinch of the coffee on the surface. Pure coffee will float some time, while chicory or other soft roots will soon sink, changing the water to a brownish or yellowish color.

SAUCE FOR WILD FOWL.—Take one salt-spoonful of salt, half to two-thirds do, of cayenne, one dessertspoonful of lemon-juice, one do, pounded sugar, two do, of Harvey sauce, and three of port wine. To be well mixed, heated and poured over the bird, it having been previously sliced in several places, so that the sauce may mix with its own gravy. The bird to be put in the dish without anything.

An approximate estimate of the gold and silver production of the United States for the fiscal year 1881, is given by *Spooford's American Almanac*, as \$36,000,000 of the one and \$37,700,000 of the other. The indications are that the production of these metals during the current year will very considerably exceed these figures.

JOHN C. FREMONT has resigned as Governor of Arizona, and Gen. N. P. Banks is thought to be his successor.





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A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, October 29, 1881

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## The Week.

The clouds are flying low, and darkness broods over the landscape even at noonday. The air is charged with moisture and with the peculiar quality which tells the senses it will rain. The telegraph announces that downpours have already come to distant parts of the State, and no doubt this Wednesday night will bring a general soaking rain which will fairly usher in the new season and clothe the field and hillside once more with the vernal garb which becomes a California winter. It is well; the return of growth and the growing season will be gladly welcomed, for hosts are eager to begin upon the plans for plowing and harrowing, planting and sowing which they have been laying during the leisure autumn months. There will be more interest in agricultural operations this fall than has usually prevailed. The season has been one of good prices as a rule, and many who had become discouraged during the two or three preceding years, have now plucked up new courage and will advance their enterprises with zeal. With a fairly good season there will be a much greater production of staple articles next year. The appreciation in value has enlivened nearly all kinds of grain, and as they are of a season's growth, the area can speedily be increased and the crop enlarged. Wheat, corn, barley, rye, oats, beans—all have done well, and all will enjoy the planter's interest. One cannot increase the number of milch cows nor the number of bearing trees as easily as the number of acres under grain, but the disposition in all the specialties is good and the prospect favorable, and this will lead to the full utilization of all available productive forces. Thus shall we advance in general prosperity and comfort.

## Removal.

The building, No. 202 Sansome street, in which our business offices have been situated for four and a half years, is to be reconstructed, and the removal of our business to other quarters was a necessity. We have chosen to go to the new building upon the northeast corner of Front and Market streets, where we have secured ample space for comfortable and well-lighted offices. The situation is near to the seat of the great wholesale trade in produce and manufacture; to the manufacturing of implements and machines, and to the main avenues of travel and transportation. The move will, we trust, make our establishment more accessible than before to our friends and patrons, and by giving us more space for the transaction of our growing business, may enable us to work even more efficiently for the benefit of our patrons and the public interest.

The diagram of streets, which appears elsewhere in this issue, will show plainly our new location. We shall have better means of access and egress than we have heretofore enjoyed, as the stairway at 252 Market street and the elevator, No. 12 Front street, both communicate with our office. Our elevator is propelled by water power, and made specially safe. We shall be pleased to see all old friends and hosts of new ones, and to give them a full welcome.

Visitors are advised to ascend by the elevator, and then take their choice of ways in descending.

We would at this time remind those in arrears for their subscriptions to the Press that now is an opportune time to favor us with remittances. The harvests of various kinds are now ingathered and, for the most part, turned into coin. Put us not off to the last, but let us have our small dues, and we shall all enter together, strengthened in the work of another season, which we trust may prove a growing one for you and for us, and for the delightful land in which we live.

## The Debris Inquiry.

The San Francisco citizens committee has made the round of the ruined farms, and the ruining mines and returned therefrom. Rumor has it that the individual members of the committee have freely acknowledged that they had no adequate idea of the destruction by debris, until they came to face it. We have no doubt of it. The fact is that very few people in the State, comparatively speaking, do know the breadth and depth of the wrong, which has been done to the valley homes and farms by the mountain mines. We are very glad that this committee has had its eyes filled with the desolation, for it will be apt to put forth a report which will be more likely to arrest attention, than the statements of the interested parties themselves.

There seems to be renewed indications that this question of debris injury is coming around to the only true basis upon which it can be placed, and that is, that the party liberating this destructive mass of material must take care of it, so that the property of others is not injured. In the general good feeling born of the association of all parties at the mellowing dinners which were dispensed, there has arisen a hope that the whole difficulty may yet be settled by the miners accepting the issue fairly, as they ought to have done at the first, and it is promised that they will build stone dams of their own and imprison the slickens in the mountain canyons. The miners say (that is the report), that they would have done this before if the farmers had not "taken the law on them," and that now, as they have become acquainted, and have eaten and drank together, they bold out the hope that the recourse to law may be forgiven, and the miners assume the honorable policy which they would have adopted at first had it not been for the thunders of the courts. There is a poem of such sweetness in this idea, that we dislike to issue a single jarring word. We hope it will be done as the miners now indicate, and that they will take steps at once to see that no more slickens are permitted to ruin the ranches and threaten the water courses of the State.

In view of this friendly hand-shake, and the promise of restraining their own debris by the miners, how egregious appears the wrong which has been done the whole State by the debris tax. It seems all the more abominable now that the chief party in interest declares that it has all along been minded to care for its own debris and would have done so had not the law's redress been sought. And when one reads of the magnificent stone dams, which the miners propose to build at their own expense, how inexpressibly miserable seems that wretched half burned brns dam, into which so much of the public money was said to have been placed.

We sincerely hope the evil may be arrested by the comfortable arrangement which the miners propose. All that now needs to be done is to have the fiat go forth in some legal and binding form, that the detritus must be kept back from the water courses, or else be left in its original place in the everlasting hills.

## Suggestions to Southern Fruit Planters.

[Written for the RURAL PRESS by O. N. CADWELL.]

It is a hard matter for one person to tell us what fruits to raise in southern California. I will therefore give you a "bit" of my experience and observation in regard to planting trees and growing fruits in my vicinity. We can grow nearly all of the fruits of the temperate climate, and many of those of the semi-tropical nature. You must not think all are a perfect success, nor that most of the numerous varieties excel.

It was said a few years ago that apples did not do well in southern California; but we can show you some few varieties that cannot be excelled in appearance or quality in any part of the U. S. If any are inclined to doubt the fact, please come, see and taste for yourselves. If there is any one variety that excels, it is the Yellow Bellflower. It stands the very best of its season—September to December. The trees grow well and bear more or less every year. The White Winter Pearmain is our best late apple; trees always full every year. Newtown Pippin is good, with more or less fruit every year. Fall Pippins fine; in fact, more varieties do well than we need to cultivate. A few kinds will furnish us apples from June to January. Apples do not keep as well here as in colder climates, but we can have more or less apples up to April. We need but few very early apples. Red Astrachan and Yellow Harvest apples are the best, one year with another.

Pears do well; but we need few varieties of them. The very earliest, you know, are never very luscious, and the market easily supplied, so a very small number of trees is enough. The Madeline is our best early pear, Dearborn Seedling, next; but the Bartlett, Flemish Beauty, Seckel and Winter Nelis do well; all of which are much better than the early kinds. I think the Flemish Beauty will bear us more uniformly good fruit than any other variety. The Winter Nelis is our best late variety, always good, great and small, big and little. The only objection I have to them is, they do not last long enough; just now they are getting to be their best. If I can have but one variety, give me the Winter Nelis. The Seckel is luscious always, and no collection is ever complete without it. The Bartlett does not do quite as well as farther north, and the quality not so uniformly good; but as that fruit is better known, a good variety to ship and the greatest favorite with the canners, we must plant largely of the Bartlett. Before the canners called for them, a few trees supplied ourselves and the market. The Bartlett sells for nearly double the price of any other variety; so plant largely and be sure you have strong, vigorous trees. They are of a dwarfish nature here, so poor, stunted trees will disappoint you if you expect much from them. They can be planted as close as a rod apart, but most of our trees we get too close for them to do their best.

Plums are not really at home here, so we must try more varieties until we find something reliable. Some years our trees will be very full of good fruit, but do not expect too much from the plums. The small French prune grows well, and is full of fruit, or has been the few years trial in our vicinity.

The peach does very well, but it has its ups and downs; we have no frost to injure them, but they will rest once in a while, and give us a vigorous growth of wood late in the season. The Crawford family appears to be the favorite with canners, and almost with everybody else. We will experiment further with the peach, and raise what suits the canners, for fruit is almost useless here without a market.

The nectarine does fairly, and is suitable for drying and canning. Few kinds are yet grown, the Downton taking the lead.

We raise the best of apricots, as everybody knows who knows anything about it. It is the greatest pet of the canner, and none better for drying. We are in the greatest muddle about names, as almost every grower has his Moorpark or Royal, or Large Early, all good, but you would not have to travel far to find them all grown as Moorparks. Our best varieties are conceded to be the Royal, Large Early, and the Peach apricot. The trees are all of vigorous growth, thousands of them being planted in this and Ventura county. Circumstances being favorable, a few years more will show very extensive orchards of apricots. There is great call for trees and seeds, to make them, and it will be some three years yet before the great demand will be supplied.

Plant varieties of fruits which will sell to the canners. The supply is now very limited; if we had a thousand times more, better it would be for all concerned. The apple, the canner touches very gingerly, and as almost everyone has more or less trees growing, our market for them is very limited at any price; but we must not altogether neglect the apple, for we hope the time is not far distant when we can get our apples to market and sell them for much more than now. My experience teaches me that when I get my returns from San Fran-

cisco, I am "out" just about 1½ cents per lb. I know you will open your eyes to see which side of the ledger the profits are on. It is simply this: The superiority of our Bellflowers! Ordinary apples would not pay the boxing and shipping. We look for a railroad sometime to take our fruit south and east, where little grows.

The cherry, gooseberry and currant do not flourish with us. I think one year with the other we can buy our little supply cheaper than raising it. The strawberry does well, and with a supply of water and proper care we can have a dish of the luscious fruit every week in the year. Blackberries do very well.

Grapes do but fairly, and scarcely that, as so near the coast they are subject to mildew, and with the yellow jackets, bees and birds, our grapevines now present a ragged appearance.

I would like to have time to write you a little of the musical little birds, also the festive quail which our sportsmen make so many laws to protect. I will venture to say when our sportsmen are as much horticulturist as law maker, Mr. and Mrs. Quail will have to be more careful of their young and eggs, for they will get all the protection they need, and that is just all the lively little busy squirrel gets, by eating poison, dodging shot, traps, etc. A little digression you will say, but they all eat fruit and more too.

I will say little or nothing about orange growing and kindred varieties in our immediate vicinity, for so far I have seen few examples truly satisfactory as far as profit goes.

Plant trees; try the varieties, but keep your mind on varieties that do well and sell. Cash is what we expect in due time from our trees, but we must have a market, for fruits are poor stuff to keep. Plant trees in good season, as soon as the rains come to wet the ground deep enough to work. Plant well, and the next and most important thing, take care of them. Neglect will bring you disappointment in more ways than one.

Pomona's Retreat, Carpinteria, Cal.

## Grape Grafting.

Vine growers will read with interest the article, by Mr. Klee, on the page 274, giving the views of a leading French authority on the success with grape grafting. Aside from the mooted point on the efficacy of the bisulphide, the article will be found worth studying on the grafting experience brought forward. Americanizing a vineyard by using American scions on the old French roots, and then relying on the scion's getting on its own roots afterward, is an interesting piece of practice, which will be new to many of our readers.

An important object lesson in grafting on the native California vine root can now be gained by a visit to the office of C. A. Wetmore, Viticultural Commissioner, 111 Leidesdorf street, San Francisco. Mr. Wetmore has received samples of European varieties of grapes, with foliage, produced from grafts made on wild California vine roots 25 years ago; also, fruit and foliage of a sucker from the wild root which has been suffered to grow. The samples came from the vineyard of Chas. Lefranc, Santa Clara county. Two important points are determined by these illustrations, viz: That the European (*Vinifera*) varieties will flourish on the wild vine of California (*Vitis Californica*), and that in 25 years the graft has not materially changed the character of the root on which it is grafted. The influence of the graft shows itself in the changed form of the leaves of the sucker from the root; but the fibrous structure and the fruit appear unchanged. The bunches of the wild fruit are somewhat enlarged (due probably to cultivation), but the berries are the usual size and color, even when the graft was a Flame Tokay. It has been feared by some that the grafts would so influence the roots of phylloxera-resistant stocks, that in a few years the latter would lose their peculiar characteristics. The California appears to be proof against any radical change, at least during the ordinary lifetime of a bearing vineyard. Those who desire to inspect these samples, can do so by calling at Mr. Wetmore's office.

PERSONAL.—We had a pleasant call last week from B. K. Bliss, of New York city, head of the well-known firm of seedmen, B. K. Bliss & Sons. Mr. Bliss has long been identified with the horticultural progress of the country, and he is not a stranger in California, for he has made other visits here, and has a son resident in Riverside. Mr. Bliss was first led to horticulture by a love of its arts and pleasures. He was a leading druggist in Springfield, Mass., and his love of floral and economic plants made him an amateur gardener. In the wintry clime of Massachusetts his hothouses became famous. Subsequently he was drawn to New York city and established the seed and plant business which is now known everywhere. His rule has been to excel, and he has excelled and succeeded. Mr. Bliss stopped a few days en route to Riverside. He expected also to visit Santa Barbara, the head quarters in the pampaa plume culture. Messrs. Bliss & Sons have done much to bring these feathery beauties into a profitable commercial position. Mr. Bliss is accompanied by his daughter. We trust they will have a pleasant homeward trip, although we feelingly sympathize with them in their forced return to the wintry region.



## Hints to Southern Home Planters.

[Written for the RURAL PRESS by JEANNE C. CARR.]

It is delightful to see the numbers who, in our part of the State, are planting homes, thus showing faith in our blessed southern land. They are coming on every train, leaving the droughts, floods, frosts and tornadoes of the mother States and coming to stay. The mockingbirds have been jubilant for a week in anticipation of the new season, and with the approaching rains we shall all feel the movement of spring in our blood. I reach out my hand to the new settlers in welcome, and make them the most informal of calls in my sunbonnet and working clothes, for I know just how they feel, the thousand questions they wish to ask, the blunders they are likely to make for fear of too much asking; how one man will tell them to plant only citrus fruits, and the next to plant none, while the third informs them that apricots are the only paying crop, but that none can be had in the nurseries for love or money.

In the multitude of counsellors there is confusion, and no way out of it except through one's own common sense.

The maker of a new home, whether single or paired, knows three things better than anyone else:

First—What are his or her immediate resources.

Second—What habits and health make indispensable in the way of comforts.

Third—The available working force of the family, indoors and out.

Common sense takes these data and applies to raw acres, or to improved property, and makes a reasonably accurate solution of whatever difficulties present themselves. The ends which our new settlers are seeking are what we all have had—health and comfortable living, which includes the gradual improvement of material and spiritual conditions. Hard work, under the best out-of-door climates, is unavoidable, no matter what the means of the beginner.

Dear new comers, let no whisper in your ear, don't undertake too much the first year. Take things moderately and give plenty of time to the choosing of a site for your home, or the shanty which temporarily marks the sacred spot. Generally you will not choose amiss if you take the most sightly, central and best drained bit of your land. I, myself, made an observatory on a Studchacker wagon and was wheeled from point to point, while I considered elevations and views, where points would be seen to the best advantage, etc. This saved me much wrong planting of shade and other trees.

The home place chosen, the location of out buildings is the next in importance. Here again the drainage question is not to be overlooked. One should know the direction of the prevailing winds, that odors of the stable and piggery may never reach the dwelling. And right here comes the first localizing of the plantations, whether of eucalyptus, acacia, or quick-growing Australians, or of coniferous trees. Let barns and shelters for animals be hidden in screens of trees. Reserve abundant space for a poultry yard and for kitchen garden, two indispensable elements of comfort in country life.

Whatever culture or cultures be determined upon as the leading source of profit, a family orchard to which the home mother can go for a dessert every day in the year is a necessity. This should be reached by a vine-shaded way, said vines being of the 20 best varieties of table grapes, beginning with the Early Black July and ending with Black Ferrara and Emperor.

In southern California it is not necessary to spend anything for fences, but the lines of the property to be hedged should be among the first to receive thorough tillage. It is often best to buy one's seed and raise the hedge plants in nursery. Pomegranate hedges are both pretty and profitable, grow readily from cuttings, and though they lose their leaves in winter, that is hardly an objection. The finest hedge for a thickly settled locality is made from the Californian wild cherry, an evergreen as glossy as the orange, but rather slow in growth. It should be irrigated for the first year or two, and then may be left to push its strong roots downward to moisture. Seeds of this delightful bush are sent out by Leonard Coates, of Napa, Cal., and possibly by others. The Monterey cypress is excellent for wind breaks and dust screens, but is a gross feeder, and requires much shearing if treated as an ornamental protection. Where water is abundant and means are ample to dispense it, I would urge the hemlock as very superior to the cypress. It can only be had in quantities, by ordering from Eastern houses, which furnish it at very low prices. The pyracantha (*Crataegus pyracantha*), is another beautiful ornamental hedge plant.

And now among trees, where shall we choose? Every new settler is fascinated by the pepper tree, that ladylike arboreal beauty, upon whose fresh skirts is never a trace of dust or cobweb. Of all trees, it is the prettiest to plant near the water trough. In four years, when plenty of water is given, the pepper will make a canopy for the breakfast or tea table. On a farm of 100 acres, I would have an avenue or screen of peppers planted 30 ft. apart. In a place of less than 50 acres, I would not have more than a dozen trees. And so of eucalyptus. Do not plant many of these devouring cormorants among trees; and if you must have a run of the gum

fever, endemic in all new settlements, choose two or three from the following list, instead of planting all of the encalyptus glohulus:

Red gum, *E. Rostrata*; iron bark, *E. leucocylon*; stringy-bark, *E. Oblonga*; stringy-bark, *E. macrovyncha*; giant *E. amygdalina*; apple scented, *E. Stuartiana*; yellow box, *E. Melliodora*; red box, *E. Polyanthimus*; swamp mahogany, *E. botryoides*; the Honey eucalypt.

I would do this because many of the above are very beautiful flowering trees, and all are valuable as protection against malarial influences.

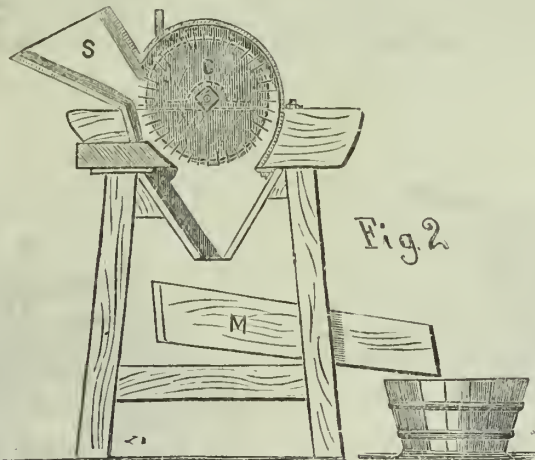
Of American trees, catalpa is one of the most rapid in growth. It is cheap, grows rapidly from seed; the mulberry is one of the most useful and desirable shade trees. One magnolia, one fan palm, one Grevillia or "she oak" of Australia, one Ficus or "India rubber" tree, one Italian cypress, one Araucaria excelsa or Norfolk Island pine, will make a very neat and even charming collection of trees, giving great diversity of form and leafage. Each will require at least 25 sq. ft. of soil when grown, but in early youth may tolerate smaller plants in their neighborhood.

Nearly every important family of American forest trees has its representative in groves which have been planted during the last four years in Pasadena. Pines, hitches, ash, tulip, bass wood, grow equally well. So that if one's heart clings to the New England maples, or Ohio sycamores, they will kindly respond to a call from the heart of the new settler, and gladden his eyes continually with their associated pleasures.

Of beautiful native and foreign shrubs there is a great variety to choose from. Their planting will follow the first season's, which is always of strong, staple things.

It is well to use any spare time in the first season, in starting cuttings in a nursery. It is astonishing how much can be done with profit on a few rods of ground. Lemons can be grown from cuttings in a single season so as to make 20 inches of solid woody stock.

To sum up this chat with new neighbors,



POTATO GRATER—IMPROVED PATTERN.

remember always that plant growth is so rapid here that one can afford to postpone what in other climates requires to be hastened; remember that the cost of labor is greater, and that brain work must be made to save hand work as much as possible. To the ladies, I would say, simplify the routine of housekeeping as far as is consistent with health and comfort, in order to be in the open sunshine creating the beauty which in a very few years will make "the place of your habitation glorious."

Pasadena, Oct. 20, 1881.

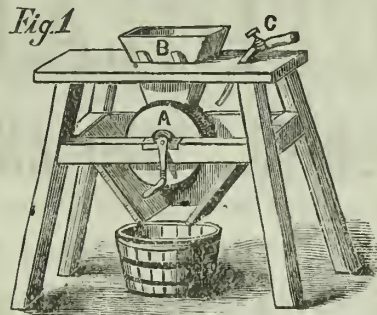
AMERICAN AGRICULTURAL ASSOCIATION.—J. H. Reall, Secretary of the above society, announces that the next number of the *Journal* of the society is in press. It will contain 17 essays upon important agricultural subjects, filling about 300 pages; price 75 cents per copy. Free to members of the association. All who are interested in agriculture are eligible to membership. Annual dues, two dollars. Three dollars sent now will pay the dues both for this year and next, and entitle the person paying to all the issues of the *Journal* for this year and for 1882, and to all publications of the association during that period. Address the Secretary and editor, J. H. Reall, 127 Water street, New York. Beginning with the present number, the *Journal* will be published quarterly, the next number appearing in January, and the aim will be to make the magazine of the utmost value to its readers. It is desired to build up a large membership and to extend the work and usefulness of the organization in every way possible.

ALDEN PRUNES.—We have received from W. C. Blackwood, of Haywards, a sample of prunes (Petite d'Agén) which he cured with an Alden improved drier purchased of Gen. Deitzler. They are exceedingly handsome, with a beautiful gloss, not sticky—in fact, a well finished product fit to command a high price. Judge Blackwood says other driers, for what he knows, may do their work as well, or possibly better, but he is satisfied with the "Alden Improved."

A Good Hit.—Oakballs are saturated with bisulphide of carbon, and are used for poisoning squirrels. They roll into the holes nicely.

## Home Manufacture of Potato Starch.

The manufacture of starch from potatoes is one of the great industries of the world. In districts where fine potatoes are produced easily and yet no profitable price can be obtained for them it is barely possible that they can be profitably turned into starch. In case any of our readers may be inclined to experiment a little to see what manner of starch they can produce, we give a little account of a homely way of making starch, and the rude appliances needed, which anyone with a little mechanical twist to his brain can easily make. A wire basket to wash the tubers, a rotary rasping machine, a few large tubs or watertight hogsheds,



Potato Grater for Starch Making.

some wire and hair-cloth sieves, and a drying-room, comprise the principal pieces.

A simple rasping machine is shown in Fig. 1, and consists of a hand wheel, A, over the rim of which has been secured, rough side out, a piece of sheet iron previously roughened up like a nutmeg grater by punching it full of holes with a blunt-pointed tool. The wheel is

mounted on an axle supported by the wooden frame so as to revolve immediately beneath the mouth of a metal-lined wooden hopper, B.

A more effective rasper or grinder is shown in Fig. 2. It consists of a cylinder, C, 20 inches diameter and 2 feet long, mounted on an axis. It is armed with steel saw plates placed about three-quarters of an inch apart, parallel with the cylinder, and having small and regular teeth. The plates are held in position by iron clamps, so that the toothed edges project about four-fifths of an inch from the periphery of the drum. It is driven at the rate of about 800 revolutions per minute before the hopper, and is capable of pulping about 45 bushels of potatoes an hour. In both these machines the rasping surfaces are kept clean by the action of small jets of water projected with some force.

As the washed potatoes are passed through one of these machines, the pulp and wash water are run off into tubs, and after the coarser particles have been deposited, the milky liquid is drawn off into other tubs and the starchy matter allowed to settle. Or, as in large factories, the pulp may be rubbed and washed through a series of sieves, ranging from coarse wire gauze to fine hair cloth. After repeated washings with fresh water in the tubs, to separate the gummy and fibrous matters, the starch granules are finally allowed to settle, and after the water has been drawn off, the pasty mass of starch and water is run off into long wooden troughs, slightly inclined, wherein the paste gradually hardens as the water drains off. When hard enough, it is cut into blocks and put on shelves in a warm room to dry out. With good management, from 17 to 18 lbs. of clear starch can be obtained by these simple means from 100 lbs. of average potatoes, which could be disposed of in bulk at present prices.

THE first electric railway in Upper Silesia has been erected in connection with the colliery of the Donnersmarckhutte Co., to supersede the ordinary horse railway. The current is conveyed by wire ropes, supported on poles in the same manner as telegraph wires. The maximum speed will be eight miles per hour. The locomotive is similar to that exhibited two years ago at the Industrial exhibition, but is somewhat smaller. The line and its accessories were constructed by Messrs. Siemens and Halske.

## THE APIARY.

## Beekeepers' Methods.

EDITORS PRESS:—The RURAL, October 8th, comes to hand as usual, and with it the communication of Mr. Lyon, as full of vindictiveness and personalities as ever, not excluding even the reiteration of his protest as a finishing touch.

Now let me remark right here, Mr. Editor, that although he claims "his remarks are in kindness and good will," his tone shows, to use the expression, either "an axe to grind" or a "nigger in the wood pile," and that he goes a roundabout way to scatter his insinuations, and it does not take a very close observer to see that he contradicts his own writings more than once.

Let me direct his attention to one paragraph: "In regard to undecided questions, etc., no one has a right to say that his theory or his practice is right, and that of another is wrong." I do not insist that I am always right, nor that others are always wrong. On the contrary, what I present to the readers of the RURAL is only practice that has succeeded with me. I ask all interested to give it a fair trial before condemning. I am willing to do the same by others. One has the privilege of discarding all modes that do not prove satisfactory. Ever since the RURAL had an existence, I have carefully scanned its columns, and have most of the copies from the first of its infantile career. I have watched its changes from the first to the present day, and can say that its columns have been free for all parties to discuss their several industries or ideas on any of the various questions of the day, with partiality, as long as they confined their remarks to the main points.

What is wanted are facts; fiction goes back on itself. While I advise all having to do with bees to procure a good reliable work on the subject, I would at the same time remind them not to forget their local paper. I am not aware of any reliable work published on this coast. I except the work of Mr. Harbison, which is good but behind the times—and calculated for his hive. Hand hooks are generally one-sided, and any that will recommend nine or ten day queens are certainly in error, as I will attempt to prove before I am through. I consider the columns of the RURAL just the place to discuss the subject as long as one gives only facts, not theories. By exchanging ideas, truthfully and honestly, we come to the most practical ways of working. As I understand, the proprietors invite all to write their experience on all subjects, the honey interest especially.

## Foul Brood

Is something that I read about in most every number of the *A. B. J.* that I take up, though I know nothing of it from experience. I keep all colonies strong, all brood together, and examine my hives often enough to see that all brood is taken care of and covered by the bees. A correspondent of the *A. B. J.*, from Oregon, states: "Most of the foul brood is there confined to box hives." Weak colonies are more subject to it than strong ones, and Italians are less subject to it than blacks. An apiarist of experience to whom Mr. Lyon refers in his article, acknowledged to me, some two years ago, that in the very county of Ventura they had too much of it at that time, and he would willingly give one-half of his bees toward the suppression of it. He saw my hives and bees and seemed to be astonished to find them building comb while his were storing at that time (in August). I took from one hive 90 lbs., and from another 75 lbs. of ripe sealed honey, and showed him a two-year-old queen, yellow, healthy, large and prolific. (I have one of her daughters, at present two years old, that did not swarm, but had plenty of stores and brood, and some surplus). The same experienced beekeeper left a number of his, at that time, "favorite hives" in this vicinity. They are the style devised by the editor of *Gleanings*, and all have loose bottom boards, though the objection I would have to them is that to close the entrance, one has to slide it forward on the bottom board, which might destroy the bees that might be there, as I find my Italians have a strong guard on the bottom of hive to catch any robber that might pass the guard at entrance, also to keep the bottom of hive clean; this is fact. The same bee-man was not only experienced, but also claimed to be a large shipper to Europe. If he found any fault with my hive or management at that time, he did not hint it. He also transferred a number of colonies in this valley.

Friend Lyon has a perfect right to fear foul brood, and no one would like to learn of the most stringent measures being used for the eradication of the pest more than your humble servant.

## Introducing Queens.

While Mr. Lyon criticises the article in the RURAL of September 10th, does he offer a better way of "introducing queens?" What does he find fault with—closing the hive? Does he expect the hive to be left open for robbers, or is it the 48 hours, or being strictly closed for a week? It appears to be because the hive is to be closed and nothing is mentioned about the entrance. The queen was not placed at the entrance. If Mr. Lyon wishes to place his queens at the entrance, I don't know who will

[CONTINUED ON PAGE 287.]



F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

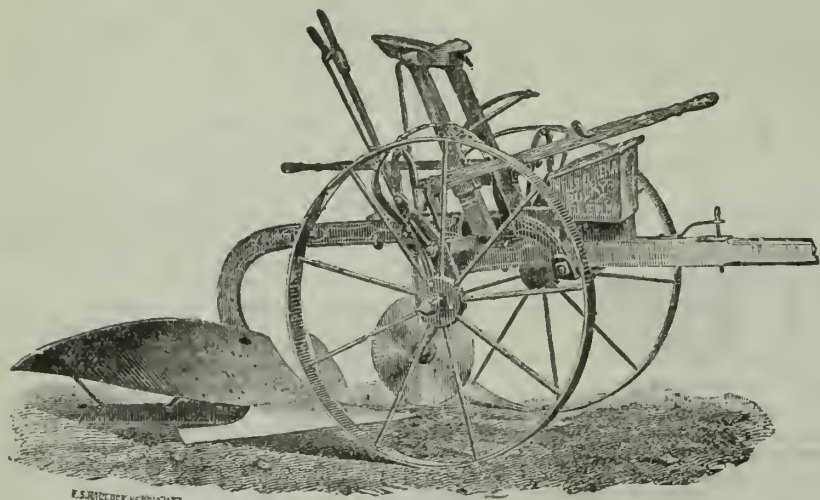
# BAKER & HAMILTON'S BENICIA AGRICULTURAL WORKS, Manufacturers of AGRICULTURAL IMPLEMENTS, GANG PLOWS, ROAD AND FIELD SINGLE PLOWS,

Iron and Wood Frame Harrows. Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons,  
PATENT IRON GEAR SPRING WAGONS,

## SPRING AND THOROUGHBRACE WAGONS OF ALL KINDS,

### Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Fresno Ditching and Grading Plows, Sweepstake Quartz Mills, etc., etc.

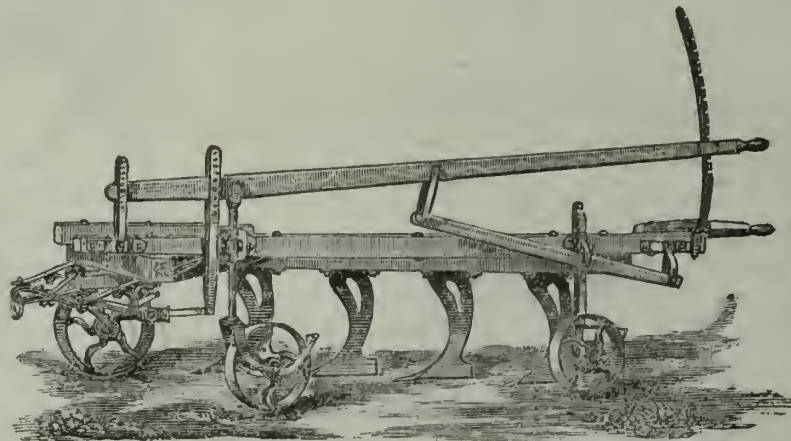
Recently removed from San Leandro to Benicia, Cal. Formerly the Sweepstake Plow Co. The Largest and Most Complete Agricultural Works on the Coast. The buildings are over 1,600 feet in length, and have a floor surface of 105,412 square feet, or nearly 2½ acres. The Wharves, connected with the Works by rail, are over 600 feet in length, and have a floor surface of more than 40,000 square feet including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries.



No. 9b.

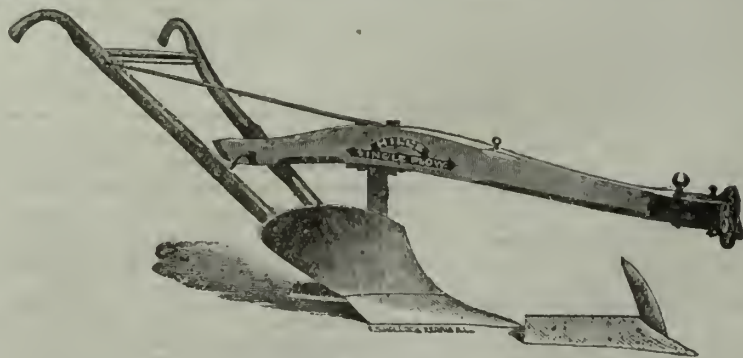
#### Hill's Improved Single Sulky Plow. FOR TULE OR SOD.

This Plow embodies all the points that skill and experience have proven necessary in such an implement. The wheels are very high, with wide tires, and are set wide apart, the mold-board is nearly 4 feet long. The share is thin and sharp as a knife, and is provided with a fin coulters. It is strong and durable, and we believe it to be the only efficient and satisfactory Sod or Tule Plow made on this Coast.



#### Hill's Improved Granger Gang. WITH LIFTING DEVICE.

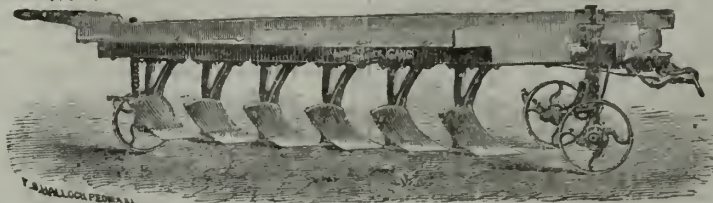
The cut explains the above-named implement so clearly that an extended explanation is unnecessary. It will be seen that there is an arrangement of levers whereby all the wheels can be easily raised or lowered and fastened in any position by a simple movement of one lever. Its advantages for plowing uneven ground, and for various other purposes, are so apparent that an enumeration of them is not necessary. Price additional for Lever Attachment, \$15.



Nos. 2, 3 and 4.

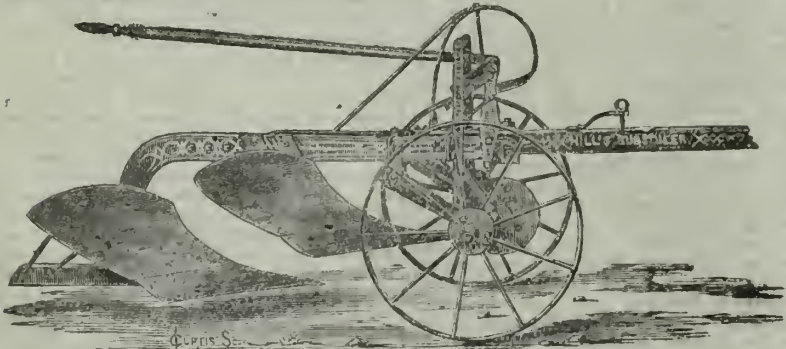
#### Hill's Single Plow.

When the manufacture of these Plows was commenced, about 6 years ago, a large trade in them was not anticipated. No attempt was made to advertise or push them, but the manufacturers decided to make the very best Plow that the present state of the mechanic art would permit, and charge a price therefor that should remunerate them. To that end they took great pains to make first a perfect and beautiful model, and then to use only the very best material. The result was that the plow so made elicited great admiration at the State and County Fairs, invariably receiving the First Premium, and the trade in them has grown to respectable dimensions. Among the points of superiority pertaining to the Hill Plows are the following: The beams are longer than common. The Landside is 6 inches longer than those on Eastern Plows. The Handles are so set that the plowman can walk comfortably in the furrow. The molds are five-sixteenths Iron center steel, and the shares and lands are cast steel, all being chemically hardened, and nicely ground and polished; the elevators of the most improved pattern, and the general make up, proportion and working qualities of the Plow are superior to anything heretofore made.



#### Hill's Improved Granger Gang.

The success of our Granger Gang has been unparalleled. It meets a long felt want for a cheap and effective Gang Plow in a very satisfactory manner. It has demonstrated conclusively that our plan of putting shares on the bottoms instead of using what are called "reversible" molds is the right one. We have proved that one of our small, thick, hard-cast steel shares will last as long as both edges of a double-edged mold, and when it is worn out it can be replaced for a dollar, while it will cost nearer two dollars to replace the reversible mold. A reversible mold is necessarily of an awkward, clumsy shape; being simply a piece of steel made concave—just as a board



No. 9c.

#### Hill's Eureka Double Deep Tiller.

The above Plow has been made in response to an urgent demand for an implement that should not only plow the ground very deep, but which should also turn the soil completely upside down in a manner different from the work done by an ordinary subsoil plow. As will be seen by reference to the cut, there are two 16-inch plows attached to the same beam. The forward one cuts 4 inches deep and the hind one 12 inches. The result is, that 4 inches of the surface is turned upside down into a furrow 12 inches deep, thus burying any foul seed so deep that it can never grow.



No. 23.

#### Sweepstake Road or Breaking Plow. ALL IRON OR STEEL EXCEPT BEAM.

This Plow is made only to order, and is intended for the heaviest kind of work. The cut explains its construction, but does not give an adequate idea of its size and strength. It is strong enough to run beam deep in the stiffest adobe soil, and will stand the draft of from 8 to 16 horses, according to size. It will plow up the hardest road or street, and when sharp will cut the firmest hard-pan. The weight—according to size—is from 300 to 500 pounds.



would warp if laid in the sun. By using shares on our bottoms we are enabled to make the mold-boards of a form that will draw as easy and turn as well as those used on any Plow. We put from 3 to 8 Plows in a Gang. They cut from 8 to 10 inches each, and will plow from 2 to 6 inches deep. These Gangs do their work splendidly, leaving the ground in light, friable condition. They have been thoroughly tested in the field, and the set of Plows on the frame carefully adjusted to secure the lightest draft consistent with good work.

### Hill's Side-Hill Gang.

Successfully used in the Montezuma Hills and other Hilly Sections.

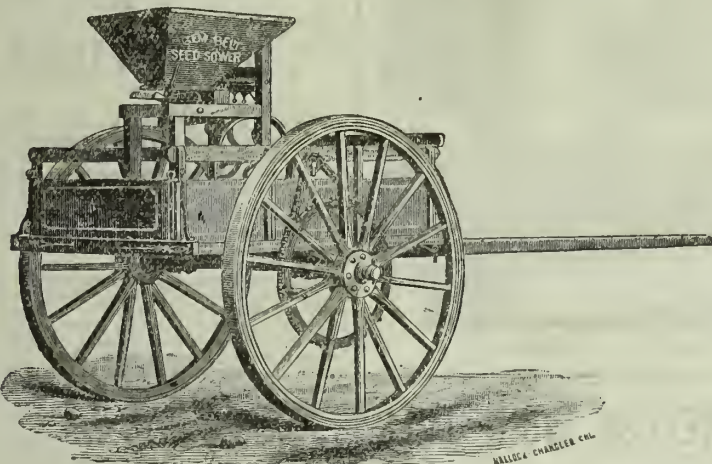


No. 10a.

### IMPROVED FOR 1881.

Same Style of Leverage and Kind of Bottoms as those Used on the Eureka Gang.

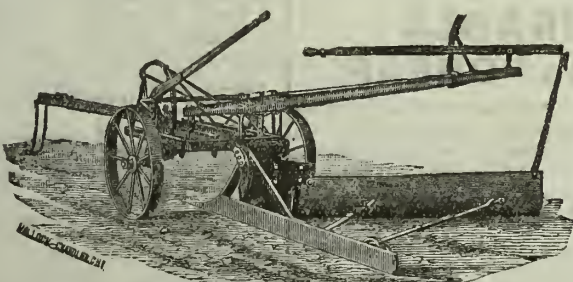
This Plow is becoming very popular in the Montezuma Hills and other sections of the State where the land is composed of high rolling hills. It has an arrangement whereby the axle of the wheels can be set, by means of a lever, obliquely across the beams, thus turning the wheels so that they run to land or up-hill. Thus, while the beams and tongue are going straight ahead, the wheels run slightly up-hill. The lever that governs this movement is situated where it can be conveniently reached by the driver, so that he can give the wheels more or less "shear," as may be required by the side of the hill being more or less steep. This device is the only thing yet tried that fully accomplishes the object sought. Price, \$13 in addition to price of ordinary Gang.



### The Improved Gem Belt Seed Sower,

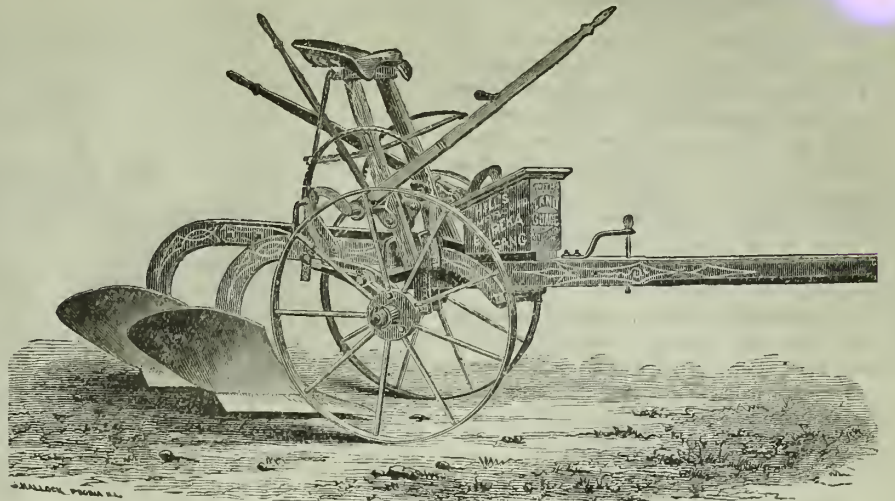
WITH CART AND ATTACHMENTS FOR SOWING GRAIN AND FOR FARM USE.

Combining two essential articles which every farmer should have The Cart itself can be made the most useful of all articles on the farm for every day use; and often when a four wheel vehicle can not be used. It is Light, Strong and Durable, has 1 1/2 axle, and well constructed for light work. The Gem Belt Sower, while it possesses all the essential points of the Gem Chain Gear, distributing the seed evenly on either side, or both sides of the machine at once, at the will of the driver, has many advantages, as it is run with a quarter-turn belt, doing away with the small gearing which in other machines break, wear, and get out of repair. It runs noiselessly, smoothly, and for reasons given above, is more durable and less liable to require repairs than any other Seed Sower made. The Cart and Gem Belt Seed Sower combined is what every farmer should have. Price for Cart and Seed Sower, \$100. Cart only, \$60.



### The Fresno Grading and Ditching Plow.

It is the only cheap and effective implement which has yet been invented for the digging of Ditches and Canal and leveling of "hog-bowling land." Its price brings it within the reach of all, while it does the work better, cheaper and more expeditiously than any other machine. It has been thoroughly tested, not only by the inventor—M. J. Church, of Fresno—but by several other practical men, and pronounced a success. There has been made with this Plow 6 miles of V ditch in less than one week, 4 feet deep and 20 feet in width, requiring 2 men and 16 animals—the measure taken from top of the embankment. Two rounds of the team on level land will make a ditch 2 feet deep and 6 feet in width from top of embankment. It will throw a furrow from 2 to 6 feet in breadth and from 1 inch to 12 inches in depth, and make a ditch from 4 feet in width and 2 feet in depth to any reasonable depth and width. The cut shows fully the shape of the Plow. It has a perfect center draft, and can be set at any angle. It will work in any free soil where other Plows will do good work and requires from 8 to 16 animals, according to the work to be performed. For further particulars, Address **BENICIA AGRICULTURAL WORKS, Benicia, Cal.**



No. 7c.

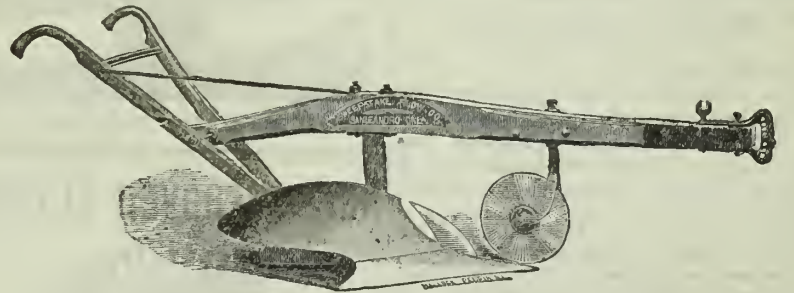
### Hill's Celebrated Eureka Gang Plow.

THE OLD FAVORITE AND STANDARD GANG PLOW OF THE PACIFIC COAST.

The above implement has received more State and County Fair Premiums, has been more successful in more plowing contests, and has met more extensive sale than any Gang Plow ever invented. It is usually called a 4-horse plow but if the ground requires that 6, or even 8 animals should be used, they may be employed without hesitation or fear of endangering its strength. This feature makes it peculiarly valuable for summer fallowing or dry plowing in stiff soil. In addition to the foregoing advantages, the Plow is provided with all those minor conveniences that go to make up a satisfactory implement. Among these is Hill's Land Gauge Attachment that enables the driver to give the Plow more or less land while in motion; the device for changing the plane of the wheels and the detachable hubs of the wheels, which can be easily and cheaply renewed when worn out. The Eureka in all its forms, whether as a Sulky, Two Gang, or Three Gang, is provided with Hill's S. P., Hill's Slip Share, or Hill's Diamond Bottoms all being of the same form, and the handsomest and best shaped Plow in the United States. All have patent iron-center mold boards that are chemically hardened and the shares are either our own hand made or else the best cast-steel. Hill's Slip Share employs one bolt that is easily got at in addition to the lug slot, to fasten it on, and is the only slip share that has proven to be wholly satisfactory. Its use enables the construction of very strong and yet light bottoms which can be very firmly attached to the iron beam.

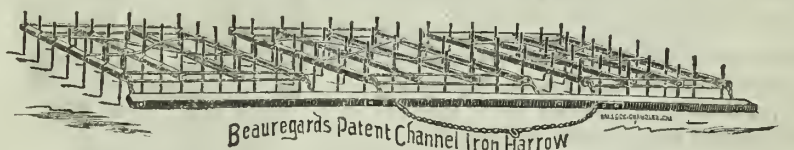
### HILL'S "DIAMOND" BOTTOMS.

Particular attention is called to these Bottoms, which have several features that are new and valuable. The landside is provided, near its forward end, with a peculiarly formed dove-tail lock that assists greatly in retaining the share in its place. The lock, however, is not depended on to wholly hold the share, but belts, also, are used in the ordinary manner. The Bottom of the landside (the part that always wears out first) is a detachable steel bar that can be replaced, when worn, for a trifle, and the landside is again as good as new. This method of construction insures a light and yet very strong Plow and one that will last much longer than an ordinary Bottom. They are called "Diamond Bottoms" because the figures designating the various parts and sizes are placed in a sunk diamond-shaped panel. In ordering, please be careful to state that you want plows or parts marked "Diamond 1," or "Diamond 2," or "3," etc. We have other plows, marked by the figures 1, 2 and 3, etc., and if the customer does not expressly say **Diamond** in his order, the wrong article may be sent. Price with extra Shares, 3 1/2 x 5 1/2 Beams, Right and Left Lever, \$100. Price extra Shares 3 1/2 x 5 1/2 Beam, Right and Left Lever and Land Gauge, \$110.



### Hill's Sod and Tule Plow.

The Plow illustrated above is gotten up in first-class style, both as to material and workmanship, and built according to California ideas. Where we have sold, entire satisfaction has been given. It scours in any soil, and every part is exact to pattern, so that it may be easily duplicated at our houses.



### Beauregard's Patent Channel-Iron Harrow

Possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality, combining both strength and lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilize nearly the whole length. The Harrow is usually made in three sections,—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, though connected, as the cut will show, by Hinges and a Draft Bar. This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team. There is no thread cut on end of teeth—which weakens them—nor nuts to loose off, as is the case with other Iron Harrows, but as before stated, all the objections in other patterns have been obviated in the Beauregard Patent Channel-Iron Harrow, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

OUR CLAIMS have been and are daily being substantiated by farmers all over the Coast. Don't make a mistake in ordering, but remember that Beauregard's Patent Channel-Iron Harrow with patent concave teeth is the Best, Cheapest and Lightest Draft.

PRICES: 1 Section, with 24 Teeth, \$14; 2 sections, with 48 Teeth and Draft Bar, \$28; 3 Sections, with 72 Teeth and Draft Bar, \$42; 4 Sections, with 96 Teeth and Draft Bar, \$56. Two Sections will cut 9 feet wide; 3 Sections will cut 12 feet wide; 4 Sections will cut 15 feet wide. For further particulars, Address **BENICIA AGRICULTURAL WORKS, Benicia, Cal.**

A complete description of all of our Manufactures cannot be given in the space here allotted, nor in any reasonable newspaper space ordinarily used for Advertising; therefore we invite correspondence, that we may send Circulars and Descriptive Lists. Merchants and Farmers are invited to visit our Works and examine for themselves. It is our aim to excel all in our line of Manufacture in producing the best Implements with all the Latest Practical Improvements which are peculiarly adapted to the requirements of our soil, and the Pacific Coast, both in tilling the ground and harvesting the grain; producing articles which combine all that genius, enterprise and practical experience can insure. A guarantee to the purchaser and a credit to the Manufacturer. Address,

**BENICIA AGRICULTURAL WORKS, BENICIA, CAL.,**  
**or BAKER & HAMILTON, San Francisco and Sacramento.**

**SAN FRANCISCO OFFICE,**  
 13 to 19 Front Street.

**SACRAMENTO OFFICE,**  
 9 to 15 J Street.

**NEW YORK OFFICE,**  
 88 Wall Street.



## Large Grain Separator.

EDITORS PRESS:—I herewith send you the correct description of the large separator, "Pride of the Valley," built last spring for Mr. J. Malsbary, at Gilroy. It is a combination of the vibrator and straw-carrier principles, and was built to Mr. Malsbary's ideas of a model machine. The bed pieces are 18 ft. long, 5 ft. 8 inches wide outside, 35 ft. from end of feeder to tail straw carrier. The cylinder is a Gold Medal, 40 inch, 12 bar, 216 teeth, with the regular Gold Medal concave.

The separating capacity consists of a series of straw carriers extending from the cylinder back, the first of which is five ft. long, running over square pulleys, dropping the straw on a pair of pickers, which toss and tumble it into the second, which is 10 ft. long, having the genuine "vibrator agitator" and eight square bumpers. This, in turn, also passes the straw over similar pickers onto the third and last carrier, which is of the same dimensions as the second. This throws the straw (which is by this time free of grain) onto the dumps ready for the straw bunks. The grain and chaff pass down through the slats of the straw carrier to a long vibrating bed which shakes the grain to the sieve, over which the bed is perforated with two-inch holes which serve to cause the larger particles to pass over into the elevator.

The sieve is 60 inches wide; the fan is an overshot—of the "vibrator" pattern. The elevator is of the Gold Medal pattern. The machine has been tested to the capacity of five bags per minute for a short run. One day she moved and set four times and threshed out 1,025 sacks. Notwithstanding that now and again a rock would find its way into the machine and loosen a tooth. There can be said more; she saves all the grain, time and again have those for whom she has worked spread sacks under the tail and tried for wheat, but in each case have had their trouble for their pains. It is decidedly the "boss" thresher, and promises fair to drive the old treadmill where they have driven the old treadmills.

Plow Boy.

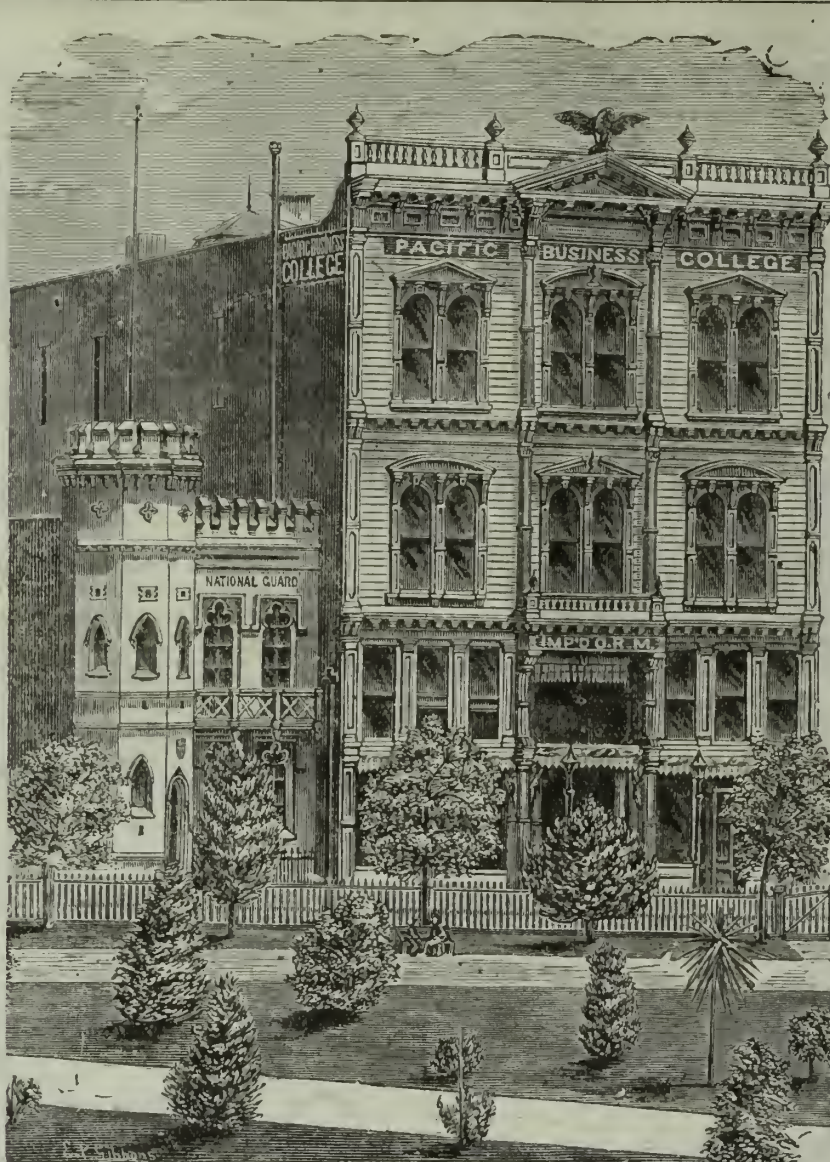
Hollister, Cal.

## The Pacific Business College.

The engraving on this page gives an exterior view of a commercial college of San Francisco, which is known throughout the whole coast by the skillful bookkeepers, accountants and business men generally which have profited by its training. It is the Pacific Business College, located at 320 Post street, opposite Union square. One of the most beautiful sites in the city. In our issue of April 16th last we gave a comprehensive description of the institution and its course of studies, etc. At this time we would merely call the attention of the reader to the beauty of the building and surroundings, and advise those who are thinking of taking a commercial course to apply to Profs. Chamberlain and Robinson for further information.

**THE HOWELL MOUNTAIN LAND SALE.**—We are informed that the sale by E. M. Woodward & Co., of Howell Mountain land at St. Helena last Saturday was a gratifying success. Every arrangement for an outdoor sale was admirably carried out; a fine collation was spread, and the finest specimens of wines and grapes from the contiguous vineyards were liberally contributed, to illustrate to buyers the productive capacity of the valley. There was a large attendance of buyers, both from this city and from the towns and neighborhood adjacent to the locality of sale. A heavy rainfall set in at 2 P. M., the hour of sale, and by invitation the sale adjourned to the spacious and elegant hall of the Viniculturist Association at St. Helena, near the Railroad station. There the sale opened, with Joe Eldridge, of the auction and real estate firm of Easton & Eldridge, of this city, as auctioneer. The bidding was spirited throughout, and the sale was in every way a success. More than half of the offering—2,600 acres of the La Jota rancho—was disposed of, at prices ranging from \$10 to \$20 an acre. Those portions of the ranch which were thickly wooded sold from \$7 to \$10 per acre. Several of the tracts were taken by city buyers, but the larger portion was bought by parties in the immediate vicinity of St. Helena. The total amount of the sale was about \$20,000. Owners of large tracts, who desire to dispose of them to small buyers and settlers, will find in this important sale of Howell Mountain lands in Napa county an example worth studying and following.

**GARDEN GUIDE.**—We have received an early copy of Sevin Vincent and Co.'s "Catalogue and Guide to the Flower and Vegetable Garden" for 1882. This old and well-known firm of seedsmen may well be proud of this new edition of their catalogue for it is very handsome and replete with information on the growth of the multitudes of plants of which seed is offered. All should send for it. The store of Sevin Vincent and Co. 607 Sansome St. is well worth a visit from those interested in garden plants, seeds or appliances.



THE PACIFIC BUSINESS COLLEGE, NO. 320 POST STREET, S. F.

## NEW IMPROVED ALTHOUSE VANELESS WIND MILL.

MANUFACTURED EXPRESSLY FOR  
PACIFIC COAST TRADE.

It combines every essential to make it a First-class  
WIND MILL.

Being Perfect in Self-Regulation,  
**STRONG,  
DURABLE  
and CHEAP.**

During the past two years there has been many improvements made, simplifying its machinery, strengthening every weak point; using only the best selected material and employing none but competent workmen, a

## WIND MILL

Of unquestionable superiority has been produced, SUITABLE FOR ALL PURPOSES.

It is especially adapted to the wants of

Farmers, Stockmen, Railroads,

And all who desire a CHEAP and EFFICIENT WATER SUPPLY for PRIVATE RESIDENCES, FOUNTAINS, IRRIGATING LAWNS, GARDENS, etc.

We keep constantly on hand a full stock of 10, 12, 14 and 16 foot

VANELESS WIND MILLS

AND MAKE TO ORDER

LARGE GEARED MILLS.

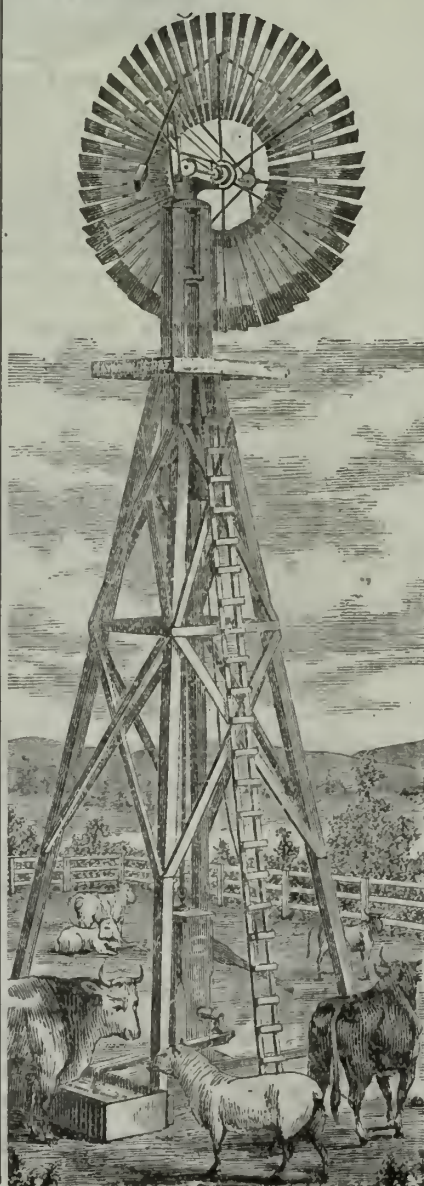
Those who are unable to erect a tank should put up a mill on an ordinary stock frame (as shown in the annexed cut), and by making a few troughs, an abundant supply of water can always be had for stock. Why pump water by hand, when nature has provided you with abundance of power to do the work? Save your strength—you can apply it more profitably. Buy one of our new Vaneless Windmills, and let the wind do your pumping.

We are prepared to furnish Windmills, Pumps, Pipe, Pipe Fittings, Hose, Tanks and Tank Frames. For full particulars call on or address,

**WOODIN & LITTLE,**

No. 109 Pine St., S. F.

Catalogue sent free upon application. Write for Prices.

THE SAN LEANDRO  
GANG PLOW.

Price - - \$92.50,

With Hardened Steel or Oliver Chilled Bottoms. Manufactured by the SAN LEANDRO PLOW COMPANY, at San Leandro, California.

In the above named Implement is combined the

Best Gang Plow Carriage Yet Made,

With the very best form of steel or chilled bottoms known to the trade.

The steel bottoms are in shape an extra reproduction of the celebrated John Deere Moline No. 7, 12-inch plow.

The chilled bottoms are the Oliver pattern made at South Bend, Indiana. They have a reputation that is almost world-wide.

The simplicity and neat appearance of the Carriage is unequalled and yet it possesses with but a single lever all the advantages claimed by the most complicated implements.

With their numerous levers, spiral springs, cog wheels, racks, segments, etc., besides some very important ones that are peculiar to this alone.

1st. It will strike out lands simply by throwing the lever well forward.

2nd. It raises very high out of the ground (seven inches).

3rd. One wheel can be raised at any height above the other so as to plow at any depth desired.

4th. The tongue can be set two feet to the right or left in a moment.

The above are points possessed by many other gangs but in none are the results obtained so simply.

The following advantages are peculiar to this gang carriage:

1st. Its leverage is so perfect that a man can lift it with ease when there are two other men standing on the beams.

2nd. The seat is so attached that the weight of the driver assists in raising the plow instead of preventing it.

3rd. The lever is pulled back to raise the plow instead of being pushed forward, which enables the driver to exert his strength to much better advantage both in raising and lowering the plow.

4th. The seat is high and comfortable and is placed on an easy spring.

For proportion, workmanlike simplicity, strength and practicable usefulness we challenge comparison with any Gang Plow made in the United States.

A cut of our plow will appear in this journal a few days hence. Photographs sent on application. Price complete with two extra steel shares (or four extra chilled shares when chilled bottoms are used), \$92.50. Address

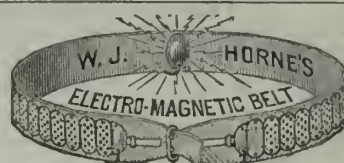
SAN LEANDRO PLOW CO.,  
San Leandro, Cal.

## VINE CUTTINGS.

I SHALL RECEIVE EARLY IN THE WINTER, from Messrs. Brush & Son & Meisner, a carload—about 300,000—wild Riparia cuttings, the most approved at the present time in France for Phylloxera-proof grafting stock on account of vigor, adaptability to all kinds of soils, excepting very moist bottoms, and facility of rooting. Orders will be taken at reduced prices if received in advance of shipment.

I am also prepared to receive orders of the choicest French, Spanish, German, Persian and Hungarian varieties of cuttings and rooted vines, among them being, Grenache, Carignans, Mataro, Folle Blanche, Sauvignon, Semillon, Cadillac, Folle Noire, Petit Pinot, Chaudel Noir (or Pinot de Poitou), Chateaus, Gris, Black Burgundy, Cabernet and Malbec, Chabron, Trouseau, Merlot, Muscat of Frontignan, Orleans Reising, Johannisberg Reising, Sylvaner (or Franken Reising), Burger (so-called), Golden Chasselas, Rose Chasselas (so-called), Zinfandel, Malvoisie, Blau Ebling, Feher Zagas, Verdeho, Verdel, Muscats, Emperors, Seedless Sultan, etc. Some of these varieties are scarce, and orders should come in early.

CHARLES A. WETMORE,  
111 Leidesdorff St., S. F.



Patent, Nov. 11, 1879,

Patent, Nov. 9, 1880.

Medical Electricity.

**HORNE'S ELECTRO-MAGNETIC BELT.**

(The Only Genuine.) Received 1st Premium State Fair, Electro-Magnetic Belt, New Style, \$10; Electro-Magnetic Belt, Extra Appliance, \$15; Electro-Magnetic Belt, 9 Improvements, \$20.

GUARANTEED ONE YEAR. BEST IN THE WORLD.

Will positively cure without medicine—Rheumatism, Paralysis, Neuralgia, Kidney Disease, Impotency, Rupure, Liver Disease, Nervousness, Dyspepsia, Spinal Disease, Ague, Piles and other diseases. Send for illustrated catalogue, free. Also,

**RUPTURE** GUARANTEED, RELIEVED, or Cured. Send for illustrated Catalogue. Hundreds of cures.

**W. J. HORNE, Prop. and Manuf.**  
703 Market St., San Francisco, Cal.



FIRST PRIZE State Fair and Mechanics' Institute Fair, awarded to the CALIFORNIA ELASTIC TRUSS for the Best IMPROVED TRUSS. Address or call on CALIFORNIA ELASTIC TRUSS CO., 702 Market St., S. F. Send for Catalogue of Wonderful Cures.

## YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE.

**JAMES CAVIN, Proprietor.**

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

## GOLDEN GATE WASHING MACHINES.

The principle used attacks every spot and place in the fabric with force, and will cleanse the most delicate fabrics without injury. The rocking motion used takes but small power, so that a youth can do a washing. Strong, Durable and Ornamental. Agents Wanted on Liberal Terms. Address JOHN D. WINTERS, Davisville, Cal.

**Hite's Portable Cook Stove Fender, Fruit and Clothes Drier.**

The most useful invention for the home, in use; can be adjusted to any Cook Stove at a small cost. From and County fairs, for sale. Address,

MRS. M. E. SPIERS, Agent,  
Wheatland, Cal.



I. J. TRUMAN.

BYRON JACKSON

# JACKSON & TRUMAN,

## JACKSON'S CALIFORNIA WINDMILL.



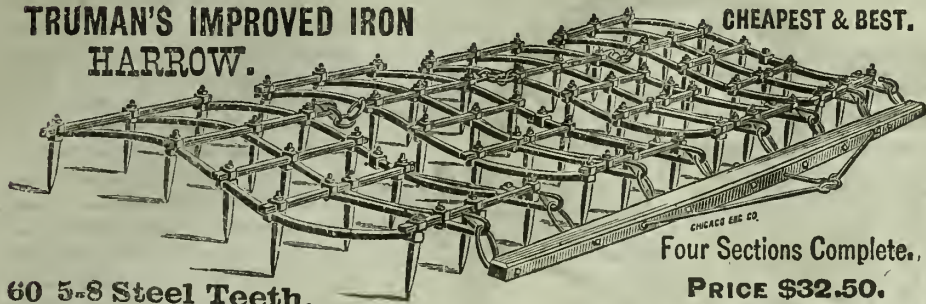
THE Best and Cheapest.

10 foot..... \$75  
12 " ..... \$85  
14 " ..... \$100

MADE BY  
JACKSON & TRUMAN,  
San Francisco.

## TRUMAN'S IMPROVED IRON HARROW.

CHEAPEST & BEST.



60 5-8 Steel Teeth.

Four Sections Complete.

PRICE \$32.50.

## TRUMAN'S IMPROVED IRON HARROW.

The cut represents a Harrow Frame that is indestructible; made entirely of iron, and locked firmly together by the teeth passing through malleable iron clamps and having screw-threaded shanks on their upper ends, which bolts the framework securely together. This mode of constructing a Harrow Frame dispenses with drilling or punching holes through the bars of the frame, thereby giving greater strength and durability to the frame of the Harrow.

Iron is continually more and more taking the place of wood in the manufacture of all kinds of farm machinery, and there is no implement used on the farm where it is employed with more profit and advantage than in the construction of the Harrow.

In handing you this description of our improved Iron Harrow, we desire to call your attention to its merits and advantages over all other implements of its class:

This Mill was first introduced in the West, and is now known there as the INGALLS Mill. We purchased the patent for this Coast, and have made a complete new design and new patterns throughout, greatly simplifying its construction. Making Large Wearing Surfaces; Oil Reservoirs, ample and convenient; Boxes are all lined with babit; Steel Pins for Connecting Rods; the Stroke is Adjustable; the Castings are Heavy, Strong and Smooth; the Wheel is Solid, and dished like a Wagon Wheel; Thoroughly Braced in every direction.

The Sections are so framed, with a special machine for that purpose only, that when simply stuck together without a nail they cannot be racked the least without breaking.

The whole circle is regularly filled with wings and no place left out for spokes, they being behind, out of the wind.

The Turn Table is small and the Vane large, insuring it to turn face to the first available wind.

It is thrown out of the wind by a Hand Lever at the base of the tower, or by a severe gale, presenting a wind surface of less than two inches and defying the fury of the storm.

A Float may be placed in the tank, so attached to the shipping gear as to automatically stop the mill when the tank is full and resume work before the water is drawn out.

It is neatly painted with two coats and varnished. Duplicates of every part.

In designing this Mill, we have aimed to make one that will bear us out in applying all of the qualifying adjectives usually employed by the descriptive ingenuity of windmill inventors and manufacturers. The following is a brief extract of those common to all windmill catalogues: Cheap, Simple, Compact, Strong, Durable, Powerful, Adjustable, Automatic, Anti-Friction, Self-Regulating, Noiseless, Ornamental, and fully warranted not to run unless the wind blows.

We challenge competition in any or all of the above enumerated qualities of a Wind Engine for Pumping. PRICE OF MILLS: Twenty-five per cent less than any other first class mill. Ten-Foot Wheel, \$75; Twelve-Foot Wheel, \$85; Fourteen-Foot Wheel, \$100. These prices include Actuating Pump Rod and Connection for Pump at the works in San Francisco.

The Tower, Pumps, Pipe, etc., are extra. The cost of Tower and setting Mill is from \$25 to \$50, or \$1 per foot in height.

We can furnish Tanks of any required size; also, Frames of any required height. On receipt of size of Tank, height of Frame, and a diagram showing length of pipe, number of elbows and faucets, we can send the whole, properly fitted. If desired, we will send a competent man, at reasonable rates. Instructions for setting up sent with each Mill.

## PRICE LIST.

No. 1 HARROW Has three sections, 45 5-8 steel teeth; cuts 9 feet wide. This is a light size for two horses..... Price \$25.00.  
No. 2 (Represented in the cut) has four sections, 60 5-8 steel teeth; cuts 12 feet. This is our standard style for two horses (generally used)..... Price \$32.50.

No. 3 Has 5 sections, 75 5-8 steel teeth; cuts 15 feet wide. This is our three-horse Harrow; can leave off one section and use two horses with the same draft-bar Price \$37.50.  
No. 4 Has 6 sections, 90 5-8 steel teeth; cuts 18 feet. For this size we use four horses abreast, with two draft-bars coupled together at the ends; for large farms.... Price \$48.00.

This Harrow can be taken apart and packed very closely for shipment, they can be put together with a wrench; the teeth are five-eighth-inch solid steel. Order the TRUMAN IRON HARROW. For sale by all Implement Dealers. Manufactured by

## JACKSON & TRUMAN,

No. 625 Sixth St., San Francisco.

W. R. STRONG & CO.,

WHOLESALE

## SEED MERCHANTS.

EVERY DESCRIPTION OF

Field, Garden, Flower and Other Seeds, Flowering Bulbs, Etc.

CAN BE OBTAINED AT OUR ESTABLISHMENT

FRESH, PURE AND GENUINE, AT THE LOWEST RATES.

California Alfalfa, Eastern Clovers and Grass Seeds a Specialty

(Seed and Tree Catalogues sent by Mail free on Application.)

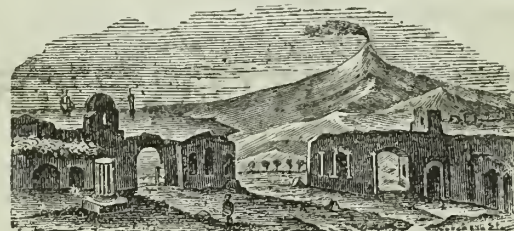
—ALSO—

## Wholesale Fruit and General Produce DEALERS.

Special attention will be given and prompt returns rendered for Consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates.

Our constantly increasing line of customers attest to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.



## ASSETS OF THE AETNA INSURANCE COMPANY, OF HARTFORD,

On the Thirtieth Day of SEPTEMBER, A. D., 1881.

CASH ON HAND IN BANK, IN TRANSIT, AND HELD BY AGENT.....	\$1,698,645.42
REAL ESTATE UNENCUMBERED.....	365,000.00
LOANED ON COLLATERALS.....	128,345.26
UNITED STATES AND OTHER BONDS.....	4,409,925.69
BANK STOCKS.....	1,342,553.50
RAILROAD STOCKS.....	736,940.00
ATLANTIC MUTUAL INSURANCE CO.'S SCRIP.....	37,290.00
ACCRUED INTEREST.....	12,200.00

TOTAL.....\$8,730,899.87

Recent published statements that the "Aetna" had retired from business, referred to the Aetna of New York, and not to the staunch old Aetna of Hartford, whose assets, as shown above (nearly \$9,000,000.00), and whose record as the leading insurance company in America, is such as to assure security beyond question to its thousands of patrons.

GEO. C. BOARDMAN, General Agent,  
311 California Street, San Francisco.

## WHEELER'S Carbon Bisulphide FOR KILLING SQUIRRELS, GOPHERS, RATS, INSECTS, ETC.

Can be Used with Perfect Safety by Any One.

Each bottle or can is accompanied by COMPLETE PRINTED DIRECTIONS for using the material, and a fluid ounce cup which holds the amount necessary for a proper dose.

### COMPARED WITH OTHER POISONS.

Bisulphide	Strychnine, Etc.,
Kills only the animal in the hole which breathes the vapor.	Is apt to kill the pet dog, sheep, insectivorous birds, etc.
Kills immediately, and without pain. Animal cannot get away from it, nor does he try.	Kills by long and hard suffering. May eat it, and may not; can avoid it, and often does.
Animal dies in the hole and never becomes offensive.	Crawls out and creates a stench, or poisons the dog or other pets.

SOLD BY DRUGGISTS AND DEALERS IN GENERAL MERCHANDISE.

Or sent by Manufacturer on Receipt of price. Address,

JOHN H. WHEELER, No. 111 Leidesdorff St., S. F.



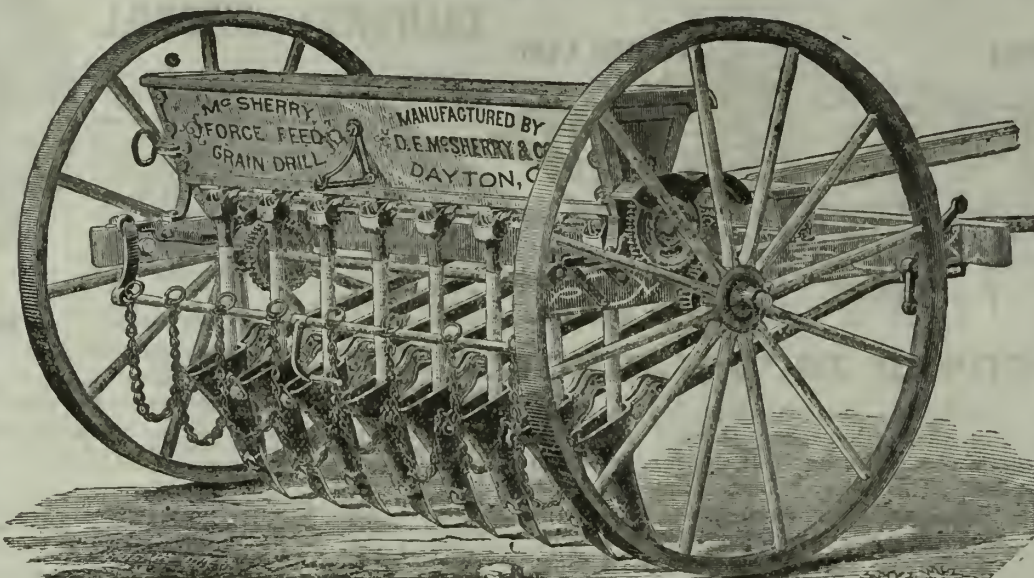
# MC SHERRY GRAIN DRILLS

With Improved Force Feed,  
COMBINE ALL THE LATE IMPROVEMENTS AND CANNOT BE EXCELLED.

Quantity Sown Regulated by  
Cog Wheels Governed by  
Established Rules.

This is the only sure and reliable method possible, for the amount of seed discharged is controlled by the revolutions of the spiral feed wheels which must be uniform.

Much is said about Changing Feed Without Gear Wheels, as though it were a new thing. Really, it is only a return of the old and unreliable way of regulation by changing the size of the discharge openings. The drills made and widely popular 15 or 20 years ago, were all regulated in this way, by means of a dial and indicator plate. But popular as they were, they all gave way to the superiority of "The Force Feeds," changing quantities by the reliable method of Cog Wheels.



The great and fatal difficulty was the impossibility of making the whole series of openings exactly alike, or to make the dial and gauge-plate infallibly correct, so that it could be depended on and the Drill be found always to sow just what the dial indicated. It is well known that the very slightest difference in size of feeder or discharge opening, makes a very decided difference in quantity of seed per acre. Lapse of time has not altered the case, nor removed the difficulties or objections. They still remain against that whole principal of regulation, when, as now, it is again brought forward. We insist, such regulation is all guess work, there is and can be no certainty about it.

With cog-wheels the case is different; because the openings remain always the same, and the cog-wheels being correct once, it is utterly impossible for them to vary the next time they are used. Therefore it is the only correct method. The change of wheels is so very easily made that the item of trouble is insignificant.

Hoes changed from Zig Zag to Straight Rows by New Lock Lever Attachment without removing or loosening anything. Sows All the seed out of the hopper, straws and obstructions being carried out by the spiral feed wheels.

PRICE LIST OF THE MC SHERRY GRAIN DRILL—9 Hoe, 7 inches apart, \$105; 10 Hoe, 6 or 7 inches apart, \$110; 11 Hoe, 6 or 7 inches apart, \$115; 12 Hoe, 6 inches apart, \$125; 13 Hoe, 6 or 7 inches apart, \$130; 15 Hoe 6 or 7 inches apart, \$150; 16 Hoe, 6 or 7 inches apart, \$165; 17 Hoe, 6 or 7 inches apart, \$175.

## BUFORD & CO.'S ROCK ISLAND PLOWS.

THE BROWNE IMPROVED THREE LEVER GANG,

So perfect in its construction and unequalled for lightness of draft.

The Browne Sulky, Black Hawk Clipper Single Plows and Chilled Plows of all Sizes.

FRANK BROTHERS, Nos. 319 and 321 Market St., San Francisco, Cal.

ROBERT WILLIAMSON.

JAMES A. ANDERSON.

## CAPITAL NURSERIES,

Sacramento, Cal.,

—AND—

## ORANGE HILL NURSERIES,

PENRYN, Placer County, Cal.

Established in 1865.

**WILLIAMSON & CO.,** — **Proprietors.**

We call special attention to our stock of NATIVE FRUIT TREES, viz.: Petite Prunes, Yellow Egg and Coe's Golden Drop Plums. A large stock of Apricots of leading kinds. Peaches, Pears, Apples and Rooted Grape Vines of every description. Also a large stock of choice Ornamental Shrubs and Trees, such as Palms, Magnolias, Golden Arbor Vitæ, etc. etc., at lowest market rates.

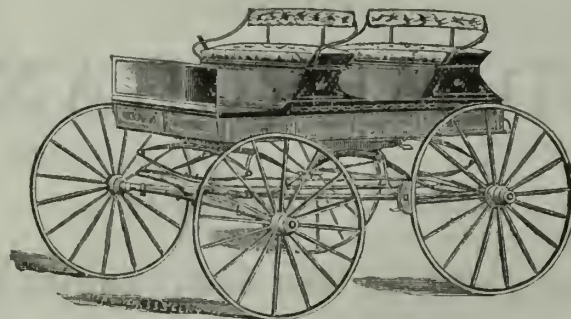
Residence and Sample grounds, U and Sixteenth Streets,  
OFFICE AND TREE DEPOT,

I and Seventh St., near Court House, Sacramento, Cal.

ADDRESS ALL COMMUNICATIONS:

CAPITAL NURSERIES, P. O. Box 407, Sacramento, Cal.,

or ORANGE HILL NURSERIES, Penryn, Placer Co., Cal.



FOUR SPRING WAGON FOR RANCH AND FAMILY USE—THREE SIZES.

**A. W. SANBORN & CO.,**

MANUFACTURERS OF AND DEALERS IN THE CELEBRATED

## SANBORN SPRING WAGONS.

Manufactory, Manchester, N. H.

24 & 26 BEALE STREET, — — — — — SAN FRANCISCO

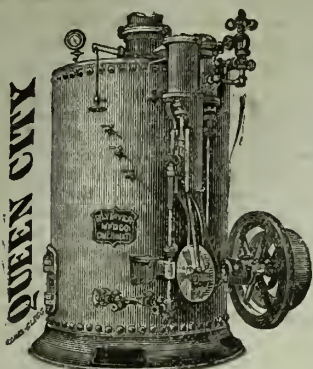
(Send for Catalogue.)



THOROUGHBRACE WAGON—TWO OR THREE SEATS—THREE SIZES.



## STEAM ENGINES.

VICTOR, GREAT WESTERN AND NILES' SUGAR  
CANE MILLS from Blymyer Manufacturing Co.

LINFORTH, RICE &amp; CO.

Depot for Pacific Coast.

323 and 325 MARKET ST., S. F.

Please send for Illustrated Catalogues.

## Poultry and Stock Book

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address WILLIAM NILES, Los Angeles, Cal.

M. COOKE R. J. COOKE

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE &amp; SONS, Successors to COOKE &amp; GREGORY

## SHOPPING

Done in SAN FRANCISCO for Ladies and Gentlemen, and COMMISSIONS OF ALL KINDS EXECUTED with judgment and taste especially in

Dry Goods, Fancy Work and Music.

Samples sent free. Circular and references given on application to  
MISS E. H. MAYNARD,  
1521 Washington St., S. F.

## REMOVAL NOTICE.

The Sweepstake Plow Company's Works have been removed to

Benicia from San Leandro.

ADDRESS IN FUTURE:

BENICIA AGRICULTURAL WORKS,

Benicia, Solano County Cal.

## California Washer.

This machine is an improvement on the celebrated "Humboldt." For Families or Hotels it will pay for itself in less than six months. Lace curtains and other delicate fabrics can be washed without injury. Price \$15. Manufacture, 431 Fourth St., S. F. Local or traveling Agents wanted. G. M. PURSELL, Patentee.

## California Improved Rotary Churn,

PATENTED AUGUST, 1881.

A Box Churn with dashers, or can be used without dashers. Can be run with reverse motion with one man or two. A trial will convince that this is the best Churn in use. For Churns and Agencies, apply to

E. L. PRIEST & CO.,  
629 Market St., Oakland.

## STILES' GRAIN MILL.

This Mill grinds by corrugated friction rollers. It will grind eight tons to one-horse power per day, and one-half-horse power will run it and do work in proportion. It can be run by a common windmill. Any orders received by W. C. STILES, Nevada City, will be filled at once.



H. T. DORRANCE,

Manufacturer and Importer of

## SADDLERY AND HARNESS,

CALIFORNIA, LADIES' AND IMPORTED SADDLES.

Whips, Robes, Team, Concord, Buggy, Coach and Trotting Harness, Horse Blankets, Linen Covers, Etc.

No 185 Hunter Street, - - Stockton, Cal

## SPERRY'S FLOURING MILLS,

AUSTIN SPERRY, S. W. SPERRY, Prop'rs,

Millers and Commission Merchants!

And Dealers in FLOUR, GRAIN, BRAN,  
GROUND BARLEY, MIDDINGS.

STOCKTON, - - - California.

San Francisco Office - No. 22 California Street.

## MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

## IRRIGABLE LANDS IN FRESNO.

640 Acres of level vineyard land for sale; Canal runs over it. Price, \$10 per Acre; about 2 miles from Railroad Station. CHAS. A. HENRY, 400 Montgomery St., S. F.

## Beekeepers' Methods.

(CONTINUED FROM PAGE 281.)

object. "Novice" has done it, so may Mr. Lyon. As I did not mention anything about the entrance, the natural supposition would be to leave it alone, as I daresay most any intelligent reader would understand. I don't risk my queens at the entrance by letting them run in, neither do I believe that "Novice" would risk a very valuable one in that manner.

I always give my bees plenty of ventilation, sometimes have a front or rear entrance, or both, as the circumstances require. I find in the different works on bee culture, under the head of "introducing queens," at times, nothing said even about opening the hive. According to the theory of Mr. Lyon, there must be a mystery, how the queen could get into the hive. He asks what I mean by closing the hive for 48 hours? I mean, Mr. Editor, just what it reads. As the hive must be opened for the queen to be introduced, so it must be closed after the introduction, the entrance open as before the introduction, or removing the original queens; or if robbers are about it may be closed just enough for the bees of the hive to fly in and out and protect the entrance to give the bees of the hive a chance to get acquainted with the queen and the more readily to accept her. On releasing the queen if the bees appear to want to sting her she must be caged again for another 24 hours, when they will forget their animosity.

It is more difficult to introduce a queen among mostly old bees. As the young bees under the cage hatch, the queen will fill the empty cells with eggs and return to her normal condition. Bees more readily accept a laying queen, but for the cage she would be killed before having a chance to lay. When honey is coming in freely and the old bees busy gathering, the young, just hatched bees will not molest the new queen, and she may be right at home in the hive, but the inexperienced cannot afford to take that risk. After removing the cage and seeing the queen on the comb, and the bees quietly feeding her, the hive must be closed as before, for a week, as all the bees are not probably acquainted with her at the time, and robbers might get in, which might excite the bees to annoy her. Many a valuable queen has been lost by curiosity in opening a hive too soon. As soon as the bees find the queen depositing eggs they will be more contented and leave her alone. She will take care of what queen cells may be started, though I prefer to be sure myself about it.

If Mr. Lyon would read the *American Bee Journal* more than he does, he would learn that intelligent apiarists do leave the queen even 10 days without opening the hive to look after her all that time. I have introduced a queen that I paid \$10 for besides the express charges, and she proved large and prolific and gave me many good queens. I introduced her, as was the custom at that time, in a roll of wire cloth between frames. After 48 hours I attempted to release her, and the bees clinched and attempted to kill her. I recaged and released her in 12 hours afterwards, and she was received all right. I have yet to lose the first queen introduced in the manner described in the *RURAL* Sept. 10. Facts are what are wanted.

As soon as the swarm ceased searching for her and were returning to the parent hive, being placed on a limb of a small evergreen tree (with the wing clipped) she crawled to the very top of the limb, in a few seconds the whole colony was apprised of her presence, and began quietly to cluster around her. P. 136—The old fashioned way of hiving swarms, by mounting trees and cutting off valuable limbs, should be entirely abandoned; p. 137—A skillful bee keeper with his hiving basket will often have six or more swarms in the time required by the old plan for hiving one; p. 173—Mr. C. adds: As the old queen leaves the hive only with a new swarm, the loss of her wings in no way interferes with her usefulness. If the bees find her they cluster around her and may easily be secured by the apiarist. If she is not found, they return to the parent stock to await the maturity of the young queen. Then they swarm naturally, when the beekeeper can cut out all but one queen cell, remove the swarm and hive to a new place and return the swarm to the old stand after hiving; p. 180 advises those that have time to experiment with the movable frame hive on a large scale, or at least on a small scale, though the less he disturbs stock on which he relies for surplus honey, the better, in receptacles not in the main hive; p. 222—Virgil speaks of clipping the wings of queens. John Mills (1766) quotes of a parish priest of Spain who had 5,000 hives, who cautiously catches the queens and then clips off their wings, p. 77.

The Northeastern Beekeepers Association, Utica, N. Y., Feb. 1881. "Question—Are bees more inclined to supersede clipped queens? Ans.—No."

The Northeastern Convention, Feb. 7, 1878: "Question—Can bees that are swarming in the air be controlled so that they cannot abscond when the beekeeper is near? Ans.—Yes, by previously clipping the queen's wing, or using a fountain pump."

G. M. Doolittle at National Beekeepers Association, Oct. 16, 1877, said:

"It is expected that all apiarists will clip all queen's wings as soon as they get to laying, thereby saving all of swarms by flight to the woods, and all uniting of two or more swarms again. Swarming can be controlled by extracting the honey from the brood combs, and cutting off all cells the evening after a swarm has issued and been returned. If the bees lounge idle in the boxes they will swarm again and the operation must be repeated. In the midst of the honey harvest when two or three swarms come out and cluster together, hang one of the caged queens with them till they get settled, then hive them same as any swarm, put on boxes at once, let the queens you don't use go back in their own hives. One such swarm completed a 65-lb box of honey in 13 days, same season."

He advises "to have first swarm hut prevent after swarms." The following was read before Northeastern Conventions, 1878:

"If a colony is determined to swarm, we have a means of detaining them, if precaution is taken in time. We mean the clipping of the queen's wing. This is so important and so easily done that it is best to render all

queens incapable of leaving their homes. The bees will come back when they find themselves queenless unless uniting with another outcoming swarm, which has its queen, which they will sometimes do. The wingless queen settles to the ground or alights on some tree, shrub or tuft of grass, a few of her workers surround her, and the cluster they thus form may be easily found. Before being put back any queen cells should be removed; useful for nuclei."

The *American Bee Journal*, May No. 1881, p. 150, advises "to clip one wing of queens;" also p. 158, "if your bees are allowed to swarm naturally you cannot keep your queen without clipping one wing."

I think that will do.

## Fertility of Queens.

Now to show authority for what Mr. Lyon calls "bad and injurious bee culture" I refer again to Langstroth in reference to the fertility of queens, p. 223—"The fertility of queens usually decreases after the second year." P. 49—"The fecundity of the queen bee ordinarily decreases with age, after she has entered her third year. An old queen sometimes ceases to lay worker eggs, and produces only drones." I have never had such old queens which had lost their fertility, but I am aware that the bees will build drone comb with an old queen in the hive unless they are given foundation or worker comb; young queens, early as possible in the spring are the most profitable.

## Bottom Boards.

I have never had cause to change the style of my bottom boards. There are many advantages to keep them so. To clean the bottom of hives in the spring lift the front and clean the bottom before they are aware of it, early in the day before they fly; and as for the moth I am willing to compare with any style of hive in the State. For the last four or five years I hardly have known what a moth is in my hives. A moth can find plenty of places to deposit eggs in or about any hive of bees, as she can go in where a bee can, after the bees have done flying at night. She is very quick. "Now you see her, now you don't." I don't fear them, nor do I find it "next to impossible," as Mr. Lyon states. As to the vote on the two styles of bottoms, it shows how the vote appeared at that time and place, but that does not prove any particular point in favor of or against either. Each kind may have its advocates. I still prefer the loose bottom boards; I can fasten them very easily, if required.

Also in regard to the rabbits: I can show both kinds. I have a few hives with tight bottoms, but only a few, and write from experience. It may be that Mr. Lyon is interested in those tin rabbits, for sale at Ventura. It may be a way he has of bringing his wares into notice. I prefer not to advertise in that way.

It may be a conceded point that Mr. Lyon's bees fly five miles on coming out of their hive; that very fact does not favor the exalted intelligence of the experienced beekeeper to allow of such a thing. I have not been troubled that way as yet. I had occasion to be away from home one day, up the valley, to set up an Eclipse incubator. In looking up a carpenter to make a table, I lost time, and was detained over night. When I returned home, about 10 A. M. the next day, I found Mr. E. at work. She had four or five swarms located in one hunch. I was having young bees being hatched in nuclei at the time. I hived the bees at my leisure the same day.

In conclusion, let me examine the paragraph that annoys Mr. Lyon so much. I can't think he writes from experience. I can prove that when the bees did not find their queen they returned to the hive, with the foregoing exceptions, and did not all go right in. When the queen returned to the hive and went inside, the bees followed suit, but sometimes the queen crawled under the bottom and the swarm clustered there. They very seldom get lost. In one case I found the queen in the wrong hive, but saved her. My hives are 6 to 8 ft. apart, and low to the ground. Sometimes the bees would spread themselves on the ground and neighboring hives, so one could not walk without stepping on them, but they soon rose again and found their hives. Sometimes being called away, on returning, my attention would be called to a cluster outside of the hive, the first notice I would have of their swarming. At the time I was away Mrs. E. caged the queens and left them near their hives, shaded, marking the hives by placing thereon a rock or chip, which made the hiving easy.

I do not allow my bees to cluster outside of the hive, and remain there long, queen or not; sometimes the queen would be in cluster on hive, other times on the ground, in case she had been superseded, I could tell by the movements of the swarm, or finding no clipped queen; but the clipping would not be the cause of her being superseded, but the unfavorable weather preventing swarming. As Mr. Lyon affirms, "had practice in every point." The only thing bad about it was some one did not catch a swarm of Italian bees. It was bad for them perhaps.

If Mr. Lyon ventilates his hives from front to rear, raises the second story, and makes room or shades his hives, the bees would be minding their own business inside their hive and not be idling their time outside. It is several years since I had a case of comb-melting; my hives do not get so heated, that is one of their best points. A. B. J. again, 1877, page 348: "To make good hives, one must understand beekeeping and mechanism. Patronize good reliable men, get a good article though it cost a little more. Select a hive easily handled and

accessible to the bees in every part." Probe all things, and hold just to that which is good. Northeast Convention of Beekeepers: Question 21. What is the best hive? Ans. The one I use. I don't try to suit Mr. Lyon, I try to suit myself and those that deal with me. If Mr. Lyon would deal with me I would try to suit him. Mr. Langstroth does not write that a queen is lost when she does not go with the swarm, but Mr. Lyon says so.

As Mr. Lyon severely criticises any mode of transferring or introducing, can he give a better way for the benefit of the readers of the *RURAL*.

If Mr. Lyon had the interest of the beekeeping public at heart as he states, he would not stay by and see a neighbor lose 24 out of 26 swarms at a loss of \$120, merely for lack of benevolence on his part in not informing him of the very simple fact to ventilate his hives. Maybe the neighbor did not take the *RURAL*. There are other writers there than Mr. Enas. I would prefer to have one save his bees.

## The Appeal to Langstroth.

Why does not Mr. Lyon give the quotation from Langstroth just as it is? The third, and I think the last edition, was printed at Oxford, Butler county, Ohio, March, 1859. Although he acknowledges some errors, the main points are as good to-day as at that time, and the hive is as popular as then. Langstroth says (page 203):

"Great caution is not only requisite in giving a hive a strange queen, but in all attempts to mix bees belonging to different colonies. It would seem, therefore, that colonies might always be safely mingled by sprinkling them with sugar water, scented with peppermint or any other strong odor, which would make them all smell alike."

Mr. Lyon, with his superior attainments, should compare the above with his "extract," and not pass his own ideas off for that of Mr. Langstroth. Since the book was printed, over 22 years ago, many new ideas and implements have come into practical use more simple and with better effect, the queen cage and the smoker being two very important additions, simplifying the management of bees and queens very much. I have seen disastrous consequences arise from sprinkling. Mr. Lyon would have it that I would have the inexperienced "tumble all the bees in one hive." Even if such was the case, the results might not be so bad as he would represent. Let him tumble a frame of bees, without the queens, from several hives together on a cloth, or a sheet, and note the result. I don't know what kind of bees Mr. Lyon has, but mine don't tumble. I have to brush them off the combs. I should think an intelligent reader would take an intelligent meaning from what he reads. I have no comments to make about the practice of anyone that I have not seen. I know I have not met with any serious loss that could be avoided.

## Raising Queens.

In the article on raising queens from brood in the different stages, let me refer him to his own *Gleanings*. June number, 1881, page 277, from the pen of one at the head of the class, and the equal of the most intelligent of the bee fraternity. I refer to E. Gallup, at present of Santa Paula, Cal., who writes: "Some queens are far ahead of others in prolificness. Any breeder who breeds in and in for a series of seasons will find his bees running out." He again quotes from Adam Grimm, a very successful beekeeper in his day. Mr. Grimm says:

"Queen breeders, as well as other beekeepers, should save all the cells that are built in stocks that voluntarily swarm. In this way they will get queens that are reared as such from the egg. It is my experience that queens of that kind are more durable and more prolific than queens reared from larvae a number of days old. Such queens are, with few exceptions, as good as the best."

## Again he says:

"To raise good queens, we must have all the necessary conditions—a full stock of bees. They must be gathering forage abundantly, be supplied daily with honey, and must have eggs or larvae just hatched, for if they have larvae several days old they will be apt to start queen cells over too far advanced. It is an ascertained fact, that bees can change a larva to a queen after it has been fed as a worker up to the fifth day. Such queens are in one sense worthless. Every beekeeper should keep introducing new stock in his apiary from year to year, so as to avoid breeding in and in, or he cannot expect to keep his stock up to the standard."

I have long watched Mr. Gallup through his writings, and hold his opinions in great respect, as well as a host of others who add to the columns of the *American Bee Journal*.

The origin of laying workers I will not discuss. I have had them and caught them in the act, but don't take stock in them. For that purpose I see the inside of my hives at times and remove all cause, if necessary. Neither do I want 10-day queens. I prefer to have queens from the egg, or just hatched larvae. They will get the benefit of the royal jelly and mature better. I change all fall superseded queens as early as possible in spring. By choosing the combs and eggs for queens, I have the queens hatched in from 13 to 16 days. I will quote *Gleanings*, page 116, March number, 1880, which says: "Get eggs or recently hatched larvae into your breeding hives. In about 12 days your queen cells are ready to be distributed in your nucleus hives." G. M. Doolittle, page 12, January number of *Gleanings*: "We experimented and succeeded in getting a few of the eight day and nine-day queens fertilized after they were two or three weeks old. They laid well for a short time, but all died of old age before fall." A. E. Maum, in *American Bee Journal*, 1878, pp. 86-7, says: "I prefer to raise my queens in nuclei, because I can watch them, and know they are raised from the eggs. In this way I do not raise any nine-day queens. Where they are raised in full colonies, the bees are liable to start queens from larvae that is three and four, and even five days old. I am positive



of this, for I have tried it to my satisfaction." Corroboration.

Mr. Lyon states, in his comments on "Introducing Queens:" "But we will venture the assertion that neither the *American Bee Journal*, nor any other intelligent bee journal, or bee book, or bee association, ever recommended that manner of introducing a queen to a strange colony." At the Western Illinois convention, at Oquawka, Henderson county, Illinois, October 2 and 3, 1877: Question: "What is the safest length of time to keep queen in cage before releasing?" Ans. No certain time—from 24 to 48 hours. Q. At what time of the year is it best to introduce queens. A. For a beginner, when there is a good flow of honey; for old hands, almost any time." Chas. Dadant (pp. 83-4, *American Bee Journal*, 1877) says: "Wait 48 hours before removing the cork to queen cage. In seven days we see if the queen has been accepted. If there are eggs, the queen is safe; if none and there are queen cells, the queen has been killed. With more than 200 imported queens we lost only five by introducing. All we received from April to August were introduced safely; the five killed were received during August and September. In the fall months bees are more difficult to handle, especially if honey is scarce." They were all introduced in a roll of wire cage, but the cage I use is more convenient and safer.

In the September number of the *American Bee Journal*, for 1879, p. 390, is given a representation of a cage suggested to the editor by Mr. Wm. Makes, of Battle Creek, Michigan, with wooden sides, instead of tin, which I have used and found good. It was there I got the first idea. Page 452 gives a description of two nearly similar, with tin sides, one round, one square, with tin instead of wood; also a description and recommendation. I am well satisfied with the one I use. Extract from *American Bee Journal*, 1877, p. 163: "Be cautious; do not open the hive during that day." That does not say either entrance or ventilation. Is Mr. Lyon satisfied?

#### Clipped Queens.

Now, in regard to clipping the wing of the queen, I quote from Langstroth (p. 117):

I haven't seen where he has offered any plan to take the place. I judge no one with ordinary intelligence could transfer a swarm by the very simple idea that he has given in his "Notes on Others' Methods" in a previous number of the *RURAL*. If he would only do his best maybe some one would be enlightened as to the most proper way to manage an apiary. The State is filling with intelligent minds that are really hungry after the proper knowledge in this branch of industry, and some of the old heads may be benefited as well. It may be, Mr. Editor, that I am not perfect, and my mistake may be that I do not go into details minute enough to give my ideas as I see them. If I can draw some of the big guns out to a fair, outspoken explanation of these points that the lovers of the busy bee desire, it will be just what I desire.

Mr. Editor, I don't desire to be lengthy, neither do I protest against your conducting your paper to suit your own ideas. On the contrary, I think that you have done well, with whatever assistance you have been able to secure, to give such a paper as the *RURAL* is today to the California public.

May its circulation never be less, and may it continue to advance. I hope Mr. Lyon will continue those feelings of true friendship and brotherly love which unite us into one friendly band of brothers, among whom no contention should ever exist but that noble competition of whom may best work or best agree.

Jos. D. ENAS.

Sunnyside Apiary, Napa, Cal.

#### Victor Cane Mill.

Those who are experimenting with sorghum cane in this State will be interested to learn that Linforth, Rice & Co., of this city, have the agency for the well-known machines and appliances of the Blymer Manufacturing Co., of Cincinnati, Ohio. The mill which we show on this page is the Victor, which we believe has already been introduced into this State. As there are a large number of people growing Early Amber and other sorghum canes for syrup, and perhaps sugar, it is proper that there should be a local emporium of the needed apparatus as may be found at Linforth, Rice & Co.'s store on Market St.

#### Nevada State Fair.

EDITORS PRESS:—I will give you a few items concerning the Nevada State fair which has just closed. The gathering was very fair considering the distance the parties had to come at this late season of the year. The weather was a decided mixture of the good and the bad with the bad predominant; one day would be calm and sunny, the next cold and windy. The racing was good. There were several fine runs made, one among the number being a running dash of 1½ miles, between Theo. Winters' Fred Collier and L. S. Martin's Clara B. They ran nearly neck and neck through the entire distance, Fred Collier coming out one-half length ahead; time, 2:40½, which is pretty good time for this high altitude. There were 11 competitors in the ladies' tournament. The riding was

Circus." It represents a group of Pinte braves, squaws and papposes, watching with an absorbing interest, a passing circus parade. The Nevada exhibit of machines, wagons, etc., consisted of one patent harrow and a few cook stoves and a display of agate ironware. But thanks to some Sacramento firms, notably among them being Messrs. Baker & Hamilton and Harry Barard, there was a fair display of iron wagons, fine buggies, agricultural implements, etc. But it is in butter that Nevada and eastern California show the lead. A prominent merchant, Mr. Schooling, of Reno, offered a prize of \$20 for the best lot of 25 lbs. of butter. There were 12 entered, and among them there were six or seven lots between which it would have been a very close test to tell any difference. Mrs. Orrin Ross was awarded the prize. The butter display was far superior to that in either Sacramento or Stockton fairs.

#### Notes on Carbon Bisulphide.

As early as 1865 and 1868, the French used carbon bisulphide for killing rats and insects. In their experiments it was found that the rat, exposed to the vapor of bisulphide, died in about four minutes, that larger animals required a longer exposure to the vapor; furthermore, it was proved that if an animal be compelled to breathe the vapor until almost dead, and then, even though it be drawing its last breath, if fresh air be admitted, it will take but a short time to recover entirely from the effects of the dose. In using bisulphide, therefore, care should be taken that the access of fresh air be prevented. About the above named date the bisulphide was used in killing the vermin in grain. This was successful, and become often practiced. One liquid ounce is sufficient to de-

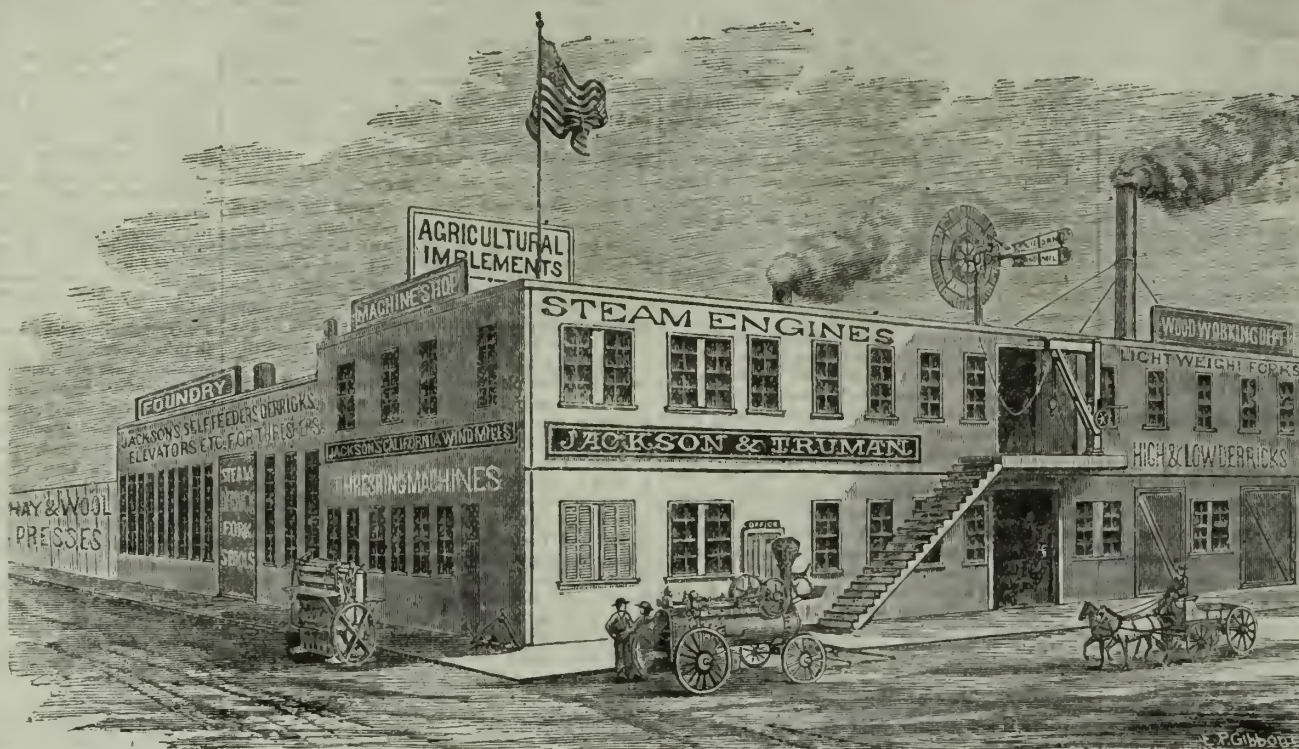
stroy all the weevil and insects of any other kind in two tons of grain, if properly applied. To operate best, the grain should be in a close bin which will prevent easy escape of the vapors. If the grain be in an exposed pile, then the operation will be incomplete. But in this case, even, this material is of great value, as most of the insects may be killed by putting a heavy dose of bisulphide upon a cloth and putting the cloth well in toward the center of the pile. This will do the grain no injury, as on slight exposure all odor and vapor leave it. Mr. J. H. Wheeler, whose advertisement may be seen in the *RURAL*, has added to his list of squirrels, gophers, rats, and phylloxera on vines, for which his carbon bisulphide was used last year, ants, yellow jackets, moths, weevil in grain, scale on citrus trees, etc. With the two first, the dose is poured into the hole and covered up—nothing more is ever seen of the ants or yellow jackets. For moths, insert a saturated cloth into the trunk, small closet, or other space occupied by the moths; allow to remain closed for half an hour or longer, afterward airing all well in open air or by exposing to ventilation. Insects of any other class may be subjected to the same treatment. A number of successful experiments were recently made by Mr. Wheeler at Santa Barbara on the scale, infesting orange trees. The superiority of a vapor for this purpose becomes apparent to anyone who has ever tried to wash thoroughly a citrus tree which grows so close as to render it impossible to destroy completely all insects on the tree. With a vapor, however, confined in a balloon of proper material, with its diffusive power it searches out every sign of animal life, and is the only method of making the operation complete and satisfactory. Experiments have been frequently made with bisulphide for this purpose, but, through ignorance of the material, which dissolves readily oils, paraffine, wax, etc., balloons of oilcloth were used, with which one could not expect to meet with success. It may yet veritably be as Prof. Hilgard advised five years ago, in saying that every farmer should have a can of carbon bisulphide always on the shelf ready for use.

#### Jackson & Truman's Establishment.

We give on this page an illustration showing the exterior of Jackson & Truman's manufactory of agricultural implements and machines, which is the largest establishment of the kind in this city. The list of the firm's manufactures is large, and is well known to our readers by their advertisements which appear in our columns. They have complete wood working, foundry and machinists' departments, and finish all their machines on their own premises.

The members of the firm are energetic, live men. Mr. Jackson is a practical mechanic, and has run on his own account, successfully, field engines and threshing machines, and is the patentee of many of the very useful appliances which are a part of a threshing outfit in California. Mr. Truman has been in the hardware and agricultural implement business for the past 20 years, and is known by the merchants and farmers of the entire coast. A visit to their works, at the corner of Sixth and Bluxome streets, will amply pay for the time occupied. The Fifth and Sixth street cars run direct from the Oakland ferry to within a block of the factory, which is within two blocks of the San Jose depot on Fourth street.

The line between Nevada and Utah is being constantly crossed and recrossed by parties of railroad surveyors. There is a sharp rivalry in order to secure advantageous routes.

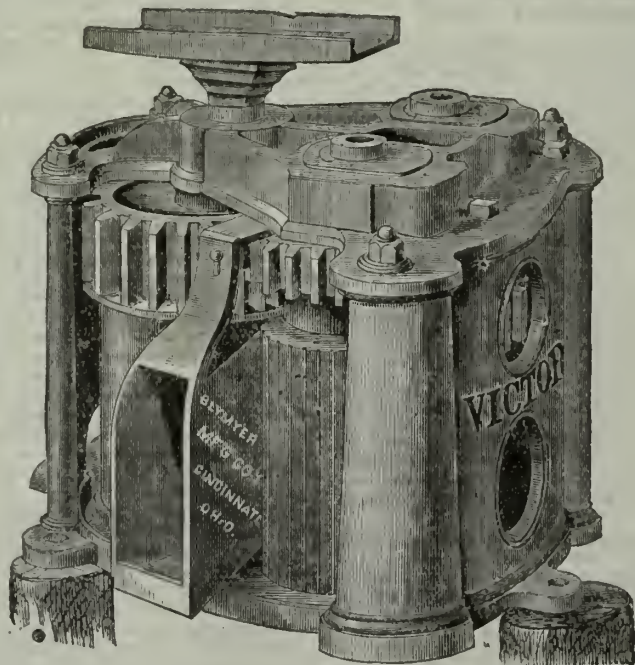


JACKSON & TRUMAN'S AGRICULTURAL MANUFACTORY, S. E. CORNER SIXTH AND BLUXOME.

first-class. They rode on two days. There was one lady, Miss Andrews, rode with a blanket and surcingle, and elicited a deal of favorable comment for her grace and skillful horsemanship. The race that created the most excitement and enthusiasm was a ladies' race, the first one in to receive \$20, second \$10. There were six entered, Miss Hannah Crow, of Clover valley, Plumas county, won the first prize; the second prize was divided between

There were three packages of very nice firkin butter. Mrs. Geo. Alt, of Reno, was awarded the prize offered by the society—\$5.

The display of apples, pears and quinces was excellent. It was the general remark of all examiners, that it was as fine as they ever saw. There were six lots of apples from Honey Lake valley and Long valley, Lassen county, Cal., Washoe valley, Wadsworth and Reno, in Nevada. The award on apples was made to Mr.



THE VICTOR CANE MILL.

Miss Frank Smith, of Humboldt valley, Plumas county, and Mrs. Gault, of Reno. The display of blooded horses was very fair considering they came from a State making but little pretensions to agriculture and stock breeding as Nevada does. There were several fine half-blood Normans and Clydesdale colts; two fine Clydesdale stallions, belonging respectively to Mr. Geo. Alt and Mr. Joe Marzen. The display of blooded cattle was meager. There were two lots of Durham, owned by Mr. Leet, of Reno, and by Mr. Markham, of Washoe. One cow of Mr. Leet's weighed 2,100 lbs. At the pavilion, the artistic display of needlework was good; some fine photographs, also a few nice pictures, notable among which was a Swiss scene by Mr. T. F. Laycock, also a real picture of Nevada life, named "The Passing

L. P. Whiting, of Milford, for best varieties, Al Shinn, of Susanville, for best display.

Geo. W. FREEMAN.

Rocky Point, Sierra county.

MAGNOLIA FARM NURSERIES.—Referring to the advertisement of the Magnolia Farm Nurseries in another column, we would remark that we regard Mr. Coates as one of our most enterprising and trustworthy propagators, and can cheerfully commend his announcement to the attention of planters.

They have already had slight snow falls in the mountains of California, Nevada and places farther north.



**A CHANGE OF SEED.**—The advantage to be derived from a change of seed is proverbial. Extra fine yields are often reported from enterprise in securing seed from other climes. In this connection it will interest our grain growers to read the announcement in our advertising columns of Australian seed wheat and oats, imported and for sale by M. Waterman & Co., of Clay street, San Francisco.

**SEEDS AND PLANTS.**—W. R. Strong & Co., of Sacramento, send us their new catalogue for 1882. It contains full lists of desirable seeds and bulbs, and should be in the hands of planters. We would also call attention to the growing trade of the firm as dealers in fruits and produce. They are just now sending forward much California fruit to distant markets. Their advertisement in another column should receive attention.

NEVADA census returns give the population of Elko at 752; Tuscarora, 1,364; Wells, 243; Virginia, 10,917; Gold Hill, 4,531; Carson City, 4,227; Austin, 1,679; Eureka, 4,207; Cherry Creek, 566; Reno, 1,302; Candelaria, 750; Winnemucca, 753; Battle Mountain, 522; Pioche, 745; Silver City, 605; Sutro, 435; Wadsworth, 661.

## BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISDIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

## TAMALPAIS HOTEL,

SAN RAFAEL.

This well-known and favorite hotel is now open for the reception of guests. Newly furnished. FIRST-CLASS in every respect.

TABLE supplied with the VERY BEST the market affords. The long experience of the proprietor enables him to make the TAMALPAIS the most desirable country house on the coast.

The salubrity of the CLIMATE and beauty of the SCENERY is world-renowned.

W. G. GRAHAM, Proprietor.

## IMPORTED

## SEED WHEAT and OATS,

Direct from AUSTRALIA by late steamer. Sold in lots to suit by S. L. JONES & Co., 207 & 209 California St., and

M. WATERMAN & CO.

113 Clay St., S. F.

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**Dr. Peck's Artificial Ear Drums**  
PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address: J. P. K. PECK & CO., 563 Broadway, New York.

## 70 YOUR NAME in New Type 100

New styles, by best artists. Bouquets, Birds, Gold Chromos, Landscapes, Water Scenes, etc.—no 2 alike. Agent's Complete Sample Book 25c. Great variety Advertising and Book-Edge Cards. Lowest prices to dealers and printers. 100 Samples Fancy Advertising Cards, 50c. Address STEVENS BROS., Box 22, Northford, Ct.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia, and 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 527 Commercial St., S. F.

## Colonies of Pure Italian Bees,

In movable (10) frame hives prepared for shipping, \$12.50 each. J. D. ENAS, Sunnyside, Napa P. O., Cal.

## To Fish Raisers.

I am now ready to sell Carp which were imported from Germany in 1872, in lots to suit. Address

J. A. POPPE, Sonoma, Cal.

## Hunter's Eccentric Patent Coupling.

For carriages, pumps and whiffletrees and other couplings. No bolts, no rattling and no unhitching. State and County rights for sale. Address HUNTER & FRANCIS, Merced, Cal.

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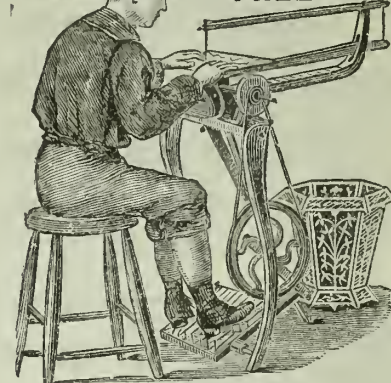
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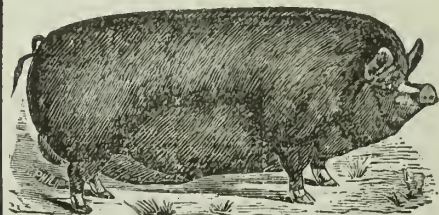
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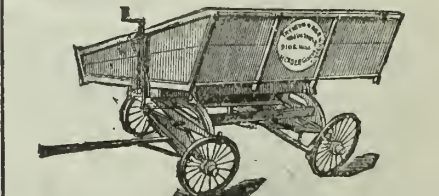
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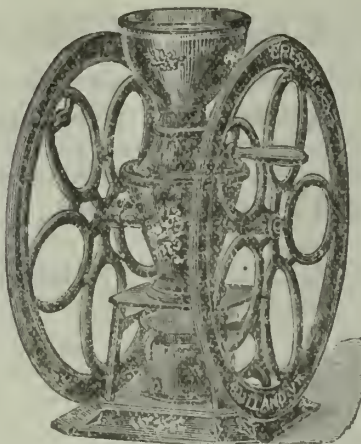
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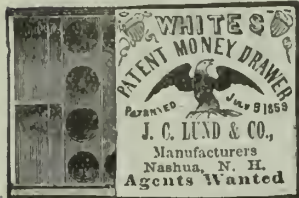
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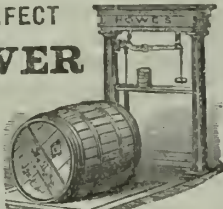
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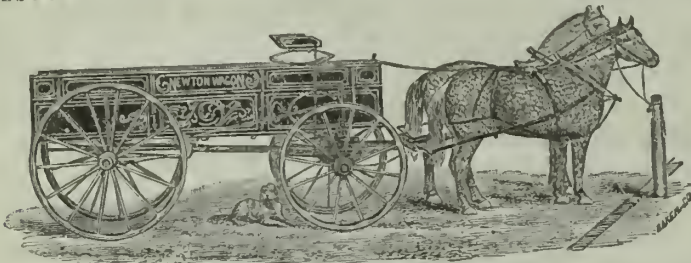
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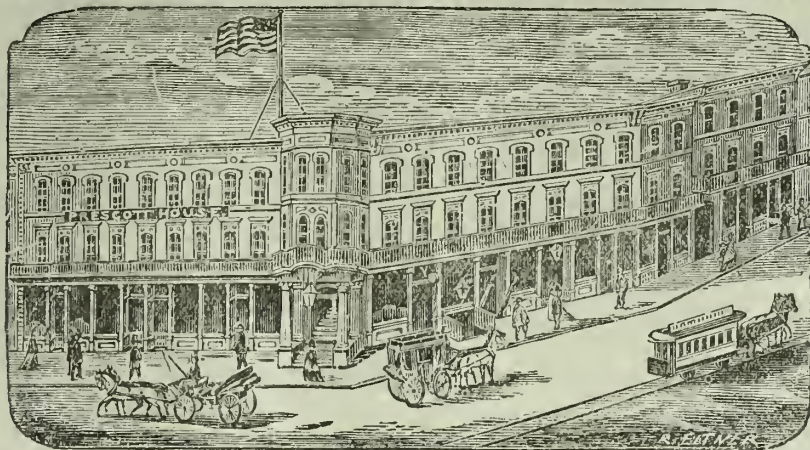
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The above Engine is the safest and most powerful in the market, lighter than other Engines, and no danger of explosions. An explosion of Heald's boiler has never occurred. Two sizes are made; either size will run the largest separator. All the latest improvements have been added to the boiler and engine. Is ready to stand a test any time. Is guaranteed perfect in all its parts, and will do the same work with less water and fuel than any other engine in the market. With one of

## HEALD'S BARLEY MILLS,

It will thresh and grind at the same time, all the separator can thresh. For further particulars, Address

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That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing OVER 100 CARLOADS and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of Breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & HOMER P. SAXE. PETER SAXE & SON.

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## Woolsey's Steam Generator and Power and Steam Cheese Vat for Ranchmen and Dairies.

This is the Cheapest and Best Steam Generator ever invented; and the cheese vat is so constructed that the temperature can be kept even and steady.

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## SMITH &amp; JOHNSON,

(Successors to J. S. Davis.)

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## Davis Gain Twist Regulating Windmill, Tanks, Troughs, Etc., Etc.,

Jobbing of all Kinds Promptly Attended to.

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Of California,

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Authorized Capital, - \$1,000,000, In 10,000 Shares of \$100 each.

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

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## MAMMOTH FURNITURE HOUSE STOCKTON,

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We Manufacture our own goods and sell Bed Room sets from \$22 up. Our styles are the latest, and made under our own supervision by the best workmen. Our immense stock of Carpets imported direct from the Eastern markets in large stock and of all the latest patterns, and sold at prices to suit the Times.

We are the Agents for the Celebrated Decker Pianos, and Organs from \$35 upwards.

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## THE CALIFORNIA ADJUSTABLE

## Spring Tooth Harrow

CULTIVATOR & SEEDER.



As IMPROVED and PERFECTED for 1881 will work equally as well on loose or wet land as in hard or dry soil, and are what every farmer needs to destroy vegetation on the summer fallow. Will save reworking and put the land in the best possible condition for early sowing.

## LOOK TO YOUR INTERESTS

And make money by saving time and working your fallows before harvest. Our new size six foot ORCHARD or VINEYARD HARROWS are provided with handles, rendering them as easily controlled as the Cultivators. These implements are acknowledged by all who are familiar with their work, to be the most practical for general use in the orchard or vineyard of any yet offered to the public. Manufactured only by

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Under the original patents now owned by

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Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at reasonable rates. Send for circular to **MATTESON & WILLIAMSON**, Stockton, Cal.

## PLOWS! PLOWS! GANGS! GANGS!

**JOHN CAINE, Sole Proprietor,**  
Gang Plow and Manufacturing Works  
AND GLOBE FOUNDRY.

Improved Stockton Gangs and Reversible Molds, wholesale and retail, at reduced prices. Every one warranted. Shipments made to all ports with promptness. Iron and Brass Castings. Agent Holt & Young's Combined Header and Thresher. Address,

**JOHN CAINE, Globe Iron Works,**  
P. O. Box 95, Stockton, Cal

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**E. A. SCOTT & CO.,**

Sole Importers and Dealers for the Pacific.

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## The La France Steam Fire Engine.

Circulars furnished on application.

## TO BEE FANCIERS.

I am now ready to furnish PURE ITALIAN QUEENS, Colonies, Nuciel, Comb Foundation, Veli, Smokers, Knives, Bee Books, etc. **SAMPLE HIVE.** Address for Circular

**JOS. D. ENAS,**

Sunrise, Napa P. O., Cal.



Caivert's Carbolic  
**SHEEP WASH.**  
\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for whitening dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast.

## GUNS

Lowest prices ever known

on Breech - Loaders,

Rifles, and Revolvers,

**OUR \$15 SHOT-GUN**

at greatly reduced price.

Send stamp for our New

Illustrated Catalogue (B)

**P. POWELL & SON**, 238 Main Street, CINCINNATI, O.



## Stockton Manufactures.

The advancing material prosperity of our State is evidenced by the growth and extent of our manufacturing interests in interior towns and cities. The city of Stockton occupying a favored and central position, many of her enterprising citizens have established manufactories that are worthy of special mention. The firm of

## Sylvester and Moyer

have established a furniture factory that has assumed a local reputation for excellence and reliability. They now employ from 30 to 50 hands per month, and are making preparations to enlarge their manufactory to meet the growing demand for their goods. The patterns and designs of parlor and chamber sets are very fine, and with their facilities, experience and personal attention, it is claimed for them a reduction of 25% in cost of manufacture and consequently they are enabled to compete with San Francisco manufactories and also to drive Eastern goods from the Stockton market.

## Carriages.

The carriage manufactory of M. P. Henderson is one of the oldest and largest in the State. This factory, corner Main and American streets, is brick 80 ft by 100, and 4 stories. Mr. Henderson adapts his business to the wants of this rich and populous part of our State, and builds all kinds of carriages from the sulky to the so-called "Schooners" for the mines and farms, as also stages and rockaways.

## H. H. Horse Medicines.

The laboratory and factory of H. H. Moore & Sons is one of Stockton's notable industries as its merit and usefulness as a remedy for man and beast, have made more than a State reputation as one of the most effectual and useful liniments known. It seems to grow in popularity to such an extent that almost every rancher keeps a bottle of this liniment on his shelf.

## Ague Cure.

The Little Gem Ague Cure, made by John R. Williams, continues to meet popular approval, and from what we hear from those who have used it, we conclude that it has relieved hundreds from the torment of malarial fevers.

## Gang Plow Manufacturing Works and Globe Foundry.

This well-known establishment of John Caine grows in extent and in general interest. The Stockton Gang and Reversible mold-board plows are being introduced far and wide, and are giving great satisfaction according to the reports which come to us.

## Matteson &amp; Williamson

Are the pioneers in the manufacture of agricultural implements in this State, and in addition to their great trade in plows, they are doing well in all departments of machine shop and foundry work. Their establishment is a credit to a busy city.

## Burnham's Abietene.

This new reliever of pain and discomfort is making its way into all parts, and as it is made in Stockton, it must bring considerable money to the city. We are assured that abietene is winning laurels as a poison oak specific and for headache and skin diseases. It is regarded as one of the happiest of recent achievements in pharmacy.

## H. T. Dorrance

has a saddlery establishment which is well meeting the many demands of the rich San Joaquin region, and is growing up with the country. The manufactory work shown is very creditable, and is as various as the needs of the region.

## Gilt-Edged Yeast Powder.

We are assured that this powder is perfectly pure, and certainly in this age of adulterations it is a fine thing for a city to have a manufactory of such materials.

## Sperry Flouring Mills.

It is only necessary to name these mills to show their relation to the manufacturing interests of Stockton. From the earliest milling history of the State the Sperry Mills have cut out their products not only to this coast but to the farthest regions of the earth. They are running to their full capacity, and contribute greatly to the wealth of the city of Stockton.

**HITE'S PORTABLE COOK STOVE FENDER.**—In this age of improvements and inventions, especially those appertaining to the household, there is none that is more desirable in view of economy and comfort than "Hite's Cook Stove Fender." It was exhibited at the late Sacramento and Stockton fairs in practical operation and received favorable comment and special premiums. This fender is built from 9 to 10 ft high and about 4 1/2 ft in width, and lined with sheet zinc. It is placed around and over the stove with wide doors on two or three sides. A flue is placed in the fender which leads to the chimney or to a room or rooms that is desired to be warmed. In the upper part of the fender are compartments and shelves for drying fruits or meats which is equal to any drier and far better than sundrying. The desirable features of this fender are economy in fuel and the ability to regulate the heat in the kitchen or utilize it for warming other rooms. In some portions of this State where this fender has been introduced it is universally used in private houses and farm homes. Mrs. M. E. Spiers, Wheatland, Cal., is the agent for the patentee.

**FRUIT AND ORNAMENTAL TREES.**—We are pleased to note that Williamson & Co., the old established nurserymen, have a fine and comprehensive stock of trees at their Capital nurseries in Sacramento, and Orange Hill nursery at Penryn, Placer county. The partners in the firm at present are Robert Williamson and James A. Anderson, the latter having recently bought in, although he has long been connected with the business as foreman. The new firm with the old name have an attractive advertisement in another column. Send for their catalogue.

**BENICIA AGRICULTURAL WORKS.**—It would be hard to overlook the grand advertisement of Baker & Hamilton's Benicia Agricultural Works in this issue of the RURAL. In our recent description of the works, we found so much to say about the establishment, that we could not specify the articles manufactured. The advertisement in this issue will supply that lack in our article, and should be carefully read.

**HOME ADORNMENT.**—As there will now be found money in the country for home adornment, it is fitting to call attention to the firm of Henry F. Gullixson, 630 Market street, dealers in upholsterers goods and curtains, and to Jos. Fredericks & Co., Nos. 649 and 651 Market street, dealers in carpets. These stores are easily reached from the ferries and railway depots, and should be visited.

## Business and Patent Office Removal.

After October 29th, our friends and patrons will find the business offices of Dewey & Co. removed from No. 202 Sansome St., to No. 252 Market St., on the north-east corner of Front and Market Sts. We have secured the entire upper floor of Nos. 250 to 252 Market St., and No. 12 Front St., where we shall have permanently more spacious and pleasant rooms for the accommodation of our increasing business. Our apartments will have two main entrances as shown in the following engraving, viz:



OUR STAIRWAY, No. 252 MARKET ST.

OUR ELEVATOR, No. 12 FRONT ST.

The building we have now occupied between four and five years is to give place to a new one, which fact causes our removal.

Old and new friends are cordially invited to give us an early call in our new quarters.

## PACIFIC RURAL PRESS.

[Established in San Francisco, 1870.]

This is the leading farming journal on the western coast of the continent, and second to none in America. It is well printed and illustrated weekly. Contains an unusual amount of fresh, original farm, household and family circle literature. Careful attention is paid to giving full and reliable weekly market reports. The following are among its ably conducted departments: Editorials on agricultural and horticultural subjects; Important subjects of live interest to farmers and their families; Agricultural, and other useful and ornamental illustrations; Correspondence from various quarters of our new and rich developing fields of agriculture on the Pacific Coast, embracing new hints and ideas from progressive men and women in all branches of rural industry; Horticulture; Floriculture; The Garden; The Home Circle; The Grange; Young Folks; Domestic Economy; Good Health; Entomological; Sheep and Wool; The Dairy; The Stock Yard; Poultry Yard; Swine Yard; The Apiary; The Vineyard; Queries and Replies; New Inventions (and illustrations) of new and improved machinery; Agricultural Notes; Items of General News, etc. Its columns are studiously filled with choice, interesting, fresh and useful reading, devoid of questionable literature for old or young and fancifully alluring clap-trap advertisements. Subscriptions, \$3 a year, in advance. Agents wanted, on liberal pay. Send for sample copies.

DEWEY & CO., Publishers.

## Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

**How to Stop this Paper.**—It is not a Herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So do sure and send us notice by letter.

**To Land Owners.**—A large and substantial firm of agricultural implement manufacturers desire from 5 to 12 acres of land suitable for establishing a manufactory on this coast. Must be conveniently connected with railroad, if not also with water transportation. Address "Manufacturers, Box 2,361, S. F."

P. S.—Grange, or other associations, wishing to aid in the building up of the interest of their towns or neighborhoods should make a note of the above.

**Important additions** are being continually made in Woodward's Gardens. The grove walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performance. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

**Mansion House.**—First-class in every respect.—When you visit Stockton stop at the Mansion House. Free Coach to the house. J. H. CROSS, Proprietor.

**ST. JAMES HOTEL.** First-class in every respect. When you go to San Jose, take free coach to the St. James. TYLER BEACII, Proprietor.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RICHOURT & Co., 10 Barclay St., N. Y.

## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 26, 1881.

Trade has been steady and values as a rule stationary during the week. The situation in the Wheat market has been somewhat changed. There are now many ships open to engagement, but the call for them has slackened, as the foreign market is for the time being rather quiet, and there have enough been taken already to carry the Wheat now pressing for shipment. The market is however firm and there has been no change in rates.

## Eastern Grain and Provision Markets.

CHICAGO, October 25th.—Wheat, weak, lower; \$1.33 1/2 cash; \$1.34 1/2 November. Corn, weak, easy; 61c cash; 61 1/2 November. Pork, weak, heavy; \$16.20 cash; \$17.62 1/2 January. Lard, weak, lower; \$11.50 cash; \$11.50 January.

## Eastern Wool Markets.

BOSTON, October 25th.—Wool is without change and the market is steady and firm with fair demand at full prices. Ohio and Pennsylvania sold at 43 1/2c for X, XX and XXX and above and best XX firm at the latter rate. Michigan and Wisconsin X, 42 1/2c for good average lots; medium and No. fleeces, 45 1/2c for Ohio and Michigan, the latter price for choice selections. In unwashed Wools a fair business was doing at 18 1/2c for common and coarse, 24 1/2c for fine, 26 1/2c for medium, with choice selections from 47 1/2c for fine delaine and No. 1 combing. Unwashed combing, 25 1/2c for coarse and medium grades. California Wool is in fair demand, but Fall Wool is only salable at low prices. Pulled Wools are firm at 33 1/2c for common and good super, 45 1/2c for choice Eastern and Maine. Foreign Wool is firm but without movement of importance.

## The Foreign Review.

LONDON, October 24th.—The Mark Lane Express says there has been good progress in sowing, the conditions remaining very favorable. A serious proportion of the potato crop in Scotland has been discovered unsound, which will make necessary an increased consumption of bread. The provincial exchanges at the close of the week showed rather less depression than in Mark Lane Friday, when the best samples of Wheat were only salable at a reduction from Monday's rates. The supply continues liberal. Country Flour is continually weaker. All feeding stuffs are dull and generally cheaper. Foreign breadstuffs are depressed since Monday and there was a very feeble demand. The factories have been compelled to submit to concessions up to one shilling in order to effect sales. Liverpool and most coast markets are cheaper for foreign Wools. It is noteworthy that this late depression in trade occurred simultaneously with the substantial increase in the floating supply. Arrivals in London were 43,072 quarters, all Red Wheat, except 1,015 quarters from Calcutta. There was a very moderate supply of foreign Flour in London during the week—namely, 15,495 sacks of Wheat, two-thirds of which came from the United States, and the remainder from Canada and the Continent. Values in London are generally unsustained. American barrel Flour is quite out of the market. Maize is cheaper. Mixed American was freely offered in London on Friday at 20 shillings ex ship, showing a decline of 10 shillings since Monday. Oats are dull and unchanged; the arrivals are small. Barley and Peas are cheaper. Thirteen Wheat cargoes are reported up to Friday, of which eight were cold; 54s 6d was paid on Thursday for Red Winter. The sales of English Wheat for the week were 54,330 quarters at 47s 1d per quarter, against 41,513 quarters sold in the corresponding week of last year.

## Freights and Charters.

The following is a summary of the engaged and disengaged Wheat tonnage in port and to arrive according to the latest advices: Engaged tons, 107,174; disengaged tons, 27,656; to arrive, tons, 329,331. The wooden ship Oriental, 1,688 tons, has been chartered on private terms, which are currently reported to be 73s to Cork. This would mean a decline of 2s from the last reported rate. The market is quotable at 75s iron to Cork, at which perhaps a few ready vessels could be placed. Exporters are offering even less, being indifferent about entering into additional engagements.

## BAGS—Bags are quiet and unchanged.

**BARLEY**—Barley has gained a point, the choicest Feed and Brewing being 2 1/2c higher. We note sales: 250 sks Chevalier, \$1.55; 500 sks Coast Feed, \$1.45; 200 sks poor do, \$1.42.

**CORN**—Yellow Corn is lower and quiet, with not much in sight. White is nominal, nothing being done with it.

**DAIRY PRODUCE**—Butter holds last week's advance. The draft on Pickle roll is making it good property firmly held. Cheese is unchanged.

**EGGS**—Eggs are strong and fresh Californias 2 1/2c higher. Imported Eggs are selling largely.

**FEED**—There is no change either in Hay or ground Feeds, except that Corn Meal is 1/2c lower per ton.

**FRESH MEATS**—Mutton has the advantage this week and is firm at an advance. Country buyers report fat Sheep scarce and hard to get. Beef is plenty and rates unchanged. Live Pork is a fraction lower.

**FRUIT**—Grapes are cheaper, as is usual near the close of the season. California Oranges and California Limes are reduced to 50c at \$1.00 per box. Strawberries are lower this week.

**OATS**—Oats are quiet and unchanged.

**ONIONS**—The price is about 5c per cwt higher this week.

**POTATOES**—There has been a material reduction this week on all sorts, owing to freer arrivals.

**PROVISIONS**—Trade is good and prices firm.

**POULTRY AND GAME**—Turkeys are a shade lower. Hens are 50c better for the best. Roosters and Brollers being unchanged. Game birds are unchanged.

**VEGETABLES**—Cabbage and Cauliflower are higher. Garlic has gone up to 2 1/2c per lb. Tomatoes are cheaper, as the Tomatoes are through with now.

**HOPS**—Hops in this market have reacted a little from last week's advance and are quoted about 2c lower per lb, although holders are not disposed to yield the point. Emmet Wells in the New York circular of October 14th, says:

The arrival of nearly 8,000 bales this week and the shipment to Europe of nearly 3,000 bales has given our market a very lively appearance; but the feeling as to values is hardly as firm as it was a week ago; the same will apply to the interior markets. The Hops now being sent abroad comprise mostly early purchases at prices under 25c. Exporters do not feel inclined to buy freely at last week's advance until they hear of a corresponding

improvement in the London market. Mail advices received from there this week fully confirm late reports of the short yield; the duty still being placed at £200,000, making a shortage of something like 600,000 bales. It is the opinion of many that but a small proportion of this large deficiency can be made up by shipments from America, especially should our brewers use the usual amount of Hops. England must, therefore, fall back upon her stock of olds, and look to the Continent for any deficiency that cannot be made up from this side. Taking a conservative view of the situation, we do not see why there should be any decline from present values, nor is there any plausible reason why prices should go higher. The future of the market will depend almost entirely upon England's wants, and that country will make our price.

## Cash Price Current for Hops in New York.

	CHOICE	CRS FEB LB.
New York crop 1881, choice	25 to 30	
" " medium	25 to 27	
" " low to fair	22 to 24	
Eastern, " "	22 to 27	
Wisconsin, " "	22 to 27	
Yearlings, crop 1880	12 to 22	
Olds, all Growths	5 to 15	
Pacific Coast, new	to	
Bavarians	40 to 45	

**WHEAT**—Prices are the same as last week; 32,000 cts No. 1, \$1.75; 1,350 do good shipping, \$1.73; 800 do No. 2, \$1.72; 500 do, \$1.71; 1,700 do Coast, \$1.52 per cwt.

**WOOL**—The situation is unchanged; the market being quiet and little doing, and that for local use.

## Domestic Produce.

## WHOLESALE.

WEDNESDAY M., October 26, 1881.

BEANS & PEAS.		Almonds, bd sh lb	
Bayo, ct	2 1/2 @ 25	Soft shell	8 @ 10
Butter	3 25 @ 30	Brazil	10 @ 12
Castor	3 50 @ 40	Pecans	16 @ 17
Pea	3 90 @ 95	Peanuts	4 @ 5
Red	1 80 @ 1 90	Filberts	14 @ 15
Large White	3 00 @ 3 50		
Small White	3 90 @ 3 95		
Lima	— @ 75		
Field Peas, blk eye	50 @ 75		
do, green	1 75 @ 1 90		

BROOM CORN.		Almonds, ct	
Southern	3 @ 31	Petaluma, ct	1 00 @ 1 12 1/2
Northern	4 @ 6	Tomatoes	1 00 @ 1 12 1/2
		Humboldt	1 20 @ 1 30

CHICKEN.		Kidney	
California	4 @ 41	" Peachblow	— @ —
German	6 1/2 @ 7	Jersey Blue	1 25 @ 1 30

DAIRY PRODUCE, ETC.		Cuffey Cove	
Cal. Fresh Roll, lb	42 @ 45	River, red	1 00 @ 1 10
do, Fancy Brands	46 @ 47	Sweet	75 @ 1 00
Pickle Roll	— @ 32 1/2		
Firkin, new	27 1/2 @ 30		
Eastern	20 @ 25		
New York	— @ —		

Cheese, Cal, lb.		KIDNEY	
do, Fresh, doz.	40 @ 45	" Peachblow	— @ —
Ducks	— @ 33	Jersey Blue	1 25 @ 1 30
Oregon	33 @ 38	Cuffey Cove	1 00 @ 1 10
Eastern by express	25 @ 27 1/2	River, red	1 00 @ 1 10
Pickled, doz.	27 @ 31	Sweet	75 @ 1 00
Utah	27 1/2 @ 37 1/2		

FEED.		Poultry & Game.	
Bran, ton	— @ 22 50	ffens, doz.	4 50 @ 5 00
Corn Meal	— @ 31 00	Roosters	4 00 @ 5 00
Hay	8 00 @ 14 00	Broilers	3 00 @ 3 50
Middling	25 @ 27 1/2	Ducks, doz	4 00 @ 5 50
Oil Cake Meal	— @ 20 00	Mallard	3 00 @ 3 50
Straw, bale	— @ 42 1/2	Sprig	— @ 1 50

FLOUR.		Teal	
Extra, City Mills	5 25 @ 5 75	Wildgeon	1 00 @ 1 12 1/2
do, Country Mills	4 75 @ 5 12 1/2	Geese, pair	1 25 @ 1 75
do, Oregon	4 75 @ 5 12 1/2	Wild Gray, doz.	— @ —
do, Walla Walla	4 75 @ 5 25	White do	1 25 @ 1 50
Superfine	3 50 @ 4 25	Turkeys	1 25 @ 1 50

FRESH MEAT.		do, Dressed	
Beef, 1st quality, lb	5 1/2 @ 7	Snipe, Eng.	2 50 @ 3 00
Second	4 @ 5	do, Common	— @ 50
Pork	— @ —	Quail, doz	1 00 @ 1 25
Mutton	4 @ 5	Rabbits	75 @ 1 25
Spring Lamb	5 1/2 @ 6	Hare	75 @ 1 25
Pork, undressed	5 1/2 @ 6	Venison	5 @ 7
Dressed	8 @ 8 1/2		
Veal	7 1/2 @ 8		
Milk Calves	7 1/2 @ 8		

do, choice		SEEDS.	
Alfalfa	11 @ 13	do, Chile	— @ —
Barley, feed, ct	1 45 @ 1 47 1/2	Canary	4 @ 5
do, Brewing	1 47 1/2 @ 1 52 1/2	Clover, Red	14 @ 15
Chevalier	1 55 @ 1 57 1/2	White	45 @ 50
do, Coast	1 42 @ 1 51	Cotton	— @ 20
Buckwheat	1 55 @ 1 60	Furzeed	2 1/2 @ 3
Corn, White	— @ —	Hemp	— @ 5
Yellow	1 40 @ 1 42 1/2	Italian Rye Grass	25 @ —
Small Round	1 40 @ 1 45	Perennial	25 @ —
Oats	1 35 @ 1 55	Millet, German	10 @ 12
Milling	2 75 @ 3 50	do, Common	7 @ 10
Wheat, No. 1	1 73 1/2 @ 1 78 1/2	do, White	11 @ 12 1/2
do, No. 2	1 67 1/2 @ 1 72 1/2	Rye	3 @ 8
do, No. 3	1 45 @ 1 61	Blue Grass	20 @ 25
Choice Milling	— @ 71	2d quality	16 @ 18

HIDES.		Sweet V Grass	
Hides, dry	18 @ 18 1/2	do	— @ 75
Wet salted	10 @ 11	Timothy	8 @ 8 1/2

HONEY, ETC.		TALLOW.	
Beeswax, lb	23 @ 25	Crude, lb	7 @ 7 1/2
Honey in comb	14 @ 20	Refined	9 @ 10
Extracted, light	10 @ 15		
do	8 @ 9		

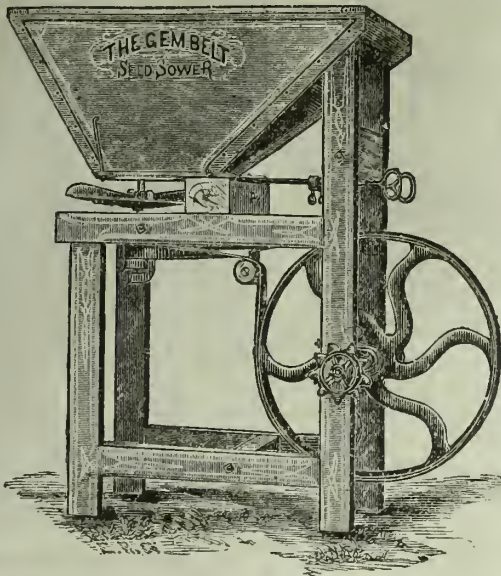
HOPS.		WOOL, ETC.	
Oregon	— @ —	FALL—1881.	
California, new	25 @ 28	San Joaquin	12 1/2 @ 14
Wash. Ter.	25 @ 26	do	



IMPROVED GEM BELT SEED SOWER. THE RANDALL PULVERIZING HARROW.

ADVANTAGES OF THE Gem Belt.

The Gem Belt has two valves that supply the Distributor with grain—one for each side of the wagon; therefore one may be closed when sowing by a fence, ditch, or land that is not to be sown. The Distributor of the Gem whirls around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down. The GEM does not throw the seed up into the air, to



be blown about by the wind, but throws it sharply to the right or left. The Distributor of the Gem Belt Sower is run by a quarter-turn belt, as shown in the engraving, instead of gearing. The advantages gained on the chain are smoothness of movement, noiselessness while running, durability of the fast running parts, and the evenness with which it sows the grain. The Gem sows bluestoned grain perfectly. The Gem sows about sixty feet wide.

DIRECTIONS FOR USING THE GEM SEED SOWER.

Bolt the cast-iron rim wheel on the inside of the hind wheel of an ordinary-sized wagon; put the chain on the rim wheel and over the small chain pulley on the Sower, and then bolt the machine to the bottom of the wagon, the disk facing outward; fill the Hopper with grain, and all is ready. You will notice there are Two Slides covering two openings; if you open the right hand one (facing the hind end of the wagon), the grain will be sown on the left side, and behind the wagon, and vice versa. No grain need be wasted at any time by being thrown where not wanted. Grain should be clean and free from straws, etc. It is impossible to give directions as to how much the opening should be opened to sow a certain quantity per acre. This depends on the weight and cleanliness of the seed and the speed of the team. If the machine is attached to a wheel smaller than 4 feet, 6 inches, or 5 feet, and the team walks fast, it will sow too thin behind. We find many attach the Machine to Header Wagons; this is objectionable, as they pull hard over plowed ground, and to sow even, the horses are compelled to walk slower.

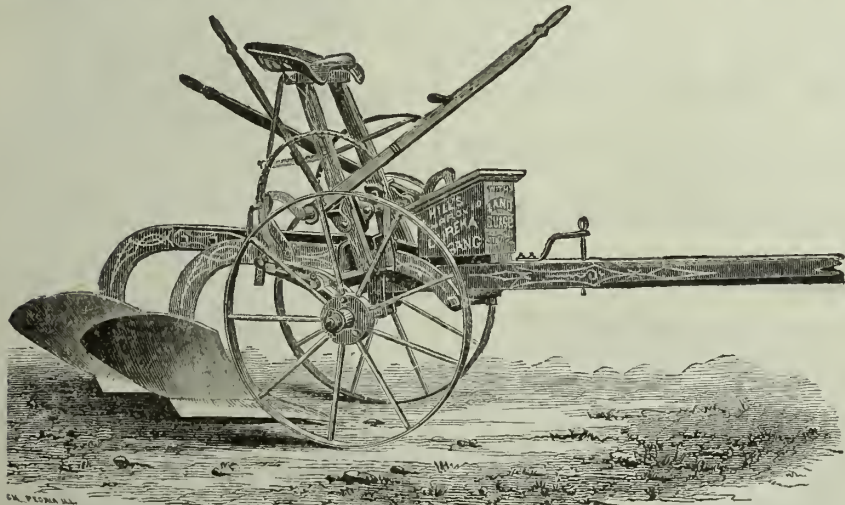
PRICES.

- No. 1 Gem, to run with chain and bevel gear, weight, 132 lbs. \$25 00
  - No. 2 Gem, to run with belt gear " 154 lbs. 30 00
  - No. 3 Gem, to run with all gears. " 165 lbs. 35 00
- No. 3 only made to order.

The GEM Seed Sower can only be obtained from us, as we are the sole manufacturers.

BAKER & HAMILTON, San Francisco and Sacramento.

CELEBRATED EUREKA GANG PLOWS.

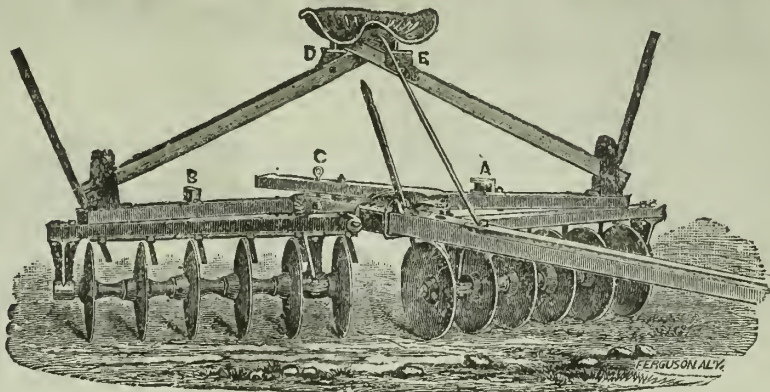


- No. 7C—Eureka Gang with Right and Left Hand Levers and Land Gauge. \$110.
- The above Implement has received more State and County Fair Premiums, has been successful in more plowing contests, and has met with a more extensive sale than any Gang Plow ever invented. It has been the Plow against which all dealers and manufacturers interested in the sale of other Gangs have waged their fiercest war, and the one by which inventors have measured their efforts; well knowing that if they could make a more satisfactory implement than the Eureka, that they could justly claim to have the best. The Eureka Gang Plows are the Standard Gang Plows of the Pacific Coast. They are Simple, Durable, painted and finished off in first-class style, and none but the most skilled mechanics are employed in their manufacture. There are thousands of them now in use on this Coast, and giving entire satisfaction. If you want a Gang Plow that you can depend on giving satisfaction, buy one of the EUREKA GANGS.

PRICES.

- No. 6 Hill's Eureka Gang, Star Moline Bottoms, two extra Points, single lever, Weight 560 pounds. \$100.
  - No. 7 Hill's Eureka Gang, 5-16-inch Cast Steel extra-hardened Molds, CAST CAST-STEEL Points, two extra Points, single Lever, Weight 625 pounds. 100.
  - No. 7a Hill's Eureka Gang, with Collins' Molds and Points, Weight 585 pounds. 105.
  - No. 7c Hill's Eureka Gang, with right and left hand levers and land gauge, 600 pounds. 110.
- Extra for TWO LEVERS on above Gangs. \$ 2.50  
Extra for Land Gauge on above Gangs. 10.00  
Extra for Fin Cutters on No. 7 or 7b Gangs. 3.50

BAKER & HAMILTON, San Francisco and Sacramento.



THE MOST CONVENIENT, EFFECTIVE, DURABLE AND RELIABLE HARROW MADE.

Rotary, Vertical Plate Wheel Harrow!

A CULTIVATOR EQUALED BY NO OTHER.

Unrivalled for its power, incomparable rapidity and effectiveness for surface tillage of all tenacious and tough soils. Is often a substitute for the plow, cutting from 6 to 12 feet in breadth. It is deservedly conceded to be

THE MOST POPULAR AND PROFITABLE FARM IMPLEMENT IN USE.

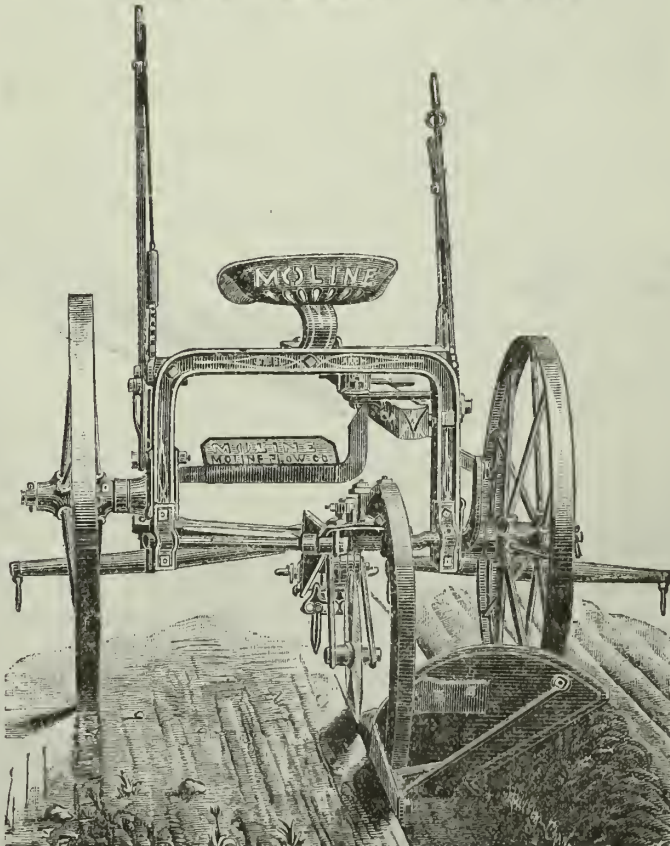
THE RANDALL PULVERIZING HARROW in field work can be turned about as readily as a cart. Its Double Gang arrangement, makes all the wheels or discs equally effective when in motion. Its combination of mutually acting vertical plate-wheel gangs is attached to a horizontal frame, and the harrow is guided when in motion by a pole in such a way as to secure a complete and effective forward and horizontal action of both gangs as well as the lateral or sideways lifting and crushing action of all the plate wheels. The flexible pole secures a steady and uniform action, saving it from jumps and side bounds. Its concave plate, wheels are best quality STEEL, and are self-sharpening by use. Each steel wheel or disc makes a groove for its passage through the soil, by clearing, crushing and lifting from the groove all the soil, and rolling it in a furrow one side. All rootlets are cut off or torn from the groove and exposed to air and sun, or are buried below the surface.

Descriptive Price List of the different sizes of Randall Harrow.

NUMBERS.	WIDTH OF CUT.	NO. OF DISCS.	SIZE OF DISCS.	WEIGHT.	PRICES.
No. 7.	6 feet.	12	16 inch.	325 lbs.	\$ 60.00
No. 8.	8 feet.	16	16 inch.	383 lbs.	75.00
No. 9.	10 feet.	20	16 inch.	525 lbs.	110.00
No. 10.	12 feet.	24	16 inch.	600 lbs.	120.00

BAKER & HAMILTON, San Francisco and Sacramento.

MOLINE SULKY PLOW.



Rear View of the Moline Sulky Plow.

COMPLETE, with 3-horse whiffletree, extra Points, Neck Yoke, etc. Weight, 490 lbs. Price. \$75.00

DESCRIPTION OF THE MOLINE SULKY.

DOUBLE STEEL ARCH, formed of two pieces of Beaded Steel, making it light and strong and not liable to bend or break. WHEELS OPPOSITE EACH OTHER. The depth of plowing is regulated by axle moving Vertically between the arches; thus retaining a natural position and "gather," and avoiding the objection to the crank movement common to other Sulky Plows. ADJUSTING LEVER, for Leveling Plow on hill-side, on uneven ground, or when opening or finishing land. TWO LEVERS, which are absolutely necessary to insure good work on both level or uneven farms, and in all kinds of soil; the Right Hand Lever for raising the plow out of the ground, the Left Hand Lever for regulating depth of furrow, or leveling the frame on hill-sides, and when in proper position need not be changed for same land. THE DRAFT is directly from the point of the beam, and there cannot be any down pressure on the horses' necks. The Plow is regulated to take more or less land from the clevis, as in an ordinary walking plow. THE TONGUE is movable, avoiding any side pressure, and inside of arch so great distance from the wheel that two horses can be used without extra attachment.

Adapted to all kinds of Soil and every section. No Side Draft, depth of furrow regulated by vertical movement of axle in arch.

The only Double Steel Arch Sulky Plow made. Light Draft, Simple, Strong, Durable, and easily managed.

BAKER & HAMILTON, San Francisco and Sacramento.



## IMPORTANT TO THE FARMER.

—USE—

## Larroche's Fertilizer.

It is manufactured solely of Bones and residues of Meats dried and pulverized in such manner that all the Calcium, Phosphates, Carbonates, Nitrates and Potassium, which are the main assimilators to plants, are entirely preserved in the Fertilizer and render it most valuable to the cultivators of the soil.

Stable manures require frequent irrigation in order to develop its properties; it is expensive, voluminous, and requires great labor to spread and subsoil it; it propagates weeds, worms, snails and destructive animals, the pests of the farmer. On the other hand, Bone Powder can be easily handled, transported at low rates of freight, in bags. It checks the propagation of insects and luxuriates the growth of hops, vines, fruit trees, etc.; can easily be spread around the plants and is most efficacious as an impediment to the rapid and terrible encroachment of the PHYLOXERA.

For further information apply or address to,

F. LARROCHE.

Stall 21, San Francisco Market, San Francisco, Cal.

—OR—

SEVIN VINCENT &amp; CO., Seedsmen.

607 Sansome St., S. F. Cal.



## This Wonderful Improved SAW MACHINE

is warranted to saw a 2-foot log in three minutes, and more cord wood or logs of any size in a day than two men can chop or saw the old way. Every Farmer and Lumberman needs one.

AGENTS WANTED—Circulars and terms free.

SEND FOR CIRCULAR TO

LINFORTH, RICE &amp; CO.,

General Agents for the Pacific Coast,  
323 and 325 Market Street San Francisco.

## ITALIAN SHEEP WASH.

Extract of tobacco, free from poison. Prepared by the Italian Government Co. Cures thoroughly

THE SCAB OF THE SHEEP

And is an excellent Sheep Dip. The best and cheapest remedy known for curing the Scab.



SAN FRANCISCO, May 24, 1881.

Messrs. CHAS. DUISENBERG & CO., San Francisco: I have used one can of the Italian Sheep Wash, as a test on my ranch in Stanislaus county, according to directions, and find it to be a sure cure for scab, and shall continue to use it in future, so long as I find it to come up to sample, for the reasons I find it cheaper than other preparations; no trouble nor expense in preparing it for use. The principal ingredients being tobacco, it gives greater growth to wool than other dips, and I find it to be all that is claimed for it. Where sheep are passed through the vat in the usual speedy way, I suggest the use of tepid or warm water but am of opinion that if allowed to remain in longer, cold water will do as well.

WM. L. DICKENSON.

CHAS. DUISENBERG & CO., Sole Agents.  
314 Sacramento Street, San Francisco.

## Bee Keepers' Guide.

A complete Manual and Reference Book on all subjects connected with successful Bee Culture, by E. Kretschmer, of Coburg, Montgomery County, Iowa. A new edition, containing 244 pages of plain and full instructions by a practical and scientific apiarist, and illustrating the new system of Bee Culture with the Honey Extractor. It also tells how to rear Italian Queen Bees. Bound in cloth. Price, postpaid, \$1. Sold by DEWEY & CO., 202 Sansome St. San Francisco.



## LAUREL RANCH!

Thoroughbred

## Spanish Merino SHEEP.

We offer for sale 400 HEAD OF YOUNG EWES AND RAMS. Prices always reasonable and terms liberal. Quality and condition superior to any flock in this State.

J. H. STROBRIDGE, Haywards, Alameda Co.

E. W. PEET, Agent.

## Harvey's Hot-Water Radiator

For Warming and Ventilating Private Residences and Public Buildings.

Introduced into TEN PUBLIC BUILDINGS and over FORTY PRIVATE RESIDENCES the past year with satisfactory results. Less attention and less fuel required to heat 4 rooms with this system than would warm 1 room with the open grate. Highest testimonials. Address

C. D. HARVEY.

213 Mission St., bet. Main and Beale, S. F.  
Residence, 1227 Eleventh Avenue, East Oakland.

JAMES T. MURPHY,

Jefferson Block - San Jose, Cal.

## Grain Bought and Sold.

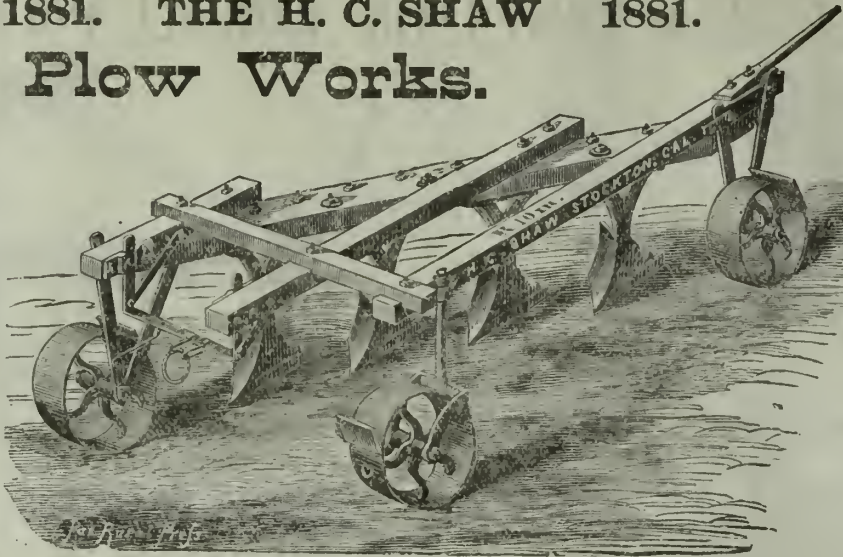
## MONEY To Any Amount LOANED

On Grain Receipts.

50 Lovely Floral, motto, hand and bouquet chromo cards—beautiful colors, name 10c, Chas. Kay, New Haven, Ct.

## 1881. THE H. C. SHAW 1881.

## Plow Works.



## GANG PLOWS AND EXTRAS.

No. 201 and 203 El Dorado street, - - - - - Stockton.

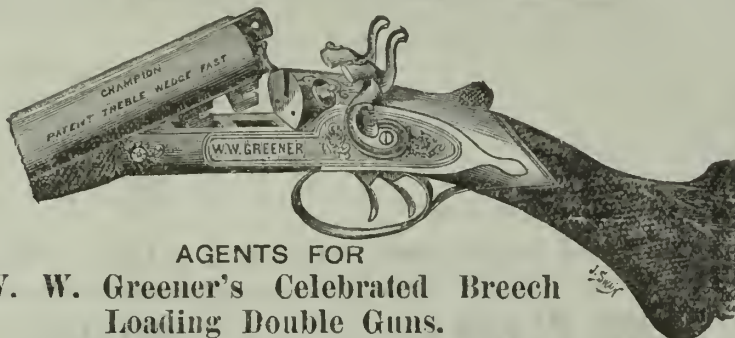
## THE STOCKTON GANG PLOW,

Over 2,000 of H. C. Shaw's Improved Patent Stockton Gang Plows Sold in Five Years

Cahoon and Gem Seed Sowers, Harrows, Etc. Extras for all Plows and Machines I have sold for the past TWENTY YEARS in this valley. Send for Circular and price list. Always on hand a full stock of Single Plows. Have used these Gangs for over 15 years. Now using 70. Adapted to all soils.—JOHN W. JONES, Atlanta, San Joaquin Co., Cal.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,



AGENTS FOR

## W. W. Greener's Celebrated Breech Loading Double Guns.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.

Ammunition in quantities to suit

A liberal discount to the trade.

Price List on Application

## C. D. LADD,

821 Kearny Street, - - - - - San Francisco, Cal.

SOLE AGENT FOR THE PACIFIC COAST FOR

## THE BALLARD RIFLE, AND MARLIN'S NEW BALLARD REPEATER.

A FULL LINE OF  
WINCHESTER  
and KENNEDY,  
SHARPS, BALLARD,  
and REMINGTON  
RIFLES.

Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to suit. Liberal discount to the trade. Send for Special Price List for Marlin's New Repeater and Ladd's Improvement on the Kennedy Rifles.

SEND FOR 1881 PRICE LIST.

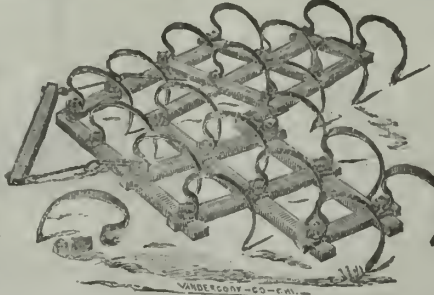
## THE PATENT IMPROVED SPRING-TOOTH HARROW!

The Best Harrow Ever Put in the Field!

The accompanying cut represents our Improved Adjustable Spring-Tooth Harrow

—the Latest and Best in the Market. It has all the good points and none of the defects of other Harrows. It is Very Easy to Adjust. It does not Trail.

The strain sideways on a spring tooth is often very great. If a tooth rests in a wooden chair or seat it will soon wear the work loose; it cannot be held in place very long. This tooth rests in an iron chair and cannot wear nor move sideways.



It does not Clog. The Teeth are Made of the Best of Spring Steel and Tempered in Oil. The Draft is Lighter than any other Spring-Tooth Harrow. The Spring-Tooth Harrow Pulverizes and works up the ground in a wonderful manner, and prepares the soil admirably for a crop, better than any other tool.

We also furnish, at small cost, an adjustable Steel Shoe, which can be readily attached, without any extra bolts, by using two or more of which the Harrow will be prevented from imbedding itself into the softest, dry, or wet land.

Send for Circulars and Price List.

J. A. MILLER & CO., Agents for Pacific Coast,  
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## Mason and Hamlin Organs.

Wholesale and Retail Agents

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Post Street, near Dupont, - - - SAN FRANCISCO

## Silos, Reservoirs, Head Gates Etc.

E. L. RANSOME, 402 Montgomery St., S. F.

ARTIFICIAL STONE.

Send for Circular

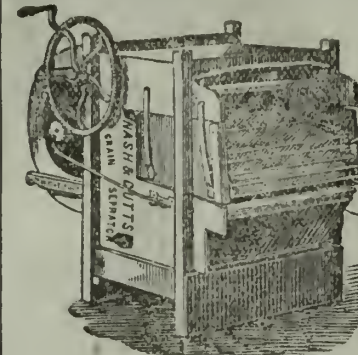
And Still We Take the Lead.

—THE—

## Nash &amp; Cutts' Grain Cleaner

Improved Again for 1881.

Five sizes, warranted to clean from 50 to 200 bushels per hour, perfectly. The fact that we have taken EVERY Diploma that has been offered by the State Agricultural Society for 11 years proves that we have the best.

THE IMPROVED  
NASH & CUTTS' GRAIN CLEANER.  
(TRADE-MARK)

## OUR NEW WHEAT GANG,

Composed of perforated zinc and patent rolled wire. The zinc is not punched as of old, with all holes of a size, but they grow gradually larger as they reach the lower or out end of the Gang, thus allowing the wheat to pass through more readily. The patent rolled wire that we use is more instrumental to the efficiency of the cleaner than one would at first suppose; being rolled after it is wove, it is perfectly smooth, thus allowing Barley and Oats to run over more rapidly, while the Wheat being smooth will pass through readily, thus increasing the capacity both in speed and quality.

Notwithstanding the extra expense incurred by the purchase of this patent Wire and Zinc, the prices are reduced this season, thus giving the farmers the benefit of this new combination.

Farmers and Dealers are particularly cautioned against spurious imitations. Be sure that the one you buy bears this Trade-Mark: "THE IMPROVED NASH & CUTTS' GRAIN CLEANER." All others are frauds. See that it is manufactured by "H. D. NASH & CO., Sacramento, Cal."

We mention the above for the protection of our customers who want the GENUINE. Every Cleaner fully warranted.

Prices at Factory.—No. 1, \$30; No. 2, \$40; No. 3, \$50. For further particulars address

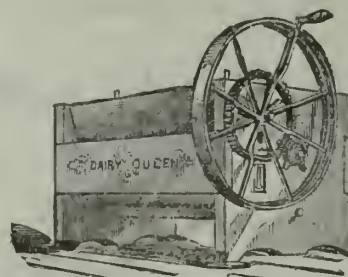
H. D. NASH & CO.,  
908 K Street, Sacramento, Cal.

Sole manufacturers of "The Improved Nash & Cutts' Grain Cleaner" on the Pacific Coast.  
We also make a Cleaner to attach to Threshing Machines that will clean ALL any machine can thresh.

## "THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years study and experiment, by a practical dairymen. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars, address the Inventor and Sole Patentee,

GEO. W. FREEMAN,

Rocky Point, Sierra Co., Cal.,

Or Jas. L. Haley, Janesville, Lassen Co., Cal.

## Holstein Cattle.

## CLYDESDALE AND HAMBLETONIAN HORSES.

The largest and deepest milking herd of Holsteins in the world. 225 head, pure bred, mostly imported, males and females of different ages.

A Large and elegant stud of imported Clydesdale Stallions and Mares of all ages. Hambletonian Stallions and Mares of superior breeding. Personal inspection invited. Separate catalogues of each class, and milk records of cows mailed free on application. All inquiries promptly answered. State that you saw this advertisement in the PACIFIC RURAL PRESS.

## SMITHS &amp; POWELL,

Lakeside Stock Farm, Syracuse, N. Y.



## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.60 per gallon. For directions and testimonials apply to FALKNER, BELL & CO.

Sole Agents, 430 California Street, S. F.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Mens' Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12. I pay the express charges. I sell nothing but my own manufacture.

54 All Gold, Chromo and Lithograph Cards, no 2 alike. name on, 10 cts. C. DePuy, Syracuse, N. Y.



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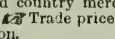
Importers, growers of, wholesale and retail dealers in

**SEEDS**

Field, Grass, Flower and Tree Seeds.

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices.  Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,  
607 Sansome Street, S. F.

R. J. TRUMBULL &amp; CO.,

Growers, Importers, Wholesale and  
Retail Dealers in**SEEDS**

FLOWERING PLANTS, BULBS, FRUIT AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE, ETC.

FREE TO APPLICANTS.—OUR DESCRIPTIVE ILLUSTRATED CATALOGUE OF SEEDS, TREES, PLANTS, ETC.

R. J. TRUMBULL &amp; CO.,

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**BLISS' SELECT GARDEN SEEDS**B. K. BLISS & SONS,  
Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS &amp; SONS, 34 Barclay Street, N. Y.

PEPPER'S NURSERIES.

Established in 1858.

For sale, all kinds of Fruit Trees, Vines and Fruiting Shrubs raised without irrigation. Also, a general assortment of Evergreen Trees and Shrubs, deciduous Flowering Shrubs; Roses in assortment. Conservatory and Bedding Plants in great variety. Send for Catalogue and List of Prices. Address

W. H. PEPPER,  
Petaluma Sonoma County, Cal.

TURNER'S NURSERY,

San Bernardino, Cal. - - - P. O. Box 275.

60,000 HALF-YEARLING TREES,

(or June Budded.)

For sale coming season, from one to three feet high, consisting of leading varieties of Peaches, Nectarines, and Apples, also General Nursery Stock.

My buds are taken from bearing trees and true to name. Prices on application to DAVE TURNER, or to R. F. CUNNINGHAM, Riverside, Cal.



POMONA NURSERY.

Oriental and Hybrid Pears,

Manchester, Bidwell, and Mt. Vernon Strawberries. Raspberries, Blackberries, Flowers and Fruit Trees. Catalogues Free WM. PARRY, Parry P. O. New Jersey.

ERADICATE NOXIOUS INSECTS.

Lewis' Exterminator and Force Pump, with its sheet spray making attachment. No change of nozzle; is unequaled by any pump offered!

Will wash from 500 to 1,000 trees per day! Will throw any liquid! Hot water or London Purple; will conquer all Leaf or Bark eating insects. Equally adapted for tree or ground crops. Durable and efficient.

Force Pump, Agricultural and Veterinary Syringe in combination. Price \$6; in polished brass, \$7.50; nicked plated Portable Fire Extinguisher, \$15. Orders received from Agents and the trade. D. N. DILLA,

825 Twenty-Ninth Street, Oakland.

Hubbell's Self-Cleaning Harrow.

This Harrow fills a long desired want among farmers. As it is built in sections for one or six horses, and can be cleaned while in motion without lifting the harrow. Address T. J. HUBBELL, PATENTEE, Mayfield, or McKENZIE &amp; CO., San Jose, Manufacturers.

Russell's Hollow Tooth Harrow.

This Harrow is guaranteed to do double the work of any other Harrow and do it better. GEORGE SEANOR, Los Gatos, Agent for Santa Clara Co.

## THE CELEBRATED

H. H. H.

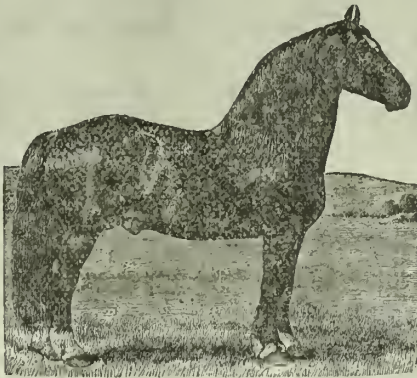
Horse Liniment.

THE  
MOST EFFECTUAL!

As a Horse Medicine

It is Superior to any Liniment ever invented. For RINGBONE, SPAVIN, SWEENEY, CALLOUS LUMPS, And OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days if not cured repeat as at first.

SPRAINS, STIFF JOINTS, BRUISES, WIND GALLS, and all slight ailments, apply a small quantity so as not to blister. SADDLE SORES, CUTS, and all other sores where the skin is broken, mix the Liniment half and half with any kind of oil and apply in moderation.



THE BEST!

AS A  
FAMILY REMEDY.

We are safe in making the bold assertion that no Liniment exists that will compare with the H. H. H. in curing the following diseases: RHEUMATISM,

Apply freely to the parts affected, and take internally from 10 to 20 drops in from 2 to 3 tablespoonfuls of water 3 times a day. DIARRHOEA, dose, as above. COLIC, same as above, repeated every half hour until relieved. TOOTHACHE, saturate a piece of cotton and put it in the tooth, repeat in 15 minutes if not relieved. All other aches and pains apply freely to the parts affected.

Price—Small Size, 50c.; Medium, \$1; Large, \$2.50.

H. H. MOORE &amp; SONS, Proprietors,

DRUGGISTS. - - - - - Stockton, Cal.

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

**SEEDS,**

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

**SEEDS!**ALBERT DICKINSON,  
Dealer in Timothy, Clover, Flax, Hungarian, Millet, Red-Top, Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, etc.

POP CORN.

WAREHOUSES:  
115, 117 & 119, Kinzie St.,  
104, 106, 108 & 110 Michigan St.Office: 115 Kinzie St.  
CHICAGO, ILL.**GRANGERS'**

Business Association Warehouses

THE GRANGERS, CONTRA COSTA CO.

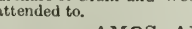
Principal Office—No. 38 California Street, San Francisco.

The Association is now prepared to receive Grain on consignment for sale and storage in its warehouses at Port Costa, on which advances will be made at a low rate of interest, and at the usual rates of storage. Cars can now be run on the wharf and the grain unloaded directly into warehouses. AMOS ADAMS, Business Manager.

**GRANGERS' BUSINESS ASSOCIATION**

Shipping and Commission House,

No. 106 Davis Street, one Door from California, San Francisco.

Consignments of Grain, Wool, Dairy Products, Dried Fruits and other Produce solicited, and advances made on the same.  AMOS ADAMS, Business Manager.**Challenge Well Auger Company**

Manufacture the Well Auger that will bore any kind of earth—makes a well any size required—and is a perfect success in Quicksand and Hardpan; will easily make a deep well in one day.

Our Combined Machine for Horse Power consists of both Earth-boring and Rock-drilling tools. The Earth Auger is used till rock is reached, when the rock-boring tools are attached, and the boring continued till an abundant supply of pure water is obtained.

Artesian Well and Prospecting tools for steam power a specialty. Our tools are equal to, if not better, than those of any manufacture in the United States, and prices below the lowest. Catalogues mailed free. Address,

**CHALLENGE WELL AUGER CO.,**

1420 North Tenth Street, St. Louis, Mo.

FOR THE LADIES.

**TURKISH RUG PATTERNS**

A Pleasant and Profitable Fancy Work. Patterns stamped in colors on heavy burlaps; Animals, Flowers and Scrolls. Can be made of rags or waste yarn. Full printed directions furnished with pattern. Send for Catalogue. Address

CHAS. PEAKE &amp; CO., 209 Kearny St. S. F.

Mission Rock Dock and Grain Warehouse

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65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

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Proprietors.

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## Lands for Sale and to Let.

**FARMING LAND**

For Sale in large or small tracts, on easy terms, in the best parts of the State.

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**SANTA CRUZ COUNTY**

Goods Crops every Season without Irrigation

Farms, Stock Ranches, Dairy Farms, Fruit Farms, Vineyards, Chicken Ranches and homesteads of every class and description in this and adjoining counties for sale or rent on reasonable terms. State requirements and obtain suitable particulars from the Real Estate

EXCHANGE &amp; MART,

Santa Cruz, Cal.

The Famous "Enterprise,"

PERKINS' PATENT

Self Regulating

**WINDMILLS,**

Pumps &amp; Fixtures.

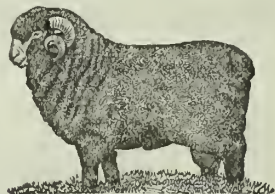
These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crankshaft with double bearings for the crank to work in, all turned run in babbitted boxes.

Positively self regulating with no coiling spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information

HORTON & KENNEDY,  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.San Francisco Agency, LINFORTH, RICE  
& CO., 323 & 325 Market Street.

Price Reduced to \$1 Per Gallon.

**MOORE'S SULPHUR DIP,**THE BEST AND CHEAPEST PREPARATION FOR  
THE CURE OF SCAB.The General Health and Condition of the  
Sheep Promoted by its Use.  
Non-Poisonous.

One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

C. E. WILLIAMS &amp; CO., Stockton, Cal.

Sold by all Wool Commission Merchants in San Francisco.

We call attention to following testimonial from J. H. Kirkpatrick, breeder of fine sheep:

KNIGHTS FARM, Cal., Aug. 26, 1881.  
C. E. WILLIAMS & Co., STOCKTON, Gentlemen: I have used Moore's Sulphur Dip in dipping my band of thoroughbred Merinos, which are admitted to be very hard to cure of scab, owing to the density of fleece, and I am free to say that the Sulphur Dip will certainly eradicate the disease when properly applied. Moreover it is the cheapest of the prepared dyes of which I have any knowledge, and being a certain cure it deserves to come into general use as the standard remedy.

Yours Truly, J. H. KIRKPATRICK.

**Whitmore's Improved Gear,**

ADAPTED TO

**Buckwagons, Buggies and Light Business Wagons.**

Weight carried to the extremities of the Axles. Long, soft, double sweep springs. No side sway or lurching motion. It is jointed, relieving all strain.

E. WHITMORE, MAKER,  
1507 Polk St., San Francisco, Or Charles Whitmore,  
Traveling Agent for the Pacific Coast.**GOLD MEDAL AWARDED**

the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled the "Science of Life or Self-Preservation," bound in finest French muslin, embossed, full gilt, 300 pp. Contains beautiful steel engravings; 125 prescriptions. Price, only \$1.25, sent by mail; illustrated sample, 6 cents. Send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch street Boston.



KNOW THYSELF

**Tempest Windmill Patent,**

Self-Regulating and Improved Gear.

Using the Celebrated "Davis Wheel." Took First Premium at Stockton Fair, 1881. Water troughs always on hand. Address,

E. J. MARSTEN, Stockton, Cal.



# Agricultural Implements a Specialty.

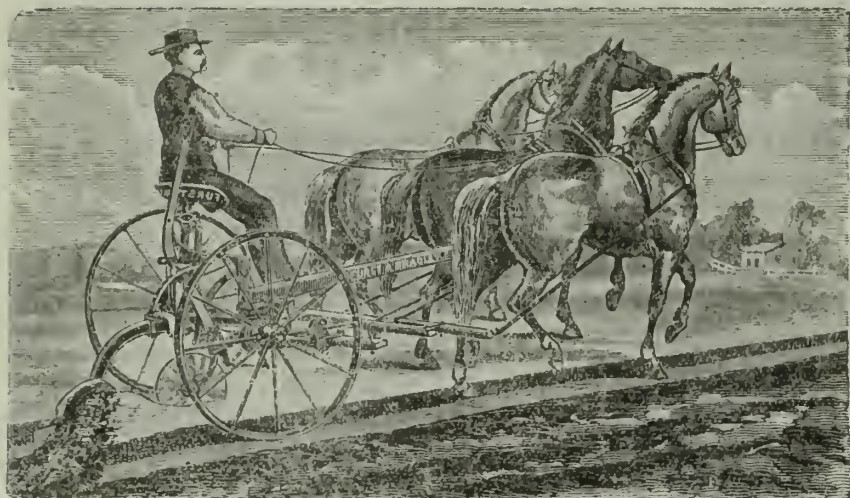
**GEO. A. DAVIS,**

Manufacturer's Agent for Agricultural Implements,

327 and 329 Market Street, San Francisco, Cal.

The Largest Importer and most Extensive Dealer upon the Pacific Coast in his line. This is a Branch House of Six of the Leading and most Prominent Manufacturers in the United States. Thus combining and dividing expenses, lower prices can be quoted, and Implements sold upon a smaller margin than could otherwise be done.

## FURST & BRADLEY FRICTION SULKY PLOW,



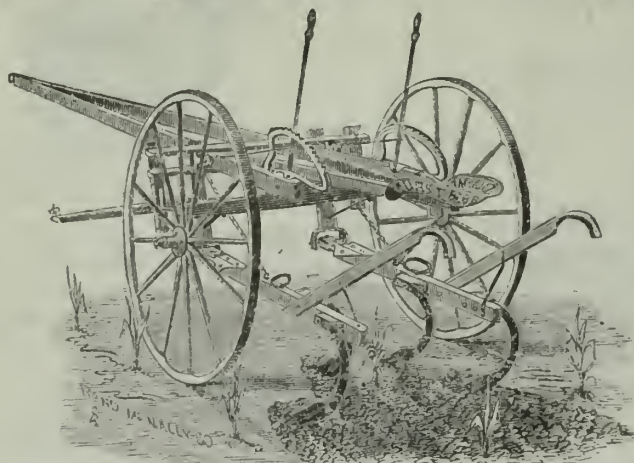
With Patent Friction Attachment for raising the Plow out of the ground, by the Power of the Team. It is very simple and effective, having no Springs, Catches, Dogs, or gears to get out of order.

The Pole plays as freely as on a wagon, consequently there is no weight upon the horses' necks, and not a pound of Side Draft.

It has a Wrought Iron Frame—not Cast—with STEEL BEAM. Wheels at all times exactly opposite each other.

In raising out of the ground, the Point comes first Heel. Depth of furrow instantly changed without leaving the seat, etc. etc.

## THE GARDEN CITY COMBINED WALKING AND RIDING CULTIVATOR.



This Cultivator has Levers attached for raising the Plows out of the ground and for gauging their depth. The Plows swing perfectly level by running chains over a pulley Directly over the points; any other arrangement gives them a Dish-ing or Lateral circular swing. They have Wrought Iron shanks, with Reversible Steel Shovels, adjustable up or down. The Plows can be moved to right or left from the seat by the feet.

JUST THE IMPLEMENT FOR VINEYARDS. THEY STRADDLE THE VINES AND EITHER PLOW OR CULTIVATE THE GROUND. Have been thoroughly tested and in no case found wanting.

## La DOW'S JOINTED PULVERIZING HARROW,



The most successful Cultivator ever introduced. It is Light, Simple, Durable and Flexible. The Discs are of hardest and best steel and are self-sharpening. Every Disc is 16 inches in diameter. It conforms to uneven surfaces. It has a lever to change the angle of each gang. This Disc Harrow will thoroughly pulverize and cut up the hardest adobe or toughest soil, simply by putting enough weight upon it. IT IS GUARANTEED TO DO ITS WORK PERFECTLY OR NO SALE. The Thoroughness in use testify as to its unequalled merits. CAUTION! This is the only Disc Harrow that has the right to use a Lever to change the angle of the Discs, and all others are only infringing. All persons are hereby cautioned against buying or using any other ADJUSTABLE Disc Harrow, as the Manufacturers are now suing all parties infringing in any manner.

## GARDEN CITY GANG PLOW.



This is the only successful Imported Gang Plow ever introduced upon this Coast. Over 300 sold in California in 1880. We will put this Plow in the field against any Gang Plow made.

ANY BODY IN WANT OF A GANG PLOW CAN HAVE ONE OF THE GARDEN CITY GANG PLOWS ON TRIAL, AND IF IT DOES NOT DO AS GOOD WORK, IN EVERY WAY, AS ANY OTHER GANG PLOW SOLD UPON THE COAST IT CAN BE RETURNED FREE OF COST.

No Extra charge for Levelling Lever or Tongue Shifter.

## DIAMOND IRON PLOWS.

These Plows are gotten up especially to supersede the Collins Cast Steel, and the Oliver Chilled Plows, and are rapidly taking their places, wherever introduced all over the United States. Diamond Iron is made of Steel, Wrought Iron and Cast-Iron. It is finer grained, stronger and harder than any Chilled Iron. Its breaking strength is 3,000 pounds. Chilled Iron, 1,400 pounds. It makes good edge tools without tempering or annealing. Chilled Iron will not carry an edge, too coarse and brittle. All the wearing parts of the Plow, including shares, are made of Diamond Iron. Chilled Iron Plows do not have Chilled Iron shares; they are too brittle. Diamond Iron shares will outwear three or four Chilled Iron shares. The Diamond Iron Plow does not run on its nose, does not dodge or jump out in hard ground. It will scour where no Chilled Plow will. It is the Lightest Draft and the Cheapest Plow to keep in repairs that was ever offered to the Farmer.

## FISH BROS. & CO.'S WAGONS.

The Lightest Running, Nicest Proportioned, Best Made and Cheapest Wagon sold upon the Coast. Every Wagon is GUARANTEED to be well made of good materials, and any breakage there may occur on account of poor Timber or Iron, will be promptly and satisfactorily settled for, with the party buying the Wagon.

Over 2,000 Fish Bros.'s Wagons sold upon this Coast in 1880.

SEND FOR OUR NEW ILLUSTRATED PRICE LIST.

Live Agents wanted in every Town, City, Village and Hamlet on the Pacific Slope. NO DEAD MEN NEED APPLY.

Farmers, Ranchers, anybody wanting any kind of a Farming Implement are requested to call upon us, or send for prices, terms and descriptive circulars. Address,

**GEO. A. DAVIS, 327 and 329 Market St., - - San Francisco, Cal.**





Volume XXII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 5, 1881.

Number 19

### Caterpillars in California Orchards.

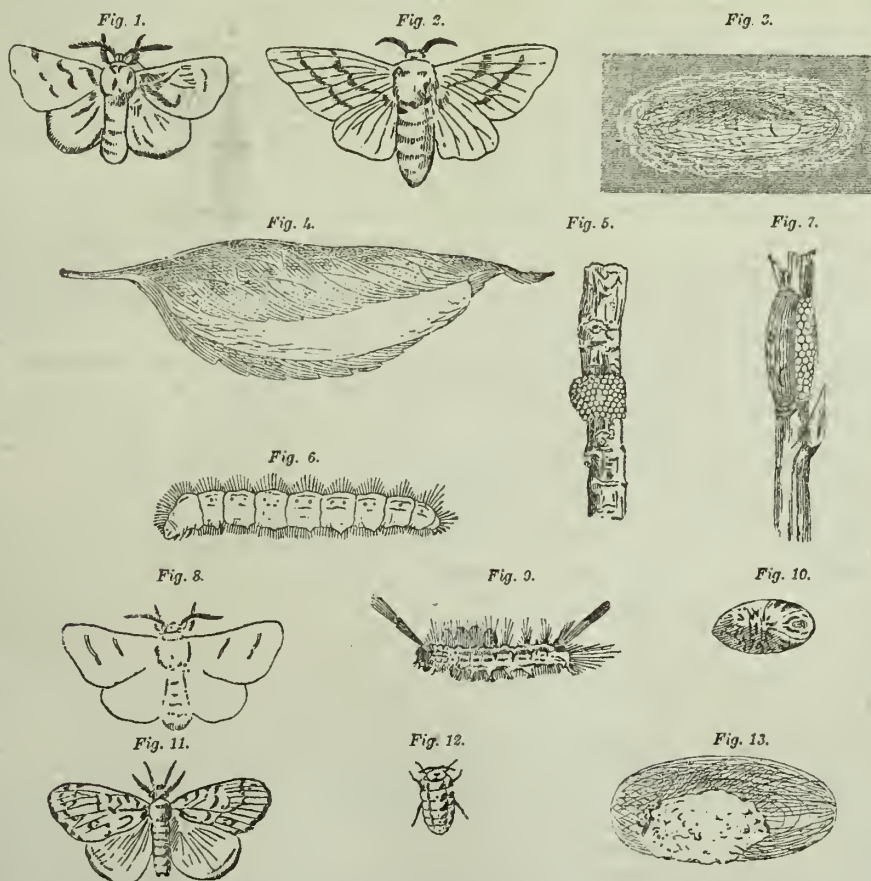
Leaf-eating caterpillars sometimes do great damage in California orchards, and they are widely distributed over the State. There are several species engaged in the work of destruction, but they are similar in their operation and in their methods of reproduction. As the leaves of the trees will soon be falling, it will be in order to look for the egg clusters, clip them off and burn them. The manner of their occurrence is shown in Figs. 5 and 7, as will be more fully explained below. We take from the recently issued pamphlet of Horticultural Officer Cooke the following illustrated chapter on this subject:

The orchard of Mr. DeLong, at Novato, Marin county, was infested last spring by caterpillars—a species of the genus *Clisiocampa*, or Tent caterpillar. The caterpillar is one and three-fourths inches in length, one-fourth of an inch in diameter, and was full grown by the 12th day of May. The body is sparingly clothed with soft and short hair, rather thicker and longer on the sides than elsewhere. The head is dark brown on each side and dark brown above, leaving an inverted Y mark in the middle and front, jet black, and having much the appearance of a goblet, as one looks from its tail to its head. The frontal mark is jet black, edged with a white strip across and over the mouth parts, and on each side of the inverted Y. The ground color of the upper part of the body is evidently blue, with a dorsal row of oval orange spots, one on each segment; two subdorsal orange lines; also, two lateral orange lines. The dorsal space not covered by dorsal spots, between the subdorsal lines, is crinkled with fine black and orange lines; between the subdorsal and lateral lines, on each side, the space is blue, slightly variegated with fine orange and black lines intermingled. The lower part of the body and feet are dusky blue, crinkled with orange and black, irregular lines, and an amber-colored ring around base of prolegs. The caterpillars do not make a tent or web, but they live in colonies on the tree. The caterpillars spin their cocoons (Fig. 3) in the folded leaves (Fig. 4) of the trees on which they feed, especially the apple. Pupa elongate, posteriorly attenuated, inclosed in a loose silken web, suffused in fine yellow powder. The moth appears in about 16 days; is reddish brown, with two transverse, rust-brown, nearly straight parallel lines, on the fore wings. Male (Fig. 1): Antennae, short curved, moderately bipinnate in both sexes, the pectinations gradually decreasing in length to the apex, and shortest in females; thorax, robust, pilose (hairy); abdomen, elongate, robust in female, and tufted in both; femora (thigh) and tibia (shin) hairy. It expands 1½ inches. The female moth (Fig. 2) lays her eggs, about 200 in number, in rows around the new growth of wood (Fig. 5), and covers them with an apparent water-proof substance, to protect them through the winter season. About the time the leaves are unfolding in the spring, the young hatch, and feed on the foliage and young fruit. Mr. De Long had a block of 2,000 apple trees completely stripped of fruit and foliage.

The method adopted by Mr. De Long for destroying the caterpillars, is as follows: He placed a band of butter cloth about 4 inches wide, covered with tallow, on the trees about 2 ft. above the ground. He discovered that the caterpillars could form bridges over the tallow, especially at night. Over the tallow he placed soft lard, which proved effective. He then swept the caterpillars off the branches on to the ground. The caterpillars attempted to ascend the tree again, but would not cross the greased hand. While thus gathered between the hands and the ground, they were destroyed in large numbers. To clean 22,000 trees in this way, it cost 7½ cents per tree, and the work done in less than four weeks. Although the orchard is not thoroughly cleaned, Mr. De Long saved the greater portion of his crop of 20,000 trees for this season. These caterpillars can be effectively exterminated by carefully examining the young wood before the tree is leafed out, and picking off and destroying the bunches of eggs, also by picking off and destroying any cocoons

found on the trees—there is often found a leaf folded containing six or seven cocoons. However, Mr. De Long is confident he can exterminate them next season, by placing the greased hands on the trees and shaking the young caterpillars off the branches, etc., thus preventing them from maturing. The moth is the *Clisiocampa constricta*, Streh. There is another species of the *Clisiocampa* that is spreading at and around Santa Cruz, and also in parts of Santa Clara and other counties, and is probably the *Clisiocampa Americana*. The moth differs but little in appearance from the *Clisiocampa constricta*—the lines on the fore wings are oblique and are a dirty white color, and the apex of the fore wings are shorter (Fig. 8). The caterpillar (Fig. 6): Head, black; frontal mark, inverted Y, same as *Clisiocampa constricta*; ground color of back and sides, apparently brownish black; two dorsal lines, orange, space between crinkled black and orange lines, excepting first and sec-

ing two pencils projecting over the head; and from a tubercle on the eighth abdominal ring also grows a tuft of black hair, forming a pencil projecting over the anal appendages. From the inner tubercles on the second and third thorax rings, and first and second abdominal rings, grow thick tufts of drab-colored hair, and join together, presenting on these four rings a pretty brush-like growth. The head has an inverted Y mark, similar to *Clisiocampa constricta*. The cocoon is made in the crevices of bark, etc., on the body and branches of the tree. Pupa of male, elongate, posteriorly attenuated, inclosed in a coarse silky cocoon. Pupa of female (Fig. 10), ovate in shape. The male moth (Fig. 11) has broad wings, pectinated antennae. Female (Fig. 12): Wingless; eggs generally deposited on outside of cocoon. (Fig. 13.) This species can be exterminated by gathering the bunches of eggs found in the crevices of the tree infested the previous season.



TENT CATERPILLARS ON CALIFORNIA ORCHARD TREES.

ond segment of thorax, dorsal half orange. Two lateral lines, orange, one on each side of stomata, with crinkled yellow lines forming a row of large black spots, one on each segment; lower part black, pro-legs reddish brown, and stylets and thorax legs black; whole body clothed with soft reddish brown hair. On full-grown specimens, lateral tuft on thorax rings, whitish. The female lays her eggs on the side of a twig (Fig. 7), not entirely surrounding as *Clisiocampa constricta*, but covers them for protection in the same manner. This species makes a tent. This species can be exterminated by picking off and destroying the bunches of eggs before the tree leafed out, and by picking off and destroying tents, when made; or the latter may be burned with their occupants at such hours of the day as the caterpillars are at rest. A torch made of rags, bound upon a pole and saturated with kerosene is a useful weapon for this kind of warfare.

In Santa Cruz county, the caterpillar of the *Orgyia leucostigma*, or the white marked *Orgyia* or Tussock moth, is effecting considerable damage in apple orchards infested by it. The pretty caterpillar (Fig. 9) is 1½ inches long, in color light drab, and covered with fine silken hair. On each segment ring on the dorsal half are four red tubercles, from the outer tubercles on the first thorax ring grow tufts of black hair, form-

Specimens of *Clisiocampa constricta*, taken from Mr. De Long's orchard, about 33% were infested by parasites, principally a *Tachina* fly (Fig. 16), and some small *Ichneumon* flies. Specimens of both were bred from pupae. From pupae of *Orgyia*, a specimen of an *Ichneumon* fly was bred; if not the *Cryptus nuncius*, closely allied thereto.

**SOUTHERN RAISINS.**—The *Riverside Press* says: Raisin packing is progressing rapidly in this valley, and three-fourths of the crop is now either packed or in sweat-boxes. Two or three carloads have already been shipped. The crop is put up in better shape than ever before. R. F. Cunningham has bought largely, and is putting up the second largest lot of raisins in the State by one man, some 12,000 boxes. Some of the finest raisins we have seen this year came from the Stamps' vineyard in Orange. They have a very large and fine berry, and the clusters are larger and more compact, but the yield per vine is only about one-third that of a *Riverside* vineyard. McPherson Bros., of Orange, are also putting up a large lot of raisins from their own vineyard, the grapes from which took the first premium at the Horticultural fair.

### Town and Country in England.

The more we can draw our people out of our towns and villages into the country and employ them on our soil, the sooner we shall wean them from these two national vices—thriftlessness and intemperance—vices which have made us a very byword among the nations of the world. The effect of the land laws, the establishment of free trade, the encouragement of commerce and the neglect of agriculture, have one and all tended to draw our people from the land into what are termed those "hives of industry," to inhabit crowded streets and squalid homes, and labor in the close atmosphere of factory and workshop. Our excise laws then facilitated and encouraged the multiplication of public houses and gin palaces in these towns to five times the number either required or demanded. Our people are then afterward bitterly taunted that they have become a nation of drunkards. We daily pray the Almighty: "Lead us not into temptation," but do we act up to the spirit of that prayer when we draw our people from the soil to live in crowded cities, and place the temptation of public houses and gin palaces at every turn and corner?—replenishing our revenue, it is true, but at what a cost? At the cost of impoverishing the homes of our people, filling our asylums, our jails and our work-houses.

Thus we read in the writings of Mr. Baghot de la Bere, concerning the condition of industrial affairs in England. Of course his lesson there is that the city operatives should be allowed to acquire rural property, though it be but the smallest area into which a man can plunge a spade and plant a seed and enjoy the growth thereof. His remarks are true: If the overcrowded towns and cities could be emptied into the vacant country, there would be an incalculable reduction of crime and vice.

In England it is hard to acquire property in land, both because of the price at which it is held and the indisposition of owners to reduce their estates. In this country it is quite different. There is plenty of land, and it is a happy reflection that the city people are going out upon it. The breaking of the idols of stock gambling is having a most salutary effect upon the tastes and desires of the people, especially those of moderate means, whose small earnings were erstwhile thrown to the Moloch of the stock market. We are often surprised at the people who come to ask us about the wisdom of investment in the country and the planting of trees and vines. Porters, clerks, housekeepers and others, whom one would never think had a thought beyond the routine of their daily lives, come to speak of soils and exposures and the varieties of orchard fruits. Some already have purchased little corners of land here and there, from the tides to the clouds; others are looking for a corner into which to put their earnings. We count this most fortunate for the State. The reign of the gambler and his exactions from the intoxicated masses of devotees are swept away. The temple of industry o'ertops the shrine of chance. It is well to go to the country. California is going.

**SUBSTITUTES FOR TIMBER.**—The growing scarcity of timber appears to be attracting the attention of visitors everywhere to the importance of devising substitutes. It is now stated that a house could be built of glass blocks about as cheaply as of granite blocks. Some glass manufacturer should make the demonstration. But people who might live in such houses should be careful not to throw stones. It is also claimed that fire-proof houses can be built of cotton and straw. In preparing these materials, raw cotton of inferior quality, the scattered refuse of plantations and sweepings of factories, are mixed and converted into a paste, which becomes hard as a stone, and then is called architectural cotton. It may be made in large slabs, whereby the building of a house would be rapid in comparison with the practice of laying brick after brick, and at about one-third the cost. For the other part, wheat straw is treated in a way already known, and converted into paste-board. The sheets thus prepared are soaked in a solution, which hardens the fibers, and are then compressed under enormous power into beams and boards of any required size, and the effect of the soaking is said to render them difficult of combustion.

**PRESIDENT A. E. DAVIS**, of the S. P. C. Narrow-gauge Railroad Co., consulted certain members of the council at the City Hall on Saturday last, with reference to extending the road which he represents to the city limits, and thence to Berkeley.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—EDS.

## Culinary Chemistry.

EDITORS PRESS:—California needs a comprehensive treatise on culinary chemistry, a branch of science not recognized, a term not mentioned in our text books, and yet perhaps not less important and not less capable of interesting development than that agricultural chemistry which has given immortality to Liebig. Our State has taken a prominent place, and bids fair to soon surpass all rivalry in the canning of fruit, and it is highly important that our learned men should thoroughly understand all the changes made in our fruits, while in the hands of the canners. The chief modifications in the flavors of fruit by cooking are chemical, and are susceptible of explanation, though they may require great application, capacity and learning, to completely master them. These things which come to the pockets and stomachs of everybody, should not be neglected by the chemists, who have added little or nothing to the resources of the kitchen; they did not discover the art of canning, nor the art of drying fruit by moving in a column of heated air, the two most important recent discoveries in the preservation of food. A great field is open to them. Examine a can of tomatoes, and you will find that it contains about nine parts of water to one of solid material. Why should not ten cans be condensed into six or eight? Probably because the evaporation of the water would carry off with it the delicate ethers or acids which make the tomato one of the richest of all vegetables in flavor, and therefore especially valuable in sauces and soups. What are these ethers and acids? At what temperature do they become volatile? Could they not be caught while escaping from the boiling tomato? And if caught could they not be returned to it, so that the canned material, while containing not more than 30% to 50% of water, should yet retain all the flavors of the tomato when first cooked?

Open a can of apricots, and you will find that the can contains a larger proportion of water than the fruit before cooking, a syrup having been added to sweeten it and fill up the spaces in the can. We pay a half million dollars annually, and shall soon pay much more, for cans and boxes to hold the water in our canned fruit, and for freight in sending them to New York and England.

It is perhaps not possible to catch the ethers and acids or other flavoring matter that would arise from fruit while undergoing a partial desiccation as a preparation for canning, but if not, it would at least be satisfactory to know that the subject had been studied carefully and had been well explained in some able treatise. Shall we not have a culinary chemistry?

JOHN S. HITTALL.

San Francisco, Cal.

## Plow and Plant Early.

EDITORS PRESS:—I have farmed six years in California, and during that time I have learned considerable, but I perceive that there is a great deal more for me to learn yet. I have got this fact pretty thoroughly drilled into my mind, however, namely: If one wishes to raise a large amount of produce from a small quantity of land, he can scarcely plow, or cultivate, or harrow too often. If the first plowing is sufficiently deep, all subsequent cultivation may, perhaps, be shallow, but it must be often. Plow, or cultivate, or harrow every time it rains, and every time a crust forms on the surface. Ground so treated will not only retain moisture longer, but it will absorb a larger amount. After ground is once thoroughly plowed, a two-horse cultivator is a good implement to use for many kinds of crops. One must not wait for the weeds to start, as, an Irishman might say, it is much easier to kill the weeds before they grow. As to the time to plow, to sow, to plant, that depends upon so many conditions, in connection with the weather, rains especially, that it is often mere guess work with the farmer. But in all my past experience, not only in this State, but in many other States, on an average, early crops of all kinds do the best. Of course, one is not to go to extremes, but I would rather risk very early than rather late. I would never spend my time with a very late crop. There are other advantages in early work: The farmer can put in more ground. An early commencement will give a longer period of labor. In case of accident, he may still recover and be able to do a fair amount of farming, if he commences early. Early corn planting indicates much weeding and cultivating, but this is more than repaid by much corn, so also of other crops. The farmer cannot begin too soon after the rains, and he cannot follow up the good beginning too persistently, constantly and well.

S. P. SNOW.

Santa Barbara, Cal.

## Extracted, Not Strained Honey.

EDITORS PRESS:—Whereas, Beekeeping having become one of the leading industries of the Pacific coast, and beekeepers taking so much care to place their honey on the market in the best possible shape, discarding the old process of straining their honey, and adopting the more scientific and business-like way of extracting their honey with machinery

ery for that purpose, thereby producing an article as pure as the best comb honey. Therefore be it

Resolved, That our Pacific coast papers, in quoting extracted honey as strained honey; and also honey merchants, in speaking of liquid honey, calling it strained honey, are doing those engaged in producing extracted honey a serious injury that has been keenly felt for several years.

Individual efforts proving of but very little, if any avail in changing the quotations; Therefore, We, the beekeepers of southern California, in convention assembled, protest against the name, and request that all papers quoting our honey, quote it as extracted honey. By order of the District Beekeepers' Association of southern California.

Los Angeles, Cal.

Let all papers who offend in this respect, take notice and mend their ways. The RURAL PRESS has quoted extracted honey for years.—EDS. PRESS.

## HORTICULTURE.

## Cost of Starting a Cannery.

The Los Gatos News says that the following is an answer to a letter of inquiry written by Mr. G. W. McGrew, to Mr. J. J. Groom of Los Angeles, whom, it is well known, enjoys a wide spread reputation as a man who has a thorough knowledge of the business and is now managing the cannery at Los Angeles:

I will give you cost of tools and machinery necessary to run a cannery for half a million cans per season.

1 steam boiler 40 inches by 12 feet, with steam drum 2x5 feet, and steam pump.....	\$ 650
1 press and 2 dies, \$150; 1 square shears, \$40.....	230
1 vice, \$9; 1 tin former, \$12; 1 solder mold, \$22.....	43
1 farmer's boiler, \$14; 3 open vats, \$30.....	44
3 trays, \$20; 5 fire pots, \$20; 20 soldering copers, \$30.....	70
1 pair tinners' shears, \$5; 1 pair snips, \$1.50; several small tools, \$3.50.....	15
6 solder blocks, \$40; syrup tanks, \$15.....	55

Then comes your pitting and packing tables, and if you put up vegetables, jams and jellies, you would want one 35-gallon copper kettle..... 70

Total cost of tools.....\$1,167

If you have a two-story building you may add an elevator at \$125. I do not like upper stories for a canning factory, only for syrup-room and storing empty cans.

I would suggest a building, say 40x70 ft., two stories high. That will give room for a preparation-room, 40x40 ft.; bath-room, 32x40 ft.; tinshop, np stairs, 20x40 ft.; syrup-room, 10x12 ft., and balance for storing cans. Then add (shed roof), for boiler, 20x40 ft. across one end, that will give you a boiler-room and jelly-room. Then, on one side, add (shed roof), for storing cans after they are filled, 30x70 ft. Now the above figures and size of building will put you in shape to handle with ease half a million cans per year.

Now I have given you the costs of all the main machinery and tools, and I have bought the tools and machinery for three canning factories, and know just what it takes and the cost, although, of course, you know that prices vary a trifle from year to year. Then there are little fittings and fixings up, such as steam and water piping, work tables, globe valves, etc., which is not much expense, and still it all figures in the cost. I do not want to give you figures that will not hold out, but you know in building there are always little extra expenses that come up unexpected. This building can be built of rough lumber, and therefore costs but little. The floors would necessarily want to be smooth.

## THE DAIRY.

## Growing Rye for Dairy Feed.

The magnificent early growth of rye in some parts of California has suggested its use as a forage crop for dairy cattle. If we are rightly informed, some very favorable experience has been attained with it in the San Joaquin valley. With a view of drawing out local experience, we give the following extracts from an article on rye as dairy feed, written by Henry Stewart for the Rural New Yorker. We quote: For soiling or for pasturage, rye will be found most valuable. It is cheaper than wheat, is better for fodder, and is ready for use earlier. It is productive of milk if it is cut before it is hard and dry, and the surplus, if cut before the grain is formed, makes excellent hay. It will make a good crop of fodder upon poor soil, and on this account is especially adapted for the beginning of a course of improvement of a poor farm.

But there are some points in regard to its culture and uses upon which erroneous ideas are current. In the first place there needs to be a thicker seeding than is usual, when the crop is grown for grain, and the poorer the soil the thicker should be the seeding up to 4 or 5 bushels per acre. I have sown all the way from 2½ to 5 bushels to the acre, and 3½ or 4 have given the best yield of the best fodder, which is all the better the finer it is. Thick seeding gives a thin, slender, tall, leafy growth which is the best for both fodder and hay. With 3½ bushels of seed and 300 pounds of a "complete" concentrated fertilizer, I have grown a crop which cut 110 pounds of green fodder to the square rod, or more than 8½ tons to the acre early in May. This is quite equal to the maximum expectation of the yield of soiling crops, which is, that the produce of a

square rod should support a cow for one day, and an Ayrshire or Jersey cow will not consume more than 60 pounds of green rye in a day, when she is provided with 4 or 5 quarts of meal with it.

The most disappointing mistake in regard to this crop is that it can be cut several times in the season. This is altogether out of the question. The habit of growth of rye is to throw out a bunch of radicle leaves, or imperfect stalks with spreading leaves, in the fall. If the season is warm and long continued, the roots spread by throwing out new sets of similar leaves until the ground is completely covered, as with a sod. If the seed has been sown early and the warm weather continues, the stalks may throw up from the center of each, an ear-bearing stem, the ear of which may or may not emerge from the sheath. In either case, to cut this or permit it to be grazed off, destroys the ear, and the plant must throw up new offshoots from the roots, or the crop of grain is destroyed, so that a very vigorous crop needs to be pastured down in the fall, not so much to prevent smothering in the winter, as some think, but to check its luxuriance and succulence, which encourages the growth of seed stalks in the fall, and which cause it to succumb to the frost or to rot under the close covering of a deep, wet snow. In the spring, the plants do not tiller so much as in the fall, unless when very forward and vigorous they are pastured down and checked somewhat; but they soon throw up the ear shoot. If the crop is cut, this must be done before the sheath has come into range of the scythe, otherwise the embryo ear is cut off and the crop is confined to those stalks which have so far been delayed in their growth by the vigor of the leading ones. At any rate, then the cutting must necessarily be done while the herbage is small and before the main shoots have grown to a length of three inches, else the second growth will be very light. The first cutting of rye, in fact, will be so light as to be hardly worth taking, and, if it is worth it, the second growth will be very light. I have grown rye for soiling, more or less, for 15 years, and have never yet found it to yield a double cutting worth the labor; if the first is good for anything, the second is next to worthless; and if the second is to be good, the first must be taken so early as to be of little value. Rye has often disappointed those who have grown it for soiling, because it has been cut too late; for as soon as it gets tough and hard, it is a poor milk-producing food; but when it is young it is different. As soon as the blossoms appear, it should be cut and not left a day longer.

SORGHUM FOR FODDER.—EDITORS PRESS:—I have raised a small patch every year for the past six years; a small quantity I have made into syrup, for family use, using a rough wooden mill, and hoiling in a galvanized sheet iron pan. The remainder I have fed to stock. Horses, hogs and cows are greedy for it, and all seem to thrive on it. Chickens go for the seed. It will keep green here (Santa Barbara county) almost the entire year. It will flourish on rich ground and on poor ground. Cut to the ground when ripe, it starts from the roots, and in a few weeks there is quite a growth of fodder. It will grow the second year, but it is better to plow it up and plant afresh. It will stand drouth much better than corn. It produces a large amount of fodder to the acre. It can be planted early or late; is easy of cultivation; is a very valuable forage plant to continue the supply of green feed, which it can here at least be made to do almost the year round. Now do not all rush extensively into the sorghum business and plant whole farms in sorghum, but let every farmer who keeps cows plant a small patch, and see how it will continue the flow of milk and increase his butter supply. It is rather troublesome plowing out the roots and disposing of the large fibrous roots when plowed out, but this is only a minor objection.—S. P. SNOW, Santa Barbara, Cal.

A DAIRY SHOW IN SIERRA COUNTY.—The Reno Gazette tells of an exhibition of produce at Beckworth, Sierra county, at which there was a fine display of butter. The interest taken was general and the whole result fully realized all that had been expected from it. In addition to butter, there was a display of fruits and vegetables raised in Sierra and Humboldt valleys. Mr. E. P. Dolly was awarded first prize for apples, cabbage, rutabagas and carrots. Mr. A. Trimble, first prize for potatoes and turnips. Mr. T. P. Dehman, first prize for parsnips and beets. Miss A. F. Hubbard, first prize for onions, carrots and jellies. These were all excellent of their kind, and far beyond what many thought could be produced in Sierra valley. F. R. Hutter, Mrs. William Sperry was awarded first premium; Mrs. E. P. Dolly, second premium. Mr. A. B. Huntly, third premium. These premiums are given for butter in its present condition, flavor, aroma, fine grain, etc. Now a further test awaits it. Six lots have been sealed up in boxes; these will be packed away for a year. At the end of that time the boxes will be opened and again submitted to inspection. Similar prizes will be awarded for merit in keeping. The result of this experiment will be looked forward to with much interest. It certainly would be a gratifying result if butter could be made to keep sweet and good for a whole year. All the butter offered was of very fine quality, rich in color and deliciously sweet in taste and fragrance.

GILROY FIGURES.—The Advocate gives the following figures of the dairy business in that famous cheese region: "A good dairy cow is a middle-grade Dnrham. Her milk will make about three lbs. of cheese per day. One man, at a cost of \$25 per month, can attend to 20 cows, yielding 60 lbs. of cheese per day, or 1,800 lbs. in a month, which, at 14 cts., will bring \$250 per month. The profit from two wheys, which is fed to hogs, and from the calves makes an important item. A cheese maker's services are worth \$40 per month, but one cheese maker can attend to an ordinary dairy. The quality of the cheese depends in a measure on the character of the feed and water, but not so much as that of butter. An alfalfa field is very desirable in connection with a dairy—in fact, it has become an almost indispensable auxiliary of a dairy ranch. Bran is fed in the winter until grazing gets good, and is said to be the best food for dairy cows. Estimating that Gilroy ships 500,000 lbs. of cheese annually (and this we believe is actually less than what is shipped), and receives 12½ cts. per lb. for the same (which is a low estimate), we have \$62,500 received from our cheese. A large portion of this money is spent in Gilroy for supplies, etc., and adds materially to the support of the town."

## THE VINEYARD.

## Classification of Grapevines.

Leonard Coates gives the Napa Register a note on the classification of vines, which may be of service to some of our readers who have not posted up on botanical arrangement:

The natural order, *Vitaceae*, to which the grapevine belongs, is not a very extensive one, numbering only some 260 species. The *Vitis vinifera*, or European grape, so called, is supposed to have been originally brought from the shores of the Caspian, but its cultivation for more than 4,000 years, has caused it to become naturalized in many parts of the globe. It should be said that the vegetable kingdom is divided into:

1. Sub-kingdom. 2. Class. 3. Division. 4. Sub-class. 5. Sub-division. 6. Natural order. 7. Tribe, or sub-order. 8. Genus. 9. Species. 10. Variety. 11. Sub-variety.

For instance, the Black Hamburg is a variety of species *vinifera* (and from this is a sub-variety, the result of a cross between it and an Eastern grape, the Agawam), genus *vitis*, belonging to natural order *Vitaceae*, sub-class *thalamiflora*, division *angiosperma*, and class *dicotyledones*. These names are suggestive terms, derived, some from the Greek, and some from the Latin.

The *Vitis vinifera* is divided into hundreds of varieties and sub-varieties, these constituting what we generally understand as "foreign."

Besides this, there are nine other known species in the United States, each having an identity of its own, and being as distinct as a sheep is from a goat. These are known as *Vitis riparia*, *V. cordifolia*, *V. rupestris*, *V. Arizonica*, *V. Californica*, *V.estivalis*, *V. candicans*, *V. labrusca*, and *V. vulpina*.

We are at present most interested in the *V. riparia* and the *V.estivalis*, the former being the stock to use for grafting European varieties onto, and the latter being valuable as including many choice varieties, all being phylloxera-resisting. According to Prof. Huxmann, the *rupestris* will also be a good stock for some soils.

Belonging to the *riparia* are the Taylor and Clinton, which are merely cultivated forms of this species, the Elvira, Amber, Pearl, Uhland, Missouri, Riesling, and others, all of which root readily, but particularly the wild parent, the *riparia*, and its two near kinsfolk, Taylor and Clinton. The species, *estivalis*, includes some very choice varieties, as the Cynthiana, Hermon, Cunningham, Norton's Virginia, Devereux, Jacques, etc. These, however, do not root easily, and to have any success at all, abundance of water must be supplied in propagating them. The *riparia* is found over a large area east of the Rocky mountains, growing mostly on river banks; the *estivalis*, known as "summer grape" throughout the Middle and Southern States, grows in dryer land, in woods and thickets. It is found in the Atlantic and Southwestern States and in western Texas, in a variety of forms. Not much is yet known of the *rupestris*; it grows on sandy or gravelly banks, and in Missouri is called "sand grape."

## Wine Without Crushing.

EDITORS PRESS:—In the RURAL PRESS, October 3, 1880, we find a statement of wine without crushing for direct. Will you please inform through the RURAL how long the grapes have to ferment before the wine is drawn off, and if any weight or pressure is required over the grapes, and if this will answer for the Muscat grape or any kind of grape? READER.

Saratoga, Cal.

The paragraph to which our correspondent alludes, was copied by us from the St. Helena Star, and described the making of wine by fermenting the grapes in large tanks, without crushing, as practiced by Wm. Scheffler, of St. Helena. We are not informed of the details of the process. Those interested could no doubt obtain them by writing to Mr. Scheffler.

VINEYARD PRICE.—We learn from a Napa Co. paper that T. B. Hopper, of Yountville, has been offered \$30,000 for his place, 110½ acres, 95 of which is in young vineyard, not yet in bearing. This latter, of course, is what brings the offer.



## THE STOCK YARD.

### A Visit to Baden Farm and Jersey Farm.

The party consisted of C. H. Dwinelle, Lecturer on Practical Agriculture and the following students from the University, who have been attending Mr. Dwinelle's lectures to Seniors, on the Principles of Stock Breeding and Mr. E. J. Wickson's course on Dairy Husbandry, namely: R. A. Berry, P. E. Bowles, O. W. Jasper, A. Paige, C. L. LaRue and S. E. Moffatt. At Baden Station they were met by Mr. Ashburner and escorted to his establishment close by, where he politely showed them his very fine stock of pure-bred and graded cattle, and explained his methods of feeding and general management.

They first visited the calf pen, containing about half a dozen promising youngsters. Mr. A. believes in keeping babies warm and supplied with plenty of fresh milk, which they take from a pail from the first day. The next move was to pens for those of four weeks and over, where the animals are fed on skimmed milk with a little oil cake and bean meal, and taught to eat hay. They soon learn to eat out feed as fed to cows.

After visiting the cattle, notes of which will be given below, the party took the fields, and manifested much interest in Mr. Ashburner's explanations of his methods of raising large crops of heets for winter use, and wheat hay at four tons per acre. It is intended to have something juicy for the milch cows at all seasons, and just now this is supplied by sweet corn raised in drills. Prickly comfrey was of service earlier in the season.

The reasonable price at which bone meal is now sold has encouraged a liberal trial of it, at the rate of 500 to 600 lbs. per acre on beets and fodder corn, with encouraging results. A lot of five tons costs \$26 per ton, delivered on the cars at San Francisco. Oil-cake meal at \$20 per ton is considered worth nearly its cost as a fertilizer, aside from its feeding value. Beet land receives stable manure at the rate of 25 tons per acre. Beets are followed by wheat hay crops of the finest description.

#### The Cattle.

The cattle are being fed in much the same way as our last year's visit. Oil cake and bean meal mixed with cut hay, in the barn, and out doors, green corn and beets each once a day; also about as much hay as they will eat. The catalogue of the pure-bred Short Horns recently issued contains the pedigree of 69 cows and heifers and 17 bulls. The three leading families, which make up two-thirds of the herd, consist of 27 Frantics, 13 Pansies and 9 Gwynnes. The remaining 20 females are of six different families, some of them added to the herd by purchase within the last two or three years, but none have been purchased within the last 12 months. At the time of our visit, a year ago, the herd consisted of 63 females and 21 bulls of all ages; since that time, and up to the time the catalogue was printed, 15 bulls and 6 cows and heifers were sold for breeding purposes. In the meantime, the imported bull, "Kirklevington Duke 2d," was also sold to the hatcher. He had, however, left his mark behind him, which can plainly be seen in some fine dark-roan cows that make themselves conspicuous in the herd by their excellent style and quality. There were but four bulls, sons of his, when we were there, and one of these, a roan, was sold a few days before, along with another roan bull calf of a month old, and five heifers, all more or less roan in color. We were also just in time to see that fine roan yearling bull, "Cherry Prince," who had been sold to go to head the Cotate ranch herd of Short Horns in Sonoma county. He is a son of "Imp. Grand Prince of Lighthurne" and "Cherry Oxford 2d," and is in every respect a good bull, of fine quality; a long, low, deep-bodied bull, and we sincerely hope that he will fully answer the expectations of his liberal-minded purchaser.

It will thus be seen that five heifers and three bulls are to be deducted from the list in the catalogue, but against which the birth of three heifer calves can be recorded, so that at the time of our writing, the herd consists of 67 cows and heifers, and 14 bulls of all ages.

Of the bulls in use, besides "Imp. Grand Prince of Lighthurne," there are three of the Frantic family, viz: "Waterman," who was sold as a calf, by Mr. Ashburner, and re-purchased for use in the Baden herd when 5 years old. Having lived out of doors the greater part of his time he is rather rough-looking, but some beautiful calves sired by him show that his hard living has not affected his breeding qualities. "Baden Duke," a 3-year-old by "Kirklevington, Duke 2d," is a vigorous, short-legged and wide-chested bull, out of "Yellow Rose," by "Mark Antony," both of which were amongst the first purchases of the Frantic family, by Mr. Ashburner in 1871. "Yellow Rose" is still breeding, is a good milker, and the mother of one of the most beautiful cows in the herd, "Frantio, 5th," own sister to "Baden Duke;" she is also a fine milker, having had three calves. She has not been dry more than six weeks at a time since having her first calf. She, in turn, is the mother of a good, thick, short-legged, roan yearling bull, "Baden Prince," by "Grand Prince of Lighthurne," who is reserved for use in the

herd. Another roan, of the Pansy family, also reserved for use, "Royal Duke," by "Kirklevington Duke, 2d," is perhaps the most perfect shaped bull in the lot, and looks all of a depth and thickness from the tail head to the setting on of the neck. There is only one other, "Kirklevington Gwynne," by the last named sire. He is on the list that is numbered for sale, but now that "Cherry Prince" is sold, he may be retained awhile for service at Baden. His dam is also by the same hull, so that the blood of the old hull, who was a great favorite with Mr. Ashburner, is pretty well concentrated in him. His maternal grandam is "Imp. Oxford Minstrel 2d," who has been favorably spoken of in these columns as a cow of the right sort.

All the hulls we have named are well-fleshed, thrifty, short-legged animals, out of cows that are good milkers. Mr. Ashburner's aim being to combine the production of both milk and beef in the same animal, he knows of no more likely way of bringing about the desired results than by using hulls of such character as described, and such of that character only as are out of cows that are good milkers.

Besides the pure-bred Short Horns there are about 90 head of high class grades, many of them fully equal to the average Short Horn in appearance, and likely to be as useful in the production of beef and milk as any animals that can be bred.

Judging from the class of horses we saw at work on the farm, Mr. Ashburner appears to like to have all animals under his control partake of the hoveine type, for all we saw were of the broad, thick, short-legged sort that could, nevertheless, walk off at a good speed with their load. Enough are bred on the farm, and should there be one to spare now and then it is sure to be of a kind that finds a ready sale.

The breeding of Berkshire pigs has been commenced on a moderate scale at Baden, and they, like the cattle and horses, are good of their sort.

#### Visit to Jersey Farm.

After a hearty English dinner Mr. A. got out his double team and took the party to "Jersey Farm," two miles distant. Mr. R. G. Sneath, proprietor, being absent, an informal examination of the lower dairy was made. The feed mill run by wind and water power, the machinery for washing milk cans, and tanks for soaking ground feed, as also the well constructed buildings excited much interest.

The calf pasture sown with rye grass, and irrigated to greenness, suggested New England rather than a Californian autumn.

Here were many specimens of grade Jersey calves from selected American cows, a cross much valued by Mr. Sneath, and in a neighboring yard their aristocratic sires.

The 240 cows now milked at this dairy were seen only at a distance on the hill tops.

Arrangements for extensive sub-irrigation are being made in the field next the county road, and we shall hope to present the results thereof hereafter.

## THE STABLE.

### Blinds on Horses.

EDITORS PRESS:—It is not my intention to attempt the performance of a miracle, but if I could, I should make the scales fall from the eyes of millions of horses in this land. Every man who has the least sympathy for dumb animals, should join in a crusade against blind bridles. Man looks forward, and a blind bridle on man would not work a great injury, but horses look sideways, and hence a blind close to the eye not only obstructs the vision, but injures the sight. Blinds are not at all necessary. A fractious horse will be just as unmanageable in blinds as without them. When men ride on horses they do not use blinds, though animals are just as liable to become frightened under the saddle as under harness. Animals used in road teams or plow teams should see where they tread. It wears an animal to be compelled to walk like a blind horse. I have seen whole teams wearing blinds so close to the eye that no animal could see the furrow or the road. This is a great wrong to the dumb animal. Suppose men were blindfolded and compelled to travel over rough places, 20 or 30 miles a day, taking each step by guess, without knowing how to brace a muscle, would they not become restive under such restraint?

No man can give a good reason for using blinds. A horse is more apt to take fright at an object it does not see than at one it does see. I have seen this tried, and I do know from experience that a horse is less liable to scare without blinds. People buy blind bridles because they are made, and they are made now because our fathers made them, and for no other reason. Men formerly used heavy harness. That custom was abandoned, and light harness was substituted. Light harness proved to be better in every respect. Why not change the blind for narrow-strap bridles, such as the riding-bridle?

I do not know what is the custom in the Eastern States, but in all publications wherein horses are represented at all in harness, they are shown as wearing narrow-strap bridles. If this communication will induce but a single person to throw away the blind, and substitute the riding bridle, some good will be done, and some poor horse or horses will be relieved from

great suffering. Horses are good servants. Give them all the freedom possible. Place no unnecessary restraint upon them for any length of time. A righteous man regardeth the life of his beast; nay, more, he regardeth its comfort, its condition at all times and in all places. S. B. McCORMICK.

Turlock, Stanislaus Co.

[It should be stated as precautionary that the removal of blinds from a horse accustomed to them sometimes gives the animal a severe fright. A huggy horse having the blinds removed is frightened by the sight of the vehicle behind him. It is therefore advisable to be careful in making reforms of this kind.—EDS. PRESS.]

## POULTRY YARD.

### Feeding Fowls.

We continue our extracts from Wm. Niles' "Pacific Coast Poultry Book," as follows:

#### Crushed Corn for Growing Chicks.

Feed corn to young chicks in "crushed" or "cracked" condition. Common cracked corn may be fed to them dry, or it may be scalded to advantage before feeding. It should always be given to the fowls fresh, however, as, if mixed with water or any other meal, it quickly grows musty, or sour, if not used.

There are other advantages in feeding it in this shape—as compared with the use of whole corn—and these are that, in the broken state, it is taken up much more easily than are the whole kernels, and, when eaten, it digests very much more readily, while the process of devouring a given quantity is slower, and the birds, if ever so hungry, cannot "gobble it down" in bulk as they incline to rush at the whole grain. Too much care cannot be taken to provide only what is eaten up clean at a feeding—as, after it lies upon the ground or has become wet, it becomes both unpalatable and unsavory.

#### Green Corn on the Ear

Is not only a very palatable food for growing chicks, but is highly nutritious and valuable for a change in their fare. If it must be purchased, it is not an economical provision, but if it can be grown upon the place, a little daily will go a great way, and for the young birds there is nothing so nourishing, except the waste milk of the farmhouse. Green corn can be chopped up with the soft cob and inner husks, and fed to chicks or fowls once a day, while it is tender, to very good advantage. For valuable young breeding stock—or for the chickens marked out for future exhibition purposes—this edible is a grand thing. Where it can be had or raised conveniently, we recommend those who have not tried it to give their young fowls a little of this, daily, for a month, and learn how admirable an esculent this article is—in summer time—for the growing chicks.

#### Milk for Poultry.

The time may come when we shall know exactly what is required, in the way of feed and the proportions, to insure a requisite number of eggs within a given time. Meanwhile, the nearest we can come to that unacquired art is by feeding our fowls such food as most resembles the egg. Perhaps nothing comes nearer it than milk, for both it and the egg are, for at least a time, the only food that the very young of both oviparous and viviparous animals subsist upon. Hence, we would expect, if we should feed our hens upon milk, that our supply of eggs would be increased, and upon trial such proves to be the fact. Though we use skim milk only, the removed cream is in a measure compensated for by the use of grain and meats. Milk is, therefore, the best article of food we can give our fowls, and for farmers to feed it to their hogs in the winter and spring is a mistake, as the returns will not equal one-half what would be received if the milk were fed to the hens.

#### Green Food for Fowls.

Nature has ordained that the stomach requires a certain amount of coarse and refuse matter to keep it in a healthy and active state, the lack of which tends to disease, constipation, indigestion, and a general disarrangement of the system. Domestic fowls are no exception to this rule, and green food (that is, grass and vegetables) constitutes just the kind of refuse matter needed. This, for something more than half the year, the fowls themselves can obtain. But in the winter season, when they are debarred from obtaining such food, we must supply the deficiency by giving them cabbage, turnips and onions, cut fine or coarse, as seems to suit them best. If we have not a supply of the above-named vegetables, potatoes boiled and mixed with bran and meal, and fed warm, is a very good substitute.

#### Bones and Bone Meal.

It is only recently that bones have been used as poultry food, their value not being known or appreciated by breeders. Now the manufacture of bone meal and crushed bones is a large business, supplying hundreds of breeders with what seems to be an essential element in the growth and development of poultry. Bone meal is usually too fine to be used by itself, though some mix it with other fine food, moisten the mess and feed it in that way. Cracked or crushed bones, however, are more desirable, for there is not so much waste, and the fowls soon learn to eat it up clean when fed

to them. A little of it in summer is very good to help them in producing eggs, but it is more valuable in cold weather when it can be fed more liberally. Some have a quantity constantly in a small trough, where the birds can get it at all times, but we prefer to feed it at regular intervals. Where bone meal or crushed bones cannot conveniently be obtained in their purity, gather up the bones which collect around the house and put them where they will dry out. When they have done so to a considerable degree, pound them up on a large, flat stone with a hammer, and you will have just what you want, and can feel assured that it is undoubtedly pure.

## METEOROLOGICAL.

### The Moon and the Weather.

M. De Parville has published in the *Journal des Debats*, a paper on the temperature of the present year, which, at Paris, has risen to a height exceeding all previous authentic records. In the course of the article he raises the question as to whether the dryness of the present summer could have been foreseen, and answers it in the affirmative. Having then referred to the influence of solar action on the atmosphere, he says: "A very long series of observations has also shown that the moon, which passes every month from one hemisphere to the other, influences the direction of the great atmospheric currents. The changes in those currents, in consequence of the prevailing moisture or dryness, are intimately connected with the relative position for the time being of the sun and moon."

The distance of the moon from the equator, that is, the inclination of the moon's path to the plane of the equator—varies every year, passing from a maximum to a minimum limit; and the meteorological character of a series of years appears to be mainly dependent upon the change of inclination when these extreme limits have been touched. Observations prove that the rainy years, the cold winters and hot summers return periodically, and coincide with certain declinations of the moon. In our latitudes the rainy years occur when the moon's declination has touched its extreme limits of 28°, 26° or 18° respectively. They are separated from each other usually by periods of about three years, and then six years." M. de Parville then gives a list of rainy years running back to 1783, the most recent being 1879, 1876, 1866, 1859, 1856 and 1853, in each of which the moon's declination was either 28°, 26° or 18°, beginning with 26° in 1879 and running back in the order named. The severe winters, he says, coincide as a rule within a year of the same declinations. The dry summers come naturally in the middle of the period which divides two wet years. The next wet year ought to coincide with the declination of 18°, therefore, with the year 1884, as the last was 1879 with the declination of 26°. Between the two years comes the period of maximum dryness, and it may be expected, therefore, that the year 1882 will be another dry year.

### The Influence of Telegraph Wires on Lightning.

Some interesting facts in the above connection have recently been brought out by M. Montigny through observations along a railroad telegraph line in Belgium. It appears that the wire for a considerable distance passes along extensive lines of poplar trees, while the road rises gradually from a plain to an elevation of about 200 ft. A close examination shows that along this route only about 1% of the trees have been struck by lightning on the plain, and on the slope about 25%, while upon the highest portion of the line not less than 64% of the trees show evident marks of injury from lightning.

M. Montigny distinguishes three kinds of injuries: First, the bark torn and detached on a limited part of the trunk; second, a furrow, straight or (rarely) spiral, made on the tree, from near the wire, down to the ground; third, a peculiar oval wound, with longer axis vertical and lips colored light brown. The furrows, which are probably due to the most violent discharges, are relatively most frequent on the upper and western slope, which the storms usually reach first. M. Montigny is of the opinion that the lightning, while provoked by the wire, does not strike that first and then the tree, but strikes the tree directly.

His conception of the process is to the following effect: Suppose a thunder cloud charged with positive electricity. A long telegraph wire under it, though insulated, may acquire as great negative tension in the nearest part as if in direct communication with the ground; and the tension is greater the nearer to the cloud. While the inductive influence affects the wire most, objects that are near, such as trees, share in the influence according to their conducting power. The lightning is attracted in the direction of the wire, yet does not strike it; the insulating cups present an obstacle to its prompt and rapid escape to the ground. It finds a better conductor in a neighboring tree wet with rain.

TO UTILIZE OLD RUBBER.—The pieces are heated in contact with steam, when the sulphur is volatilized and the caoutchouc melts, and is collected as a liquid, used in preparing waterproof covers, etc.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Roll Call of Grangers.

We continue the "five-minute" reports made by representatives at the roll call of subordinate Granges at the recent State Grange meeting, aiming to give the substance rather than the language given:

#### Pilot Hill Grange, Eldorado Co.

In the absence of its representative, Bro. Spilman said that Pilot Hill Grange was situated 15 or 16 miles from Sutter Mill. It was the first Grange organized in the State, and it has lived and prospered in spite of adverse circumstances. Its numbers are not great, but the members are united in all good works. Its financial condition is good. The country round about is settled by small thrifty farmers, and I have observed that wherever this condition exists there are prosperous Granges. In the great wheat-growing counties of the State, where men cultivate acres by the thousands, Granges languish and die for the want of proper and sufficient sustenance.

#### Roseville Grange, Placer Co.

Bro. Leonard said Roseville Grange was organized March 5, 1875. At one time it had on its rolls 112 members; like most other Granges, ours has been through the mill. At present it is in good condition, members generally attending our meetings, and we feel encouraged for the future. We have no hall of our own, but the rent we pay is nominal. Earnest efforts are being made to increase our membership. A co-operative store is spoken of as being a good thing for our section, as well as tending to build up the Grange.

#### Plymouth Grange, Amador Co.

Bro. S. C. Wheeler reported Plymouth Grange in a prosperous condition. Our membership is not very large, but active and earnest. We are recovering from the Grange depression which everywhere prevailed some time since. Sister Wheeler said: We have taken steps to build a hall of our own. A subscription list for that purpose has been started, with a fair prospect of ultimate success. We have initiated into our Grange 10 or 11 new members within the last six months.

#### Plumas Grange, Plumas Co.

Bro. W. E. Neal reported that Plumas Grange was alive and active. We have paid out, as an organization, over \$100 in charities. We propose to have a Grange library for the benefit of our members. Plumas county is the best butter section in the State. We have had several local fairs, at which three premiums have been awarded to members. Our Grange meets once a month. Our meetings are becoming more interesting. We are fairly prosperous and out of debt.

#### Point of Timber Grange, Contra Costa Co.

Bro. Richardson responded. He said Point of Timber Grange is fairly prosperous. We own our hall, which is 30 by 50 ft., well furnished, with an organ of our own. Our present membership is 37; average attendance, 15 to 20. The Grange meets on the first and third Saturday in each month. We have increased our membership within the last year, and are encouraged to believe that we shall add more members during the incoming year.

#### Stockton Grange, San Joaquin Co.

Dr. C. Grattan who has served several terms as Master of Stockton Grange, said that his Grange at one time had the largest membership of any Grange in the State, numbering 270 members. At the start everybody appeared desirous of joining the Grange. Many did so for selfish purpose, and when they failed to accomplish this purpose, they left the Grange berating and abusing it because we would not allow the principles of the Order to be perverted to advance individual interests. Some withdrew from the Grange because it cost two bits a month to run it and pay its State dues. At present our membership is 64, many old members who dropped out through neglect or indifference, are now seeking re-admission to our ranks. The old stand-bys have carried the Grange along in spite of croakers and adverse circumstances.

Sister Grattan said: We have an instrument of our own. We have good music and a pleasant and profitable time at each of our meetings.

#### St. Helena Grange, Napa Co.

Bro. Story said St. Helena Grange is yet alive and holds regular monthly meetings; average attendance about 15 members; are out of debt; have come money in treasury; have some earnest Grangers, Bro. Lewelling among the number; but like many other Grangers the everlasting dollar has got away with us. Nearly all of our people are engaged in the vineyard business and many of them have got too rich to make active Grangers.

#### Watsonville Grange, Santa Cruz Co.

Bro. H. Cox reported Watsonville Grange alive, with a fair prospect ahead. The sisters are always in attendance on our meetings, while the brothers stand around the street corners talking business and politics, rather than come into the Grange meetings. We, as an organization, are out of debt, and have made some increase during the past year.

#### Wheatland Grange, Yuba Co.

Sister Jasper responded. She said Wheatland Grange was nine years old. It started out with 25 charter members; for several years we prospered, then there came a fire which destroyed the hall and all our regalia, charter and working tools; some of the members were discouraged and wanted to give up the charter, but the proposition was voted down, and from that time our Grange took a new start. We have admitted 25 new members this year, with a class of 3 or 4 on the way; our present membership is 60. Most of the late initiates are young people, who average a better attendance than the older members. The Grange is out of debt with something ahead. The debris question is one of our standing subjects for debate, for it is one in which we are all interested. Most of the farmers living in the neighborhood belong to our Grange. We pass the Grange officers around so that every worthy one may have the honors. Our harvest feasts come often and are always enjoyable occasions and well attended.

#### Washington Grange, San Joaquin Co.

Bro. S. C. Waters, in response to a call for information, said that Washington Grange was situated about three miles from anywhere, away out on the San Joaquin plains. A brother while swimming the river to reach the Grange lost our records. We have an organ of our own. Grange meets every two weeks; we are talking up a co-operative store. This year we have had a light crop, and in consequence many members have moved off; but those of us left propose to hold on to the charter.

#### Walnut Creek Grange, Contra Costa Co.

Bro. O. Dennis reported in the absence of Bro. Larkey, that Walnut Creek Grange was in a fairly prosperous condition, that he had visited and seen its work. There are many good members and much good material in the settlement for additional members. The country roundabout is of good quality, and contains many prosperous farmers.

#### Woodbridge Grange, San Joaquin Co.

Bro. Ennis, in the absence of its Master, stated that the Grange was alive, but that the great trouble with Woodbridge was similar to that of many others—farmers were absorbed in making money, and everything that did not immediately pan out well was given the go-by. At present there is a discussion of a proposition for the establishment of a co-operative store, which would cause a revival in our work.

#### Yuba City Grange, Sutter Co.

Bro. Chandler said, Yuba City Grange was in fair condition, and for the last year there had been held many interesting meetings. We are out of debt and have some money reserved; have an annual picnic under the auspices of the Grange, which encourages our members. At one time there were 150 members belonging to our Grange, now we have 75. We have a fine section of country, and if the debris don't cover us up, the farmers and the Grangers are bound to prosper. So we feel encouraged to hold on to what we have until another advance can be made.

### Home from the State Grange.

[Written for the RURAL PRESS by Mrs. M. B. LANDER.]

Not only to the stay-at-home Patrons, but to outside farmers, those eligible Patrons who blindly stand at the outer doors of our Council rooms, we would proclaim that Santa Rosa's doors have been opened wide and her saintly gifts of hospitality gratefully received by pilgrimaging Grangers. These representative farmers, for the week, shifted home cares upon other shoulders, and with wife and sometimes children, exchanged steeds of bone and flesh for that of the fire-horse; thus were they profitably awakened to new outside social life, and made to come back to home duties with an added contentment for the present and brightened hope for the future.

Our deputation from Alhambra did not arrive till Wednesday eve after session hour. Gladly did we take by the hand the sturdy few who go early to put the house in working order. Santa Rosa's hotels were overflowing, but still a few lucky ones were bodied in hall-way and every other available corner, while private houses took pity upon many who were turned from overrun hotels. Too much credit cannot be given our Santa Rosa Committee, for well did they look after all visitors; in fact, for the time, were they runner boys, and experts did they prove, as we can testify.

Farm life, from time immemorial, has insured womanhood to such privacy, that a home in the country has almost been her living mausoleum; but the warm greetings and easy acquaintance-ship of these many sisters, whose homes are divided by hundreds of miles, was a most telling sermon on Grangerism, showing that the millennium of the farmer's wife is fast coming, if not already at hand. As proof that we are rising higher up the mount of civilization and refinement, was the deference shown to the few women who were bold enough to "speak in meeting." Strange the Grange should be the pivot by which woman should be given an inch, and through which they are likely to take that ell, of which, by proverb, we are forewarned. In our midst were Matrons whose absent husbands threw upon them the responsibility of their Grange representation, and gracefully, modestly and becomingly did these duties fall upon their untried shoulders.

Thursday forenoon, Masters and Matrons cast those tiny ballots which place the insignia of office upon the receiver of the majority. Directly followed installation, taking chairs of duty, and a few words of acceptance.

Business wound along slowly, but surely, and was sandwiched with pleasure, not the least of which was an invited ride upon the street cars, of which Mr. Mark McDonald is proprietor. Upon stoppage of cars, we were agreeably surprised by the throwing open of his home gates, thus inviting a Granger raid upon well-kept lawns, beautiful shrubbery, blooming, fragrant flowers and miniature fish ponds. Mr. McDonald and assistants led the van, and before we were satiated with lawn and floral beauties, the house door magically opened, and Mrs. McDonald was no doubt surprised that the *ladies* and *penates* of her household were to be chased from hall to parlor, drawing and bedroom, kitchen, pantry, bath-room and closets. After a few minutes' freedom in this restful summer residence, we are more than ever thankful that such homes of comfort and luxury are ever attainable by the co-operative forces of mind and labor, and that none are to the "manor born." And only about two hours were spent in this "useful recreation."

Santa Rosa, the capital town of Sonoma county, is a thriving, growing city of between 5,000 and 6,000 souls. Her churches, schools, colleges, pleasant private homes, fine roads for drives, and last, but not least, her guardian Granges, Santa Rosa and Bennett valley, make this a favored spot for the visiting Patron. I was one of a happy company who, behind a fine four-in-hand drove round the suburbs, down College avenue, through beautiful, quiet streets, over Santa Rosa Creek bridge, around the fair track, through long quiet lanes shaded with maples, locust, walnuts, eucalyptus, and the darker tinted evergreens so partial to our soil and climate; while in the dim, hazy distance stood the tall spires of the not very far-off redwoods, as sentinels over the softer-rounded hills, that melted into far-reaching dells and glades, where grew the vine and fig tree.

Viewing the many signs of growth and civilization around, I thought, is it possible this seat of culture and refinement is but 30 years of outgrowth of the Digger, elk, bear, wolf, screeching hyena, and wild-roving cattle? Yes, 'tis a glaring fact this flavorless, flowering wilderness of but three decades of time, has grown into a smiling luxuriant waste of vine and fruit, while the still blooming flowers of nature's wild are flavored with the spicy sweets of the cultured flora. Here Pomona sat upon her throne, and never did her Patrons have more tempting fruits and flowers to lure them on to agricultural heights.

From nature's sublimest height and deep, tangled wildwood to the city, which is man's, has miles of space been redone to moments of time. From the compass of this unbounded reach of hill and plain, whose fullness is the quiet restfulness of country life, the crowded, contracted, unless honest and lot of the city, filled with artificial wants, are the two phases of our life lease. In either phase, tenants of God's acres are we; and as the survival of the fittest seems to be a law of nature, are we not necessarily tending to a grand balance sheet where those elements of city and country, now seemingly at variance, will harmonize so that producers and consumers will go hand in hand in one common beaten track of mutual good to all, or greatest good to the greatest number?

Is not this the mission of our semi-monthly home meetings, as well as of our annual councils of Grangerism? And if our next edition of State Grange is prefaced by our old-timorous stalwarts, who are noted for being first in the field, firm, steadfast and watchful of the Patrons' rights, and in that untiring zeal which is sacrificing and successful, stay to sweep and clear up, then truly may we look to a grand future for our Grange firesides.

May our meeting in Stockton in the year 1882 be dimmed by no vacant chairs, saddened by not one less familiar face of "yo olden company," but rather may our Grange tide be swelled by the many waiting drops of humanity who are now pending between two opinions.

Martinez, Cal.

### Our New Grange Officers.

We continue our sketches of the newly-elected officers of the State Grange as follows:

Lady Assistant Steward—Nellie G. Babcock.

Sister Babcock was born in Cuyahoga Falls, Summit county, Ohio. Her maiden name was Nellie E. Guelleau. She came to California in 1862, and married Bro. H. C. Babcock soon after arrival. Herself and husband were charter members of Temescal Grange, which was organized, and continued for a season to meet, in Bro. Babcock's hall, at Temescal, about three miles north of Oakland. Sister Babcock has always been one of the most prompt and active members of the Grange. She served most of the time from 1873 until elected Secretary, about 12 months since, as Lady Assistant Steward. The able and satisfactory manner in which she has performed her duties in the subordinate Grange, is a guarantee that her labors in the higher field will be as well and acceptably performed.

Flora—Sister Lily G. Jasper.

The newly elected Flora of the State Grange is Lily G. Jasper, of Wheatland Grange. Sister Jasper was born in New Harmony, Indiana, May 21, 1851, and is the daughter of Capt. W.

P. Calloway. In April, 1852, her parents started for California, but before that long, toilsome journey was accomplished, her mother died of that terrible scourge, the cholera. Sister Jasper was married in 1873 to J. M. C. Jasper, present Master of Wheatland Grange, and an early settler in the well-known Bear River valley. She is a charter member of Wheatland Grange, held the office of Ceres at its organization, and at the last annual election was elected L. A. S. for the ensuing year.

At the recent meeting in Santa Rosa, Bro. Jasper being detained at home, Sister Jasper represented Wheatland Grange so handsomely and becomingly that, although at first a stranger in the State Grange, she was popularly chosen Flora by a vote complimentary to herself and to Wheatland Grange.

### Our Representative at the National Grange.

California's representative at the meeting of the National Grange will soon be on his way to Washington to carry the earnest greetings of the Pacific coast Patrons and assurances of their hearty sympathy and desire for the advancement of the good work in all parts of the land. Our new W. M., Bro. Daniel Flint, is a fit representative of California agriculture and enterprise. He has grown up with the State and is a leader in the lines of agriculture to which he has given his chief attention. He knows the State well and the people well, and can speak with authority on matters affecting our material interests. He has had large experience both in public and private affairs, and those who meet him in the councils of the National Grange will find him ready, confident and able. He will carry with him on his Eastern journey the warmest good wishes of the Patrons of California—and when his duties shall have been discharged we ask that his return be safe and speedy, for there is much needing his presence and earnest effort here. *Bon voyage.*

### Election of Officers.

SANTA ROSA GRANGE ELECTION, OCT. 22.—G. W. Davis, M.; John Adams, O.; E. W. Davis, L.; L. J. Hawkuue, S.; D. T. Hoskins, A. S.; Julius Ort, T.; S. T. Coulter, Secretary; A. J. Mills, G. K.; Ella Adams, Chaplain; Mrs. E. W. Davis, Pomona; Miss Nellie Coulter, Flora; Mrs. G. W. Davis, Ceres; Miss Emma Mills, L. A. S.

ELECTION OF COUNTY LECTURERS.—It has been suggested that a union meeting of Patrons in each county be held for electing a Lecturer for each county, to carry out the provisions of the late State Grange therefor. Such meetings themselves would be of much profit and pleasure to those attending, and would perhaps be the best way of securing a satisfactory selection. By providing for the frequent exchange of Lecturers from one county to another, in addition to the State Lecturer's work, the new system providing for County Lecturers may prove remarkably effective.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### LOS ANGELES.

CALIFORNIA COTTON.—In the window of the Commercial office is a cotton plant raised by Mr. J. W. Potts, on the hillside in this city. The seed was obtained from the Agricultural Department at Washington, and planted April 6, 1880. The first year it blossomed and balled, but the squirrels ate the bolls. The blossoms continued till January, 1881. In the spring it renewed blooming and 47 bolls were observed on a single plant, which is now green and growing. The cotton is of excellent quality, being of good medium length of fine fiber.

#### SANTA BARBARA.

EDITORS PRESS:—Our harvest is nearly completed. Taken altogether we have little or no reason to complain. First in importance are our Lima beans, which are a fair crop of fine quality, most of which are sold at good prices from 2½ to 6 cents per pound, purchasers assuming freight and risk on delivery at the wharf, which is equivalent to one-half cent more on the pound to place them in San Francisco. Some few have refused an offer of 6 cents, perhaps to take much less when sold, for 6 cents does not come every year for beans of any sort nor produce of any kind. Several of the farmers will sell over \$100 worth of beans per acre at 5½ to 6 cents per pound. Good returns. Few other beans are grown this year. Next year we expect to see Lima and other white beans planted everywhere from the coast to mountain tops. Look out for plenty of beans at low prices and fancy growing. Corn is good, but not a large crop raised. Very little barley is threshed. Hay not so plenty as the two past seasons, but better prices all around for produce of all kinds. There are not as many potatoes as usual. Fruit is a good crop, but prices low considering demand. Farmers generally feel well, paying debts, cancelling mortgages, etc., which indicate better times.—O. N. CADWELL, Carpinteria, Cal.



## SONOMA.

ANGORAS.—Napa Reporter, Oct. 22: Mr. John P. Lang, who has a ranch in Sonoma county, near the line of Sonoma and Napa, southwest of Calistoga, was in Napa Thursday, and called at the Reporter office. He informs us that he is engaged in raising Angora goats, having about 275 on his ranch, and thinks they will prove more profitable than sheep, being much harder and living where sheep could not. If, said he, there was capital invested for the manufacture of Angora wool, the raising of the Angora goat would become a source of great profit to all who have mountain ranches. He informs us that Capt. Cralle, a neighbor of his, has 600 of the animals on his ranch. The milk and cheese product of these animals are considered a very healthy diet.

SHEARING AND WOOL.—Healdsburg Flag, Oct. 20: In an interview with a member of one of the largest shearing gangs, one that has sheared nearly 10,000 fleeces this clip, we learn that the wool is unusually clean but light. He accounts for the cleanliness in part by referring to the late June rains, which probably knocked many seeds and burs down upon the ground that would otherwise have attached themselves to the sheep. The lightness is owing to the cool autumn weather preventing the grease from rising; and, again, the fall rains that have already occurred have washed much of the oil out of the wool. The staple is nice and long. Our informant is a member of the following team: John Chitwood, Gabe Thompson, Monroe Chitwood, Wm. Henry and Edwin Brooks and Jas. Patrick. They sheared approximately as follows: Hi. Briggs, 1,400 fleeces; Hulman, on the Slusser place near Frank Bidwell's, 900; Jos. Alexander, 600; Calvin Holmes, 2,108; H. M. Keyes, 400; John Bidwell, 500; C. W. Mathews, 350; Silas Rodgers, 550; L. C. Faught and Orriu Shearer, 300; Mrs. Trimble, 200; Jesse Grant, 1,300; John Grant, 700. Total, 9,308. These shearers receive six to seven cents a fleece for their work, and they remove from 60 to 70 fleeces per day each, thus making large wages while the season lasts. The fleeces this fall ran from two to four lbs., four lbs. being the largest average of any flock. Some of the bucks shear as high as 12 lbs. The fall clip is generally lighter than the spring clip, owing to the weather being cooler during the shearing time.

THE WOOL SALE.—At the big wool combination sale at Cloverdale last week, according to the *Reveille*, little or no wool changed hands. From 15 cts. to 19 cts. was offered, but it was refused almost universally. There are about 1,000 sacks stored in town, making something like 325,000 lbs., which at its present value, represents over \$60,000. The sale has again been set for the 11th day of November, when more satisfactory prices are looked for. Saml. Cohn of Healdsburg was the only purchaser, and he secured 200 bales at 16 to 19 cts. If the wool combination would hold sales in Healdsburg they would find abundance of competition, and no doubt secure better prices.

## SAN BENITO.

MOVING TO THE SILO.—Hollister Advance: E. A. Davison, of Gilroy, has leased John W. Green's ranch, near here, and will move his dairy to that place in a few weeks. He has about 275 milch cows. We understand Mr. Davison does not intend to locate here permanently; his object is simply to bridge over the dry feeding term by having his stock near the ensilage feed, of which Mr. Green has about 500 tons. Dairy houses are to be constructed and large quantities of cheese shipped from this depot during the winter months.

## SANTA CLARA.

CLOSING THE SEASON.—The San Jose Fruit Packing Company commenced work May 1, 1881, and closed Saturday night, Oct. 15th, working five months and a half. During that time they have put up 1,200,000 cans of fruit and jellies. This is by far the largest work the factory has ever done. Last season they put up 1,000,000 cans. After the work of Saturday was completed a banquet was given by the proprietors to the work-hands.

## TULARE.

TULARE CITY COUNTRY.—Delta, Oct. 20: No portion of Tulare county has developed more steadily and solidly, during the last 12 months, than Tulare City and its surrounding country. Settled nine years ago, that is, in the summer of 1872, when the Southern Pacific railroad first reached that point, it, like most parts of our county, has had a varied experience. After a rapid growth for a time, a series of dry, unproductive years, when little provision had been made for irrigation, greatly depressed trade and all improvements. But the two last wet seasons, and increased facilities for irrigation from Packwood creek and other streams into which the Kaweah river divides after reaching our plains, have brought that naturally fertile region, in common with all parts of Tulare county, paying grain crops, and abundant pasturage for stock raising, to which latter branch of agriculture our whole district is peculiarly well adapted. Consequently, prosperity has smiled for a year past in an unprecedented degree on the industrious workers of our sister town and its surrounding ranches—a prosperity richly deserved by their grit and perseverance through a series of discouraging years. An unwonted demand for land has arisen, and in 12 months upwards of 40,000 acres have been sold within from 5 to 12 miles of Tulare City for grain raising, fruit raising, viticulture, and alfalfa pasture. These lands have been bought at prices ranging from \$6 to \$20 per acre, and

small choice tracts at even higher figures—both lands held by private owners and by the railroad company. Lands that men would gladly have taken \$5 an acre for three years ago, are held at \$20 per acre, and some have changed hands at that figure. Twice as much wheat has been sown in that district the past season as ever before, and the yield was never so good. The general yield of wheat this year has varied from six to 10 sacks per acre, and some crops, on land well irrigated last year, have threshed out as much as 15 sacks per acre, the sacks generally averaging 140 lbs. each. In bushels this will range from 14 to 35 per acre. And it is plump, first-class wheat. With sufficient moisture the lands around Tulare City are proved, by such seasons as this, to be as productive as any lands in our valley. The more sandy lands are found to require more water for successful irrigation than the stiffer and darker soils. The black heavy soil, a stiff loam formed largely of vegetable mold, is found to retain moisture so well, if deeply plowed and well pulverized, that fruit and shade trees well planted there, require comparatively little irrigation. A large part of these lands is well covered with oak timber.

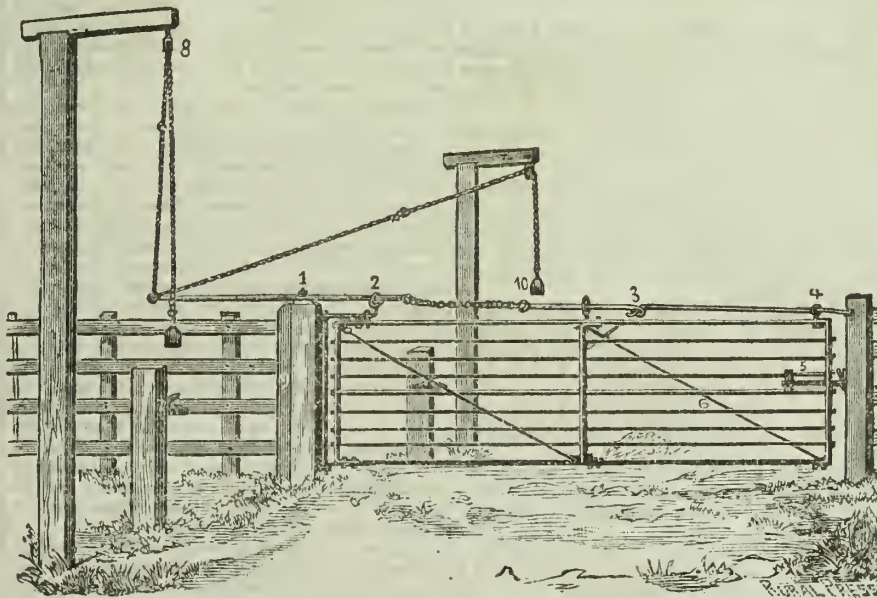
## TULARE.

DITCH CLEANING.—Delta: Next to the necessity of having ditches for irrigation, is the importance of freeing their channels occasionally from sand and other obstructions. A work of so novel a character in this line is now being done on the People's Consolidated ditch, which conveys part of the water of the Kaweah to the productive lands around Farmersville, that it is well worthy of special mention. The work of cleaning out a badly choked portion of this ditch is being done by Mr. Stephen Barton, according to a plan of his own. By the application of a principle that is well known, but that has not before been applied in re-opening our ditches, he accomplishes this ob-

therefore the growth of two and a half months. They were large, smooth, and as fine flavored as could be desired. The turnips were of too rapid growth and too large; the fault of early sowing. This experiment is demonstrative of a fact of vital importance to the future development of the country. It has been a prevailing opinion, and in fact yet is, that there can be nothing grown in the way of grain and vegetables without irrigation, and that in consequence all our mesa lands and upland valleys were worthless for agricultural purposes. This test demonstrates the fallacy of this opinion. Where such potatoes and turnips will grow and mature, any of the cereals and hardy vegetables will do likewise. Near the foot of and skirting every mountain range in southeastern Arizona, are rich valleys nestled in among the outlying spurs and rolling foothills, as also warm sunny slopes of deep rich soil, free from rocks and obnoxious shrubs, where grass grows in great profusion and where there are, every year, heavy and timely rainfalls, that will be made veritable garden spots, now that it has been demonstrated that the duration of the rainy season is sufficiently prolonged for the maturity of cultivated crops. The eastern portion of Cochise county will some day be thickly populated with honest farmers. It is there are located the two finest valleys in Arizona—the Sulphur Spring and San Simon, that for expanse and fertility remind one of the broad prairies of the Western States. The valleys are capable of supporting a population equal to any other agricultural country, and some day will be seen upon every quarter section a smiling homestead after the style of other farming States.

## A New Farm Gate.

The engraving on this page represents a new



CAMPTON'S CHAMPION FARM GATE.

ject readily and rapidly, unaided except by the natural force of water. We mean that, from his acquaintance with hydraulics, gained in part by former mining experience, he, with no labor but his own, so confines the water in its channel that its natural flow completes the work of cutting out and removing the deposited sand in a comparatively short time. The case in hand is a peculiarly difficult one. The portion of the ditch he is now operating upon is in a swamp, where there is a very dense undergrowth of willows, so that in places you cannot see four ft. ahead. He has contracted to thoroughly clean out 1,500 yards of this for \$200. This is all filled with sand, but 800 yards of it is not only filled higher than the banks, but several ft. higher than the surrounding country, within a half mile of it. Most of this deposit has been made within the last two years. The means Mr. Barton employs, besides the force of water, are slight brush jetties, and suitable selection of places, at convenient intervals, to deposit the surplus sand. By this process, in 22 days a channel has been washed out half a mile long, 2½ ft. deep at upper end, 1½ ft. deep at lower end, and averaging 20 ft. in width. The work already done fully demonstrates the efficiency of the plan, even on the unfavorable ground, while the cost is but a small part of what it would be to clear away the heavy growth and clean the ditch with plows and scrapers. It certainly involves important principles that may well be applied in other ditches, and may even be successfully used for the best disposition of the slickens in the streams of Sacramento valley.

## ARIZONA.

AGRICULTURE UPON THE MESAS WITHOUT IRRIGATION.—Tombstone Epitaph: Yesterday the agricultural editor of the *Epitaph* was made happy by the presentation to him of samples of Early Rose potatoes and flat turnips, grown out northeast of town upon the mesa, by Messrs. Young and Bobier. These productions would do credit to any of the California valleys or the prairie States east of the Rockies. The potatoes were planted the first of August, and were

farm gate invented by Alfonso P. Campton, of Rohnerville, Humboldt county, California, and which is taking well wherever introduced. The principal features of the invention is the horizontal lever hinge pivoted on top of the upper rail of the gate, this lever hinge being provided with an eye or loop, through which is passed the front end of a horizontal lever, which is pivoted on the top of the gate-hinge post, and has its forward end attached to a sliding latch. Suitable cords are attached to this horizontal lever, and these loose ends led to the proper position to be grasped by a person on horseback or in a vehicle. The operator, on horseback or in a vehicle, approaching the gate, pulls the cord marked 10 in the engraving, thereby moving the lever, 1, laterally on its pivot. This lever, 1, then pressing sidewise in the eye or loop, 2, moves the hinge of which this eye or loop forms part on its pivot, with the effect of drawing taut on the chain, whereby the gate is inclined from its vertical plane and raised on its lower hinge or pintle, and by the same means the latch, 3, is drawn from the catch, 4, while the swing of the same gate also liberates the catch, 5. A continuous pull upon the cord, 10, throws the gate open against one of the catches, 7. After passing through the gateway the operator will pull the opposite cord with the effect of releasing the gate from the catch and restoring it to its primary condition. The cords are led through pulleys, 8, on suitable posts so as to be in convenient position.

The latch used on this gate is such that it cannot be raised by cattle, hogs, or other animals. The corner post, 9, is firmly planted in the ground, so as to sustain the gate without allowing it to sag. The gate is preferably made of iron. This gate took the first premium this year at the California State fair, the Stockton fair, the San Jose fair and the Ninth District fair, in Humboldt county. The inventor desires to sell State and county rights. Quite a number of gates of this pattern are in use, some of them being even sent to Mexico. Mr. Campton calls it the "Champion gate."

## News in Brief.

THE rainfall for October was .54 of an inch. CALVIN BROWN, civil engineer of the stone dock at Mare island, has been retired.

RAILROAD talk is agitating Winters. The people hope for an extension of the line to Lake county.

THE winnings of the American horses in England and France this year amount to about £30,000.

THE formal transfer of the North Pacific Coast railroad to its new owners took place on Monday last.

ICE from Lake Ladoga has flowed into the river Neva, Russia. Steamboat service has been suspended, and all the cauals are frozen.

IT is rumored that parties have leased the Watsonville beach, and propose expending \$15,000 in converting the same into a seaside and bathing resort.

BANK COMMISSIONER COLEMAN examined the Modesto bank, at Modesto, on Wednesday last, and found it solvent. The liabilities and assets are \$495,585.88.

TWENTY deep water vessels arrived in this port one day this week. There are 143 deep water vessels now in harbor. They are loading at the rate of two each day.

THE taxable property of Esmeralda county, Nev., as shown by the assessment roll, amounts to \$1,214,626.98. The tax this year foots up \$35,831.51.

THE question of running the New York elevated trains by electricity is under consideration. It is believed that a great saving can be effected by this method.

THE Mexican government has contracted with Mier Celes & Co. for the drainage of the Valley and City of Mexico for \$9,000,000. The company is composed entirely of Mexicans.

THE Land Leaguers in Paris still effect the sincerest confidence in the eventual triumph of their cause, though the turn which things have taken in the last few days might depress the most cheerful of them.

ON Friday of last week, at the upper Salmon Creek mill, a load of 10 logs, containing 12,500 ft. of lumber, was hauled by Homer Barton's 10 ox team, being the largest load ever hauled by a team of 10 oxen in Mendocino county.

NATIONAL CITY, San Diego county, on petition of its citizens, has been incorporated as a town by the Supervisors of that county. An election of five Trustees, a Town Marshal and Recorder has been ordered for November 5th.

THE State Central Committee of the Workmen's party of California has given up the ghost, its last act being the division of a balance of \$80 remaining in the treasury among the members to be distributed in charity.

THIS will be the greatest year of railroad building in the history of this country. The year 1872 was a wonderful one in this respect, having witnessed the laying of 5,147 miles of track, but to the present time in 1881, with 2 months still remaining, 5,340 miles have been laid.

GEN. DRUM, in his annual report to the general of the army, says: The losses of the army during the year were: Deaths, 248; discharges, 6,564; desertions, 2,361. Total, 9,173. Number of recruits assigned, 3,805. This shows an increase of 1,260 discharges, 13 deaths and 318 desertions.

A STATION is to be established at the Volcano House, on Kilanea, which will be in communication with the United States Meteorological Department, and next year a proper record is to be kept of the movements of the volcano, and a series of observations of volcanic phenomena will be undertaken.

FOR some time past it has been whispered that the English government intends to sell Gibraltar to Spain, and the story seems to have some foundation. It is said that the subject has been discussed in the Cabinet and that the Premier's proposal met with no very decided opposition from the colleagues.

THE final location of the Northern Pacific has been made from the north side of Lake Pen d'Oreille to a point 40 miles above the mouth of the river. The preliminary lines run to Thompson's river, 100 miles west of the Missoula. There is considerable snow now, but a large force will be kept at work all winter.

STOREKEEPERS are generally displaying notices calling attention to the value placed on mutilated coin by the Treasury Department, and stating that no mutilated silver will be received, except upon the basis of value fixed by the Secretary of the Treasury, as follows: One dollar, 65 cents; half dollars, 35 cents; quarters, 15 cents; dimes, 5 cents; half dime, 4 cents.

## Choice Vineyard and Orchard Lands.

There is a choice piece of land of 40 acres, within one-half mile of a shipping station near Winters, Yolo county, which can be bought at a reasonable price, considering its excellent location, etc. Winters is generally known as one of the earliest spots for fruit and vegetables in the State. This is illustrated by the fact that this year Briggs Bros., of Winters, had one-third of their raisin crop in market before any other maker had shipped any. The advantages of the Winters region in soil, climate and growth of plant and tree are fully demonstrated. The piece of 40 acres which is now for sale has 23 acres of vines two years old, Muscat of Alexandria. Briggs Bros. had vines coming three years old which gave them 25 boxes of raisins to the acre this year.

For further information concerning the land offered for sale, address "Winters," care PACIFIC RURAL PRESS, San Francisco.





### The Farmer.

(Written for RURAL PRESS by R. SCHULTZ, M. D.)

I did at times sing many songs,  
Have praised, have loved and censured.  
All wore the garb of foreign tongues,  
No English verse I ventured.

With this my first, an English song,  
I sing the praise of farming.  
For city-life I never long,  
But you may find it charming.

The farmer is a king, a lord,  
His rancho is his empire;  
Here rules supreme his will and word,  
He feels no grudge, no ire.

The lawyer holds behind the hill,  
Must hide his heart's dictation;  
The dandy fears the tailor's bill,  
The tailor's God is Fashion.

The merchant for the sake of gain  
Must often grin and flatter;  
The gambler risks with hope in vain—  
Beware of city-matter!

The farmer deals direct with God,  
Who sends his fruitful thunders,  
Provides his fields and garden spot  
With rain and sunshine wonders.

He does not linger left or right,  
Straight is his word and furrow.  
He does his part—his heart is bright  
And God will help to-morrow.

The farmer is a busy bee,  
And harvests what he plants.  
He knows but one philosophy,  
The one, to be contented.

Shasta Co., Cal.

### Aunt Serena's Trials.

I was sittin' one cold evenin', a spell ago, meditati' and toein' of a stockin' that I was knittin' for a nephew of mine when I beerd sumbody rap. It kinder startled me at fust, for I'm a poor, lorn crectur, and there is so many tramps pokin' round that uatterly I felt sort of skittish. Howsumever, I took the kerosens lamp and went to the door—and behold! there was the sauns nephew of mine—Robert Grimes—that I had been knittin' for, and a grand-lookin' gal with him.

I was real tickled to see Robert. I bad the bringin' up of that boy, mostly; I washed his face and combed his hair ev'ry mornin' for about 19 years, and spanked him when occasion required. I shook hands with him, and then he said:

"Allow me to introduce my wife—Anna—Aunt Serena."

Sakes alive! I was completely beat. The idea of that high-falutin' thing bein' my niece. Why, she looked as if she was Queen Victry, at the very least!

I axed 'em to cum in, and then I see that her dress was dragging about half a yard on the floor. Thinks I, now sumbody has stepped on the back breidh and ripped out the gathars. It's too bad! But before I had time to speak about it, she gavs it a little swish and sot down, and then I made up my mind that them are gathars was ripped out purpuss.

I axed 'em if they bad ben to supper, and they sed no. They had been travelin' ever sence mornin'. So I made a rousin' cup of tea, and sot out the tabs. I put on a plate of cold beans, caus sumtimes people want suthin' hearty to commence on when they ben travelin'. I sot on a plate of pickles, sum bred, cheeso and donuts, and ons of my best punkin pies. Then I told 'em to set up and have some supper.

The minit that gai got site of the table, she throwed up both hands and yelled:

"Baked beans! Oh, horror! Robert, do hand me my vinegarrett—I shall surely faint!"

I sprung right up, and says I: "I don't know anythin' about your vinegar-ett, but here's smn good, strong cider vinegar; p'raps that'll help ye. Want a swaller on't?" and I held the vinegar bottle right to her mouth. But she pushed it away, and Robert said:

"I'm sorry, aunt, but my wife is so extremely delicate that she could never bear the sight of baked beans!"

"Fudge and fiddlesticks! Delekit!" sed I; "more likely she's had to liv on 'em to hum till she got sick on 'em! I'll carry the things off—then p'raps she'll revive!"

Just then she spied the pickles, and said to Robert:

"What are those green things lying in the dish before you?"

"Them's cowcumber pickils, you ninny!" sed I, for I begun to think she didn't know nothin'.

"Cow what?" said she.

"She means cucumbers," said Robert, "you havo eaten cucumbers, haven't you, dear?"

"Oh, yes," said she; "but really, until this moment, I always imagined they gsw in slices!"

"Where on airth havs you ben, and what havo you ben doin'," sed I, "that you don't know any more?"

"I attended a boarding-school till my education was finished, and mamma never would allow me to come near the kitchen. But I

have dons lots of worsted work; I'll make you the loveliest sofa pillow, some day, with a dog on it."

"Young woman," sed I, "I bavs got a piller onto my sofa in the parlor; it is made of gooss feathers; it's a span clean piller case, and I won't have no nasty dog a settin' on it—I tell you."

"She means a worsted dog on canvas, aunt," said Robert.

"Waal, I don't want eny of them are things. I don't suppose you could git a meal of vitals, could ye?" sed I.

"Oh, no!" sed she, in a borried way.

"Waal, what be you goin' to do, now you've got married?" sed I.

"Board, of course, like other people, my dear annt."

"Waal, like enough if Robert's woll and has a big sal'ry, you'll manags to get along. But what are ye going to do if he should be sick?"

"Ob, I'm one of the cheerful kind; I never borrow troubles. But, really, aunt, I should like to take a few lessons in cooking of you. It would be such fun."

I looked at her as she sot there with that long, silk gown on, big gold things shakin' in both ears, gold bracclets, a long chain with a watch on the end of it, and curls and braids and frizzles a whiskin' ev'ry way, and I sed, calmly: "I guess you'll bev to take off sum of them fixin's, and get into a sensible caliker dress with a big apen, before I try to larn ys enythin'; I ixpect it'll be bard work, enyways; it's rather discouragin' tryin' to beat enythin' into a body's head where the brains are as faw and scatterin' as yours appears to be. Howsumever, for Robert's sake, I'll try."

And so I did, and of all the trials I ever had that gal was the wust. Why, she didn't know nigh so much as I thought she did at fust, and that was useless.

The fust time I let her make the tea, she put in, as near as I can calkerlate, about half a pound of my best green tea and then filled the teapot with water. You can imagine the result.

Ons day I bad a lot of carpit rags I wanted to sew, and I thought I'd let her get dinner alone. I told her I thought we better bev sum biled rics for toppin' off, cause that was healthy, and Robert was powerful foud of it. I told her she mite jst run down to the store and git sum. I told her to put it on airly, so as to let it cook slow.

I got so engaged in carpit rags that I didn't go nigh the kitchen for onct all the mornin'.

About half past 'leven, she come to the settin' room door, and said she wisbed I'd cum out and see about that rice. She didn't know what to do with it.

So I went out—and mussy sakes! the sight was enough to disgust a starving savage! There was my kittles that would bold a painful, on the stovs runnin' over with rice, and she bad got ev'ry bowl and tin dish in the house full of biled rics. Sbs sed the stuff kept comin' up, and comin' up, and she didn't know what to do with it.

I looked at her and sed, as calmly as I could: "How mucb rics did you put into that kittie?"

"I got four quarts, aunt, and I put it all in," says she.

I didn't say enythin' more; I could not. We fed the hog on biled rice that day, and I told Robert, kinder confidentially, that I had a strong mind to make a good mustard plaster, and put it right on top of that gal's head, and mebbe, if she bad eny grains of common sense, 'twould sort of draw 'em together, for I was about sick tryin' to make enythin' of her.

One Saturday mornin', jst as I had got redly to go to bakin', one of the neighbors cum in, and sed I must cum right over to his house, for ons of the young ones had got the croop, or hoopin' coff or suthin'. I didn't know bow to leave, but Anna sed:

"I'll make the pies, auntie; I've seen you make them so many times. I know I can."

Waal, thinks I to myself, I'll let her try. I told her where things was as I was gettin' redly; told her I shortened my pie crust with lard, then mixed it with sour milk, cause I thought it was softer that way. I told her the lard was in the buttery, cut up in cbunks on a plate.

Waal, I went off, and didn't git home till most supper time. She bad got things in toler'ble order, considerin'. I kinder felt encouraged; thought mebbe I shouldn't need the mustard plaster, arter all.

She had got four pies made. They did look sorter decent, and I put one on the table for supper.

Just as soon as I tasted it, I knew suthin' wan't right. The fust mouthful made me sick.

"Anna Grimes," sed I, "for conscience sake, what havo you put into these pies?"

"Why, jst what you did, annt—I put in most a whole square chunk of lard, and I had to cut it all up into little pieces. It wouldn't dissolve."

A thought struck me all of a sudden, and I riz right up and went to the buttery, and as true as you live, that sap head had shortened her pie crust with hard soap. I bad jst bought a dozen bars of hard soap, and put it ou the bottom shelf in the buttery, and she had put most a pound of it into them pies.

I gave right up that nite. I told her firmly that the best thing she could do was to let her self out to smn respectable milliner or dress-maker, to stand in the winder for to hang new bunnits and gownds onto.

I felt that I could stand a bushel of biled rics at a time, and green-tea puddin', but when

it cum to short'nin' pis crust with hard soap, 'twas time to take a decided stand. It was a leetle more'n I could swaller.

I hev only jst this remark to make: If there's any gal who reads this bers paper, that thinks cowcumbers grows in slices, or shortens their pie crust with hard soap, they need not set their caps for any of my nephews. I'll brake up this match jst as sure as my name's Serena Wiggins! I sartingly will!

### Sabbath Morning Thoughts.

EDITORS PRESS:—This is the Sabbath morn. Beautiful is Nature in her serene and yellow leaf.

The sun shines with a spring-time splendor, the glass registers 76° in the shade. While the city church bells are ringing a welcome to worship God in temples of stone, we, in the country, far removed from such influences, must be contented to worship our Maker under the grandest dome conceivable. Smiling Nature responds to the silent worship of the soul, and we feel strengthened by contemplating the work of Infinite wisdom. The quiet of this Sunday morning is soothing to the senses after the labors of the week. Alone, we may enjoy this peace.

A man may be alone and unhappy in the crowded cathedral or busy streets. It is condition which mars or makes the true worshipper, and not profession. Who could look upon nature on such a morn as this, without worshipping nature's God, whose tempests and storms are only purifying? The song of birds is a requiem of praise for the blessings of life and glad sunshine.

The summer is past. The fall of the leaf proclaims this near approach of winter. The crops are all secured and housed, or on their errand of mercy to hungry Europe. The garden is denuded of its golden fruits. Death is approaching vegetation. The frost is nipping and bleaching tree and bush, and soon the floods will cleanse our rivers, refresh the barren waste, preparing nature for a renewal of spring-time, seed-time and harvest.

We never question but what nature will just be as abundant in the future as in the past. "Paul may plant and Apollos may water, but God giveth the increase." If then we lean in confidence for the increase in a material point of view, why should we not have the same confidence in a spiritual outpouring for good things rendered, without having a visible evidence of that fact? We are told to "cast our bread upon the waters, and it will return after many days." Again: "The poor ye have always with you." Is not this lesson grand, teaching us to look around and see that no suffering exists through the coming winter. That God has blessed our country is apparent by the quantities of good things on hand and being shipped to foreign ports. More than enough has been vouchsafed to supply all natural wants of man, woman and child of the State. Shall we then feel satisfied with our own abundances, while want and misery may be our next-door neighbors? "Unto whom much is given, much shall he required."

I know your sheet penetrates where abundance liberality and hospitality, and where patience is sometimes taxed to its utmost in supplying the hungry tramp. But they must never weary in well-doing while abundance blesses their storehouse; and their spiritual natures will be fed by the riches of Heaven's choicest gifts.

Moralizing on Sunday morning is natural to the reflective mind. We may speak of God and goodness without touching on man's conditions and prejudices. There is a shrine where all may enjoy the communion of what is good belonging to the inner life of man, and it is at that shrine I kneel to-day, believing that a kind word may be spoken in season, without leaving a shadow to dim its luster. Our beautiful Sabbath morn may be typical of that eternal morn, where the sun goeth not down to a darkened wintry night, the glory of God being the light thereof.

JOHN TAYLOR.

Chinese Camp, Oct. 23, 1881.

### New California.

The California of to-day is so changed from the California of 15 years ago, that those who were familiar with it then and who have been absent, would scarcely recognize it. It is in some extent unfortunate that in any part of the world, and even in some localities in the eastern part of our own country, the prevailing opinion of California is based upon the stories and romances founded upon events which transpired when the State was little more than a huge mining camp. While some people still think that we are all following the life of border outlaws, others still cling to the idea that a very inferior grade of civilization prevails. As far as statistics can prove anything in such matters, we now have nothing to lose by comparison with the most refined in the sisterhood of States. Refined and elegant homes are no longer confined to a few localities, but can be found in every nook and corner in the State. The development of agriculture has wrought the great transformation which is now to be observed. It has changed the habits of the people; it has encouraged those habits of thrift and economy which never fail to make people fairly affluent. Thousands of

acres of land, which until recently was a desert waste, are now covered with orchards and vineyards. What used to be regarded as dusty and sterile plains, are yielding generous harvests of wheat. There are among us thousands of men who cannot be called old, who once believed that California would never be able to raise the food which would be needed by her population, but now she is supplying no small proportion of the cereals which are sent abroad for the use of foreign countries. But few States are ahead of us in the list of wheat producers. We head the list of barley-producing States, and our domain has come to be looked upon as the land of the vine, the orange and the lemon. Nobody has attempted to closely approximate the capacity of the State for the production of these staple articles of commerce. It seems to be almost limitless.

New California has now the full benefit of all of the great agencies which are promotive of the best civilization, and which are the best adapted to promote the general happiness of mankind. The capitalists of the great moneyed centers of the country are now competing with each other in the race to determine who shall do the greatest share of the railway business of the Pacific coast. We have been brought into full harmony with the rest of the Union; we have cast aside the provincialism which so long prevailed and are making use of all the instruments of progress which are anywhere known. We are beginning to realize upon the advantages of location and climate which we possess and are discovering that we are surrounded by all of the elements which are needed to create an empire as great as any of which we have any account in history.—Oakland Times.

THE PARALUNE.—The latest freak of fashion is the paralune. Visitors at the French beaches during the last summer were surprised at seeing many ladies while wandering in little groups on the sands under the moonlight carrying their parasols, not rolled up and used as walking canes, but expanded over their heads as though to protect them from the rays of the moon. Great was the surprise to learn that they were not really parasols, but paralunes. The paralune, as its name indicates, performs a similar office to that of the parasol—the one guards against the sun, the other against the moon. The inventors of the paralune assert the effect of the moon's rays on the complexion is very disastrous. The plumpest faces, they say, will grow thin and the delicate peach bloom of the cheek will pale and become yellow when long subjected to the action of the moon's rays. Not alone will the face lose color, it is said, but it will also become dry and shriveled. The only device to prevent this is, of course, the paralune. The paraluns resemble the common parasol, except that it is covered with a thin, transparent silk gauze of the color best suited to the wearer's complexion. Those most commonly used are pink, as the color lends a soft tint to the complexion, which loses its natural color under the pale light of the moon. The framework is light, as a wind has not the same fatal effect on the gauze as on a solid silk web. The handles are light and delicately carved. The casings are generally made of silk, similar in color to that of the paralune. They were high priced last season, as but very few were made.

SHORT DRESSES.—The short dress is still in the ascendant, and it depends upon women themselves to keep it so, or, at least, so well sustained and protected that any woman can wear it without feeling herself remarkable. At present, the short dress, as before remarked, is in the ascendant. The majority of evening dresses of silk, satin and brocades worn by young girls are cut short, and spring walking and visiting dresses of the richest material clear the ground so that they can be worn with comparative comfort. Unlike the mode of some 10 or 15 years ago, which ran into all sorts of eccentricities, and made those who indulged in it look like mountebanks, the style of to-day is, or may be, modest, sensible and convenient. It is not too short, and it is most fashionable when it is simple and free from overloading. Can we not keep it—that is, in its essentials? There ought to be women enough now of thought and intelligence to adhere to a single idea which is undeniably good—even essential to health, economy and cleanliness—and which offers no restriction, except where restriction is necessary to save waste, and the attributes become every conscientious woman.—Jennie June.

SCULPTURING WITH STONE IMPLEMENTS.—It has been held by some archaeologists that the ancient sculpturings could not have been cut without the use of iron tools; but others have of late years succeeded in reproducing similar markings on granite slabs, using solely stone implements; and in doing so they found that diorites and other such tough stones cut the granite better than flint. This corresponds with the practice of the stonecutters of the present time, whose steel tools for cutting granite are of a much softer temper than those they use for sandstone. The great sculptured stone of Montezuma, in Mexico, is a striking proof of the extent to which granite can be sculptured with stone implements. Gama, in his work describing this stone, states that 10,000 Indians were employed in transporting it to the City of Mexico, where it was sculptured by 30 workmen with stone axes.



## Chaff.

"What a beautiful thing, my dear, is a rosy chaski!" "Yes, husband, but how great the contrast when the blush settles on the nose."

In Russia "hello" is rendered "Tzikanfit-kranjanski," hence the telephones can never be introduced into that country.

A LITTLE boy, disputing with his sister on some subject, exclaimed: "It's true, for ma says so; and if ma says so, it is so, whether it is so or not!"

"LONGFELLOW wears his frock coat buttoned to the chin." The question now is, who sewed that button on the poet's facial extremity.

A NEW book asks: "Can she atone?" A more important question to the marrying men is: "Can she bake?" or "can she sew on shirt buttons?"

A NEWLY-ACQUIRED HABIT.—"Look heah, Uncle Mose, you fooled me wid dat ar horse I buyed from yer last week. He jest drapt dead in his tracks." "He nebbar drapt dead in his tracks or anywhar else as long as I had him, goin' on 20 years."

A SCOTCH preacher, who found his congregation going to sleep one Sunday before he had fairly begun, suddenly stopped and exclaimed: "Brethren, its nas fair. Wait till I get along, and then, if I'm nae worth listening to, gang to sleep; but dinna gang before I get commenced. Gie a mon a chance."

## To Young Women.

O, young woman, cultivate your mind, shun frivolous reading, poor, weak, silly books, sentimental books. Read for knowledge some hard book which demands attention, memory, thought; master one good book, no matter what; geography, arithmetic, astronomy, history, what you will; but study it and know it well; understand one thing certainly.

Read also for beauty, what fills the imagination, fills it with handsome shapes and wakens noble thoughts. There are poets, our own and those abroad, who can do this; some of the present generation, some long passed by. Read also for the reason—something that gives you general laws, universal views. Read for inspiration. You may be poor and have little time, or rich and have much. Still, there is one humanity and one womanhood in the idle and in the active, in the rich and in the poor, and the same noble book will speak to each and to all; and so is America favored and blessed that the poorest, the most active, can find the book, and the time also to read it, if she will.

Next, reverence your own moral instincts. Ask your conscience, is it right, as well as your hearts, is it kind? Man is more likely to go astray through self-love; you, through the opposite path. Keep your individuality sacred. Surrender not to priest, nor husband, nor father, nor mother, nor lover, nor child. Look to your own moral sense for approbation, not to man nor to woman, but—

As that pronounced lastly on each deed  
Of so much praise, in heaven expect your meed.

Cultivate religious faculty, develop the instinctive religious feelings; have reverence for God. Let it light your conscience and give you a general moral rule whereby to find your path. Let it beautify your intellect and stimulate your understanding, imagination, reason. Let it correct that poor temptation to frivolity, peevishness, vanity, discontent.

Remember that all the little every-day duties of woman's life are just as much means to help you as the rougher discipline of man is to aid him in his course. The little cares, sorrows and joys, the vexations of the household, the perplexities of those careful and troubled about many things, these are elements to form the noble woman; only she must have a noble idea, a noble will.

So the artist takes the little chips of many colored stone and constructs his grand mosaic of creative skill, a queen, a Madonna, an angel, and the dead stone becomes a living oracle, a moral prophecy of nobleness to come. Grandeur of character is not easy to young women or men. God be thanked, it is possible to both! And one noble woman, she is parent of many more; in her spiritual image and likeness she shall create women and men to the end of time! Aye, people eternity with noble souls, beautiful in life, and welcome unto God.—*Theodore Parker.*

LUMINOUS METEORS.—At the recent session of the British Association, at York, Prof. A. S. Herschel read the report of the committee on luminous meteors, in the course of which he referred to the aerolite which fell near Middlesborough this year, and embedded itself to a considerable depth in the earth. It was estimated that it struck the earth with a velocity of 402 ft. per second. There was no doubt it fell at least 40 miles. Sir William Thomson said the great majority of meteoric stones, instead of falling to the earth in a solid mass like the one produced, generally got shivered to pieces in the air through becoming so intensely hot. Prof. Herschel observed that the stone in question had not been exposed to any great heat

LONG TELEPHONE CIRCUIT.—The telephone has been successfully worked over a distance of 350 miles between Buffalo and Patterson in New York and New Jersey States. The voice could be recognized, but owing to the sputtering and snapping caused by induction (the wires were close to the ordinary lines), the words could not be distinguished.

## Young Folks' Column.

## A Sweet Brier Rose.

Once upon a time there was a young girl whose name was Fatima. The home folks called her by her pet name, Fay. This young girl was fair of face, graceful in manner and carriage, and, what is better than either, was possessed of a good temper. It was not strange that her parents doted on her, her companions enjoyed her society, and her social inferiors admired her. Being an only daughter, Fay was queen of a family circle of six brothers, who could see no fault nor blemish in their darling sister, except Phil, the brother to whom she was dearest of all. He could perceive, and perceived it with a pang, a defect that marred this beauty and completeness of an otherwise lovely character. He noticed it first when his sister was but a child in years, and was asked by her father to leave a pretty toy with which she was amusing herself, for a few moments, and carry a letter for him. But Fay had answered, smilingly, to be sure, but selfishly, "Oh, papa, this is too cunning to leave. Please call Donald or Phil. They are just in the next room."

"Aren't you afraid of becoming just a little bit selfish, Pet?" asked Phil, as he stooped and kissed the sun-tressed brow of his beloved sister.

Fay smiled.

"Are you afraid?" she asked in reply.

"I don't know," said Phil. "I couldn't bear to think that my precious little sister was growing up to be a selfish girl, and yet sometimes I fancy she prizes her own ease and pleasure beyond that of any others. It would have pleased father if you had taken his letter just now. It pleased you rather to go on with your play, so you went on."

"Oh, but Phil," cried Fay, "you took the letter. Father didn't care who took it, just so it got off in time."

"Perhaps," said Phil. "But I cannot help thinking that father is better pleased when the child he requests to serve him does so willingly, than when she hesitates or shows a distaste for the service."

"That is true enough, Phil," returned Fay, with a pretty blush, "and I ought—only somehow I don't think."

And as months passed into years Fay's habit of not thinking only took firmer hold. She "didn't think," when Aunt Bascom, who was quite lame and feeble, begged her to take a message to her son at the other end of the village, and because of her thoughtlessness Fay failed to carry the message, and, in consequence, Aunt Bascom's son, a husky man, tied to his shop all day, did not learn that his mother was in need of a man to split her wood and fill her shed with fuel; and poor aunt was forced to hobble about the yard on her crutch and gather up chips for her baking, until, finding a more thoughtful passer-by, she sent the message that for two days she supposed was carried by Fatima.

It was the same cause that she had to offer, when, after promising Nelly Gage, the little blind girl who lived next door, to read to her one hour each Wednesday afternoon, she engaged to take her music lesson at the precise hour.

"I didn't think, when I agreed to have the music lesson at that time, that there was really no other afternoon in which Nelly could have visitors. What a pity."

And then Phil, the careful, loving brother, who was not blind to his little sister's faults, ventured to say: "Fay, dear, won't you please put this habit of yours, that you are often deplored, into plain terms?"

"Thoughtlessness?" asked Fay, with a smile and a blush, glancing up at her brother's grave eyes.

"And now, please will my little sister consider this word, in the light of all the deplorable consequences of her own undesirable habit, and interpret its true meaning?"

"Thoughtlessness means—"

Fay's cheeks blushed rosy red, and her bright blue eyes filled with tears as she turned away, resolved that she would at least find out Phil's meaning. She went into her own room and sat down by her open window. A sweet-brier rose clambered all over the casement. It was in full bloom, and its delicate fragrance filled the air.

"There," exclaimed Fay, "how many times I have promised to take a root of this rose to Grandma Beverly, and have always failed to think of it at the proper time of year. And now grandma is dead and gone. I wonder if there in the glad heaven she remembers how thoughtless—yes, I will interpret it as dear Phil has seen it—how selfish I have been."

"Thoughtless," repeated Fay, slowly and sorrowfully. "Yes, thoughtless of everything but myself, my own will, and wish, and way. Ah me, I am a very selfish girl, thus to have thought only of my own comfort and happiness, and to have failed so utterly to think of my bounden duty to others. Can it be that all my dear friends know me as surely as dear Phil does, for a selfish, self-satisfied girl?"

Fay's tears streamed over her cheeks and fell upon the pink petals of the sweet-brier rose.

"Poor rose," murmured Fay, "you seem to be my sweet, reproachful monitor. You shall be so still. Surely your fragrant breath shall remind me of my neglect, and of my duty. By God's help I will conquer my enemy. I will live no longer thoughtful only of myself. God

forgive me for my life of selfish thoughtlessness."

Time proved the sincerity of Fay's repentance, and when another spring called into life the early buds, bending over the low mound above Grandma Beverly's grave, as her careful fingers planted the tender rootlets of a sweet-brier rose, Fay lifted her sweet eyes to Phil, who stood beside her, she saw his look of fond pride that cheered her heart, as her dear brother said, in tones that conveyed more meaning than words alone, "The dearest flower in all the world to me, must always be a sweet-brier rose."

## DOMESTIC ECONOMY.

## Preserving Dried Fruit from Worms.

EDITORS PRESS:—With due regard for Mr. Dwinelle and his communication in your paper of October 8th, about preserving dried fruit from insects, I will tell you about my method, which I think is better. In early days in California, when apples were not as plentiful as now, I had some nice ones, and to make sure that I should not lose one by rot, I thought I would dry them in the sun, as my mother had taught me years ago, in dear old New England. After drying, I put them in a sugar barrel and felt very rich in prospect of the coming winter and my store of nice fruit. But, alas! When I went to get some of my apples, I found them full of worms, and was obliged to throw them away. Not liking to acknowledge myself beaten in anything, the next fall I dried some more, and after I had got them all ready to put away, I took a very large dripping pan, filled it with the dried apples and put it in the oven, when not too hot, stirring them and turning them over until they were thoroughly heated, then put them away for the winter. I did not cover them till the next day, to allow them to get cold. I have never since had any trouble with worms. MRS. S. S. MERRILL.

Berkeley, Oct., 1881.

BAKED PEARS.—To bake small pears, pare them but leave the stems on and do not core them. Put them into a deep dish with fresh lemon or orange peel. Strew over them some brown sugar or molasses; pour on them a little water and cover them quite tight. Set in a moderate oven and bake until tender throughout. The best pears for baking are the large late ones usually called Pound pears. Pare them, cut them in half, and take out the cores. Lay them in a deep white dish, with a thin slice of fresh lemon peel in the place from which each core was taken. Sprinkle them with sugar and strew some whole cloves or some powdered cinnamon among them. Pour into the dish some port wine; to a dozen large pears allow one pound of sugar and a pint of wine. Cover the dish with a large sheet of brown paper tied on; set it in a moderate oven and let them bake until they are tender through, which you may ascertain by sticking a broom splint through them. They will probably be done in an hour, but you must not leave them in long enough to have them go to pieces. In cold weather they will keep a week.

SWEET POTATO PIE.—Take half a pound of sweet potatoes, wash them, and put them into a pot with very little water, barely enough to keep them from burning. Let them simmer slowly about half an hour. They must be only parboiled, otherwise they will be soft, and may make the pie heavy. When they are half done, take them out, peel them, and when cold, grate them. Stir together to a cream one-quarter of a pound of butter and six ounces of sugar; add a grated nutmeg, a large teaspoonful of cinnamon, and half a teaspoonful of beaten mace; also the juice and grated peel of a lemon, a wine-glass of rosewater, a glass of wine and a glass of brandy. Stir these ingredients well together. Beat eight eggs very light, and stir them into the mixture, in turn with the sweet potatoes, a little of each at a time. Having stirred the whole very hard at the last, put it in your pie plates, which you have lined with puff-paste. Bake in rather a slow oven. To be eaten cold. Carrot and white potato pie may be made in the same manner.

COMPOTE OF SWEET POTATOES.—Select fine, large sweet potatoes, all as nearly of a size as possible. Boil them well and then peel off the skins. Then lay the potatoes in a large baking dish, put some pieces of fresh butter among them, and sprinkle them very freely with powdered sugar. Bake them slowly till the butter and sugar form a crust. They should be eaten after the meat, and will be found very good. This is a Carolina dish.

A CHEAP paint is made for brick walls by simply mixing up good hydraulic cement in water, and applying with a whitewash brush. The natural tint is neutral and pleasing, but may readily be varied. This paint cannot be washed off by storms nor peeled off by the sun.

ASPHALTUM AND INDIA RUBBER VARNISH.—Dissolve India rubber in a small quantity of refined spirit of tar. It takes about six hours to dissolve. Asphaltum dissolves in the same vehicle in about the same time. This is preferable to the old plan with mineral naphtha.

## GOOD HEALTH.

DEATH FROM A TARANTULA BITE.—The Louisville Courier Journal of Oct. 12th, says: Oliver C. Waddell, who recently removed to this State from Texas, settling along White river, in Stone county, was bitten yesterday by a tarantula. He was on a hunting expedition in the mountains, and had camped under a large pine tree. Some time during the night the insect crawled in between the blankets which enveloped him as he lay before the fire and bit him twice, once on the finger and again on the arm near the elbow. He was awakened by a tingling sensation in that part of his body, and rousing himself, discovered the cause and succeeded in killing the tarantula. It was as large as the hand of an ordinary man. Waddell's hand and arm began to swell rapidly, and before he could get to the nearest house, some four or five miles away, the poison had spread apparently to all parts of his body. It was some time before he could get medical skill, and when the physician arrived Waddell was found to be beyond hope. He lingered sometime, however, dying in the afternoon. The case is a singular one, from the fact that it proves that the tarantula is capable of inflicting a death wound.

A NEW MALARIAL DISEASE.—The Boston Herald shakes in anticipation of a great danger which menaces that city. It says: "A terrible foe is marching upon New England. His name is Malaria. This mysterious disease is still a puzzle to medical science, and no satisfactory cause can be assigned for its origin, although various theories are advanced. But we must face the alarming fact that the danger is upon us. It is now acknowledged that, year by year, the malarial zone is steadily spreading northward. Every summer it has attacked new districts whose sanitary conditions were hitherto unquestioned, and thus far it has seemed to come to stay. At the time of the Centennial it made its appearance at Philadelphia and scored its victims by hundreds. Nearly all of New Jersey is now a den of malaria. It has intrenched itself along the Hudson and crossed into western Vermont. New York City and the shores of Long Island sound are fearfully afflicted. The past summer its advance line has appeared in the Berkshire hills and in the Connecticut valley, Lenox and Springfield being especially marked. It has even come as near as Rhode Island, making its appearance in several districts of that State this season. Therefore it is time for us to be alive to the danger before us."

WOOD-SPLITTING AS A REMEDY.—Some years since, the wife of a wealthy Tennessee banker, after trying a variety of remedies for dyspepsia and other ailments, consulted a physician noted for plain common sense and small doses of physic. He told her if she would split the wood for the family it would cure her. Woodhouses are unknown in Tennessee, or were at that time, and of course the wood-splitting must be done in the open air. The lady procured an axe suited to her hand, and applied herself to the task, beginning with a few sticks each day, and increasing the number as she grew stronger. Gradually her ailments all disappeared, and her health became exuberant. When we knew her 25 years ago, with a house full of servants, and practically unlimited wealth at command, she still did all the wood-splitting for the family, and bid fair to double the half century in age she had already attained. Doubtless, taking her exercise in the open air had quite as much to do with her recovery as the mere muscular labor had.—*N. Y. Tribune.*

TREATMENT OF NERVOUS SHOCKS.—The true way in all cases of shocks, whether from hurts or frights, is to unloosen every bandage that could obstruct circulation, lay the person in an easy position, see that the feet are warm, the room well ventilated; let them lay (it may be) for hours or even days, and "balmy sleep, Nature's sweet restorer," will do its work better than all the stimulants in creation. If, when consciousness return, there is sickness or headache, as the case generally is when the shock occurs soon after a meal—because it suspends digestion—the contents of the stomach ferment and sour, to prevent which a good drink of tepid water, and sometimes, the finger placed at the back of the tongue, will produce a vomit and the souring mass thus prevented from vitiating all the fluids. Let this be followed by another sleep. If inflammation occurs, it can be stayed by a wet cloth, properly regulated as to temperature and duration to meet the case—the sense of comfort being the rule of right.

COMPARATIVE LONGEVITY.—The Director of the Bureau of Statistics at Vienna has made some interesting researches concerning the longevity of women and men in Europe. He finds that out of 102,431 individuals who have passed the age of 30 years, 60,603 are women and only 42,628 are men. In Italy 241 alleged centenarian women are found for 141 men of that age.

A GOOD DISINFECTANT FOR THE MOUTH.—Permanganate of potash and hinoxide of barium, of each 24 grains, are to be rubbed up into a mass, with sugar and glycerine, and divided into 144 lozenges. It is said that the use of these will remove all disagreeable odor from the breath.





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SAN FRANCISCO:

Saturday, November 5, 1881

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## The Week.

On the wings of the norther we have sped along another week nearer to the holidays and to the rain storms. Never have the days shown a more transparent air. Our atmosphere, which always seems to annihilate distance, has, the past week, achieved signal victories; miles have seemed but steps, and sidereal distance but an arm's extension. Morning and evening colors have been most intense, and the intervening temperatures have been so delightful, that roofs and walls seemed burdens and the open sky the proper cover. One who cannot enjoy such days as are now passing, is out of place upon this lovely world.

There is a variety of work in progress. The gardens are being tidied up, and the exhausted annuals gathered to their fathers. The endings to orchard and vineyard are still being collected. Here and there the plows are running and the seed shooting forth. But the heavy work has not yet commenced, and many are prone to enjoy the days which lie before the storms, in rural excursions and visits. It is good work providing one is careful not to make himself a burden. It is well to renew friendship, and lay in a good stock of vigor and good nature, before the fall labor and the closed season are upon us.

The American ship *Carondelet*, Capt. Stetson, arrived, 22 days from Yokohama. This is the best trip on record from Yokohama.

## Looking Toward Immigration.

The movement in charge of the Board of Trade looking toward the obtaining of a greater proportion of desirable immigration for California is progressing favorably, and as we think upon sound premises. In a report framed last week by a committee of the board it is set forth that California contains 188,982 square miles within its borders, and 20,000,000 of acres of public lands surveyed, in addition to a large quantity of unsurveyed public lands, and furthermore a very large quantity held by private owners or corporations who have assured the committee that they are ready and willing to divide it into small farms and homesteads. In view of these facts it regrets that there are but 800,000 inhabitants in a State which has room for 20,000,000, and that out of this small population at least 300,000 reside in the larger cities.

Fitting recognition is made of the fact that we do not desire an influx of irresponsible and shiftless people who might come with the idea that California was a place to live in without work, and thus recruit the already overcrowded ranks of the tramp army. The report well states that the class of immigrants required are the thrifty, frugal and industrious, who have a little money to start them in life. Of the laboring class in cities, without money, there is almost sufficient. The class required can readily be obtained by energy and judgment and by making known throughout Europe the great advantages offered by our marvelous resources in the industrial, agricultural and mineral characteristics of the State—a land of unbounded fertility and splendid climate. Owing to our inaction newer States, with inferior advantages, by their persistent push and advertising of their resources are obtaining the immigration that should come to us.

It is proposed to set up immigration machinery under the auspices of the Board of Trade, as follows:

That the president appoint a board of 12 representative men, independent and irrespective of politics—since there is no tinge of politics in the movement—to act as an immigration bureau, to be organized under the State laws. That the main office shall be in this city, but that by degrees agencies shall be organized in as many places as is necessary. That the members of this bureau shall canvass among all persons interested in colonizing the State, and it is believed that a sufficient sum can readily be obtained to make our hills and valleys contain 50 where they now have only one. This bureau, having been fairly at work, should apply to the Legislature for State recognition and State aid. It should disseminate thoroughly the advantages offered to thrifty, industrious and frugal immigrants with sufficient money to keep them from want, to settle with us. As in cities there are frequently persons with moderate means desirous of settling in the country, some scheme might be devised to assist them.

It is quite proper that something should be done in the public interest in this connection. Other new States are threatening to outstrip us in development and advancement, merely because they are prepared to mold the plastic minds of new comers by copious publication of information concerning their respective localities. The great central States have their agents at the East and in Europe. Oregon meets the incoming tide to the Pacific coast at Ogden, and turns it northward on arrival. California does nothing unless it be by the interested efforts of a few real estate agents. No doubt many men who would be material aids to our progress, are attracted to other fields because they can learn nothing about California, except from men who have direct interest in some special locality.

The present time is no doubt opportune for an effort to increase our population, by the enlistment of desirable arrivals. Our own industries are awake, and offer better field for the investment of money and effort than hitherto. There is too a great disposition abroad to seek new homes, and the avenues of travel are well filled. It is true as shown by the report of the board, that the public mind is at rest on exciting political questions, and hence the time is favorable for industrial enterprises. There is a prospect that the Chinese immigration may be checked by the limitations proposed, and if the place can be filled with honest and energetic whites, who are faithful to labor and come to stay with us, it will be a welcome thing to all.

The board fittingly alludes to the need of the survey of vacant Government lands in this State, and will urge Congress to contribute money to prosecute these surveys. This is a very important proposition. These surveys are now proceeding slowly, and if accelerated by Government direction, we shall soon have a far better idea of the land favorable to settlement, than has heretofore been attainable. The Kern county *Californian* has mention of the work of Mr. W. H. Norway, the United States Deputy Surveyor, in land surveys for the Government on the South Fork of Kern river and its tributaries. He says that, in all, he has run off 30 townships and parts of townships, some of the more valuable parts of which he has laid off in the smaller legal subdivisions, and that he considers all of this extensive area a region of great resources, particularly in the way of timber and grazing. Between the North and South Forks of Kern river, in particular, are immense forests of pine, cedar and fir, that have the appearance of being inexhaustible, while among them luxuriant meadows are of frequent occurrence, that have sustained, the past summer, innumerable flocks of sheep. The face of this vast plateau is not of a rugged character. Every part of it is easily accessible. The ascents and depressions are gradual, and it is possible to find routes for wagons where no obstruction

will be met with for miles. He thinks, if this land were put in the market, it would sell readily at \$1.25 per acre, and if it were all under private ownership, it would be vastly better for the general interests of the country.

We ought to know facts like the above, concerning all the lands of the State which are still open to settlement.

## QUERIES AND REPLIES.

## Bud Variation.

EDITORS PRESS:—I am not sure that I understand just what is meant by the "interloping almond" mentioned in the Press of October 15th. I know what "interloping" means when applied to persons, but an interloping bud is something I do not comprehend. I have cultivated and budded fruit trees for more than 30 years, and have never seen anything that would justify me in the belief that the bud "voluntarily" started from that tree.

The question is asked, "Is it a case of 'bud variation'?" I think not. Buds never vary. For instance—the Rhode Island Greening, an old and favorite apple, has been budded millions of times, and it is the same to-day that it was when produced from seed; and will remain the same as long as apples are grown. Nature does not work in that way. New varieties of fruit are produced by hybridizing.

It is my opinion that the almond bud was put in the peach limb by some person. It may have been 4 or 5 years ago, for it is frequently the case that buds remain dormant for years. I have a peach tree that was budded 3 years ago to apricot, and the bud remained dormant until this season, when it came out and made a vigorous growth.—J. ALLISON, Vacaville, Oct. 29, 1881.

The above is in reference to the appearance of a branch bearing almonds upon one of Mr. Deming's peach trees in Solano county, noted in the Press of October 15th. We used the word "interloping" as signifying the intrusion of the bud in a place to which it had no apparent right. The dictionary says an interloper is "one who runs into business to which he has no right." The business of Mr. Deming's tree apparently was to bear peaches; was not the almond shoot an interloper?

Our correspondent says that he has not observed any change in buds which would warrant the term "bud variation." We understand it that the term is a legitimate horticultural expression to denote the changes from the prevailing fruiting of well-known varieties which now and then appear. These appearances are sometimes called "sports." They are departures from the prevailing type from no cause which the grower can discern. Scions have produced fruit different from their kind, and now and then a limb has borne a new kind of fruit and part of a plant a new flower. For want of a better term the phenomena have been styled "bud variations."

Our correspondent holds that there is never any change in the fruit of wood grown from a bud of a given variety. For all practical purposes this is true, and for this reason we go on propagating the desirable varieties by bud and graft. But there are occasionally freaks and changes, the proportion of them to those which preserve the type being, however, so small that in ordinary propagation there is no occasion to make allowance for it. Still instances are recorded where the variation has occurred, sometimes without apparent cause, sometimes being evidently the effect of the stock upon the growth and fruition of the bud. No more unmistakable evidence could be cited, than the experience of the southern citrus fruit growers, and the change in the quality of well-known varieties of orange when huddled on the China lemon root. But there are cases recorded where violent changes have occurred, in the character of the fruit from the bud, so that new varieties have been originated in this way. In his well-known essay before the Massachusetts Horticultural society, Josiah Talbot records the origin of several quite distinct sorts. We have but space to mention a few:

Mr. S. B. Pullen, of Norwood, testifies that he brought some scions from a Sweet Pumpkin Russet, which had fruited several years on his place in Maine. A part of these he grafted on a neighbor's tree, and the remainder on a very thrifty Roxbury Russet on his own land. When they fruited, his neighbor's tree bore Sweet Pumpkin Russets, but his own bore Sweet Pumpkin Russets, in size, form and color, but *not* as the Roxbury Russet.

Mr. Washburn Weston, of Winthrop, Mass., several years since, was acting as gardener of Dr. Warren, who owned the place now belonging to Mr. Weston. The doctor, wishing to have some of the fruit of his boyhood growing on his own place, brought some ill-fated Sweet scions from the old tree in Marshfield and requested Mr. Weston to graft them into a bearing Red Astrachan, as he had more of that variety than he needed. When the graft fruited, to the surprise of all, it bore a red apple, with the size and form of the Astrachan, but sweet like the Hightop. Scions taken from this tree now produce the same kind of fruit, thus showing that grafting has produced a new and very desirable variety of fruit. So marked is this case, that the fruit committee at Marshfield did not hesitate to call the apples Red Astrachans, and were convinced of their mistake only when tasting the fruit they found it to be sweet like the Hightop.

Mr. Allison's experience with dormant buds is interesting, and can no doubt account for many peculiar occurrences which surprise tree growers. We do not affirm what was the cause of the almonds appearing on Mr. Deming's peach tree. We cite the above cases of variation because of their bearing upon the general subject of propagating varieties.

CAPT. PAUL BOYNTON has arrived at Omaha on a cruise down the Yellowstone and Missouri rivers from Glendive, Montana, the highest navigable point. He has paddled about 2,600 miles, and has been seven days out. He reports the trip as one of the most difficult he ever undertook, and was enlivened with adventures, occasioned by indiscreet Indians and reckless hunters who fired at him from the bluffs. He is in good condition.

## State Horticultural Society Meeting.

The monthly meeting of the State Horticultural Society was held at the Academy of Sciences, October 28th, the chair being occupied in succession by Vice-President Webster, President Hilgard and Director Hatch. It was the "annual meeting," and the attendance was good. The following were elected regular members: David Tisch, Oakland; R. Ulrich, Monterey; A. E. Briggs, Winters; Geo. D. Dornin, Berkeley; Myer E. Jaffa, San Francisco, M. M. Estee, Napa.

A package of seeds of the India rubber tree was presented to the society by John T. Wright, of this city, on behalf of P. P. Pacheco, of Panama. On motion, the thanks of the society were extended to the donors.

A communication was received from Dr. Sirentzel, stating that he was at work condensing the information from the fruit circulars of the society, and would be prepared to submit his condensation for the approval of a committee before another meeting of the society. Upon motion, the committee was continued to complete its work.

The secretary presented a brief review of the progress of the society, stating that the total membership of the society is 122, of whom 27 were elected during the past year.

The treasurer, G. P. Rixford, submitted a report on the finances of the society, showing that the expenses for the last year had been \$98.30, and the total cash now on hand, \$174.35. The treasurer asked for a committee to examine his books and vouchers, but upon motion, the account was accepted as it stood.

## Election of Officers.

A motion of thanks to the officers who had served during the past year, was adopted.

Officers for the ensuing year were then elected by ballot as follows: President, Prof. E. W. Hilgard; Vice-President, J. V. Webster; Secretary, E. J. Wickson; Treasurer, I. J. Trumbull; Directors, A. T. Hatch, Dr. J. Strentzel, C. H. Dwinelle, Matthew Cooke and E. H. Rixford.

## Fruit Shipping Interest of California.

The stated subject for discussion was introduced by M. T. Brewer, of Sacramento, in an able and eloquent address. Mr. Brewer paid a fitting tribute to the greatness of the fruit interest of California in its several branches. He said time would fail him to speak of the canned fruit interest, which produced in 1881 about 12,000,000 cans, consuming thereof about 30,000,000 lbs. of green fruit. He would also pass over the great dried fruit interest and achievements of the Briggs and Blowers and others, who are building up the fame of the State for raisins. Passing to the green fruit interest, he showed that the interests of growers and shippers were identical; that the shippers must succeed that they might discharge their obligations to the growers from whom they purchase. He remarked that fruit growers scarcely begin to realize the risks taken by the green fruit shippers. If they did they would be more careful in putting their fruit up. Mr. Brewer referred to the great losses sustained by the shippers arising from mixing of different qualities of fruit—putting in the same box, for instance, pears that are intended to keep for 90 days, and pears that should be eaten in 30 days. While boxes from some growers never had to be examined, as they always could be relied upon, there were others from whom they dared not send forward to the Eastern market a single box without opening and carefully examining it. He charitably, however, attributed it to the lack of thought on the part of the growers in packing. The immense number of boxes to be sent forward daily allowed no time for such examination, except at a great loss to the shipper. They never send fruit across the continent that has been in the store over 24 hours. Such fruit is sent to San Francisco to sell for what it will bring. The cost of shipping green fruit to the East is so great, and the exigencies of the trade so numerous, as to render it eminently one of risk. In the single month of August, this year, \$50,000.00 in gold was lost in shipping green fruit out of California. The careless manner of packing fruit by the growers was ruin to the shippers. There will come a time, he said, unless greater attention is given to packing, and unless a greater bond of union exists between growers and shippers, when shippers will have to step out of the field. Some growers were ambitious to become shippers also. He gave the experience of one of these who shipped three carloads of green fruit East this season. The first carload lacked \$19 of paying its freight, and the second car lacked \$100 of paying its freight. The grower thought he would accompany the third car to the East, and by his own supervision see that it paid. The outcome of it was that he had to borrow money to come home with.

## Statistics.

Mr. Brewer gave the following statement, showing the growth of green fruit shipping during the past 10 years, the figures show approximately the number of pounds sent east of the Sierra Nevada:

1871.....	2,399,000 lbs.
1872.....	2,144,800 "
1873.....	2,341,600 "
1874.....	5,032,800 "
1875.....	2,832,800 "
1876.....	6,735,500 "
1877.....	5,359,400 "
1878.....	4,612,600 "
1879.....	7,187,300 "
1880.....	8,121,800 "
1881.....	10,000,000 "



## The Question of Freights.

The freight alone on green fruits shipped out of the State so far this year has amounted to \$300,000. One house alone has thus far this year sent forward 4,240,000 lbs at an expense for freights of \$118,000. Men who ship green fruit pay from 10% to 40% more freight than those who ship any other kind of goods, or of canned or dried fruit, sent out of California. The charge per car by slow freight is from \$100 to \$560, by fast \$1,075; while for dried fruit, say, for instance, raisins, it is but \$300 per car. The reason is this: Dried fruit will keep for long voyages, and consequently for this trade the railroad has the competition of the sea route, either by way of the Isthmus or Cape Horn, while the railroad man says to Mr. Shipper, "If you send your green fruit East, you have got to send it by my line; it won't keep for the long voyage." Mr. Brewer gave credit to the Central Pacific Railroad Co. as being the only company that had provided cars for shipping fruit from California to the Eastern markets. The Union Pacific and other Eastern roads would not furnish proper cars, consequently the shipper is occasioned great loss because he cannot get suitable cars just at the time he needs them. The Eastern roads claim that they pay the C. P. mileage on their cars which may be true, but that did not help the shippers, for if all the roads that profit by the trade would furnish suitable fruit cars as they should, there would not be the ruinous scarcity of them which causes the great losses and hampers shippers' movements. Shippers of all other kinds of commodities, except green fruits, may pay the freight at either this or the other end of the route. The goods are always good for the freight, and if an accident occurs, the loss inures to the railroad company, but with shipments of green fruit the rule is reversed. The shipper is required to pay or guarantee the freight in advance, and if an accident happens, the loss is the shipper's. One week Mr. Brewer's house paid \$8,000 for freight alone on shipments East, and got less than \$500 for the fruit after it got into the Eastern market. It is right enough for the railways to exact prepayment or security for fresh fruit because the fruit is perishable, but there is another requirement which is unjust. The shipper is obliged to relinquish all claim for loss from any cause. If the car is thrown from the track by the negligence of the company, there can be nothing recovered. One shipper had his fruit cars destroyed in the Pennsylvania riots, but there was no recovery, as with other kinds of merchandise. Thus, the shipper has to take not only the risk in his fruit, but has to free the railroad from all liability which may result from their wrong handling of it. This is a great hardship.

## Limitations of Profitable Eastern Shipment.

Mr. Brewer spoke of the high rates of freight as one of the great burdens the shippers had to bear. It requires California fruit to be held at such high figures in the Eastern market that unless our shippers can anticipate the Eastern crops, or come in at a time when there is no Eastern fruit in the market, it cannot be sold, and when, in the many contingencies that occur, it has to be brought down to the same prices with the Eastern fruit that has come in competition with it, it does not bring enough to pay the freights alone. The California fruit is hurried with a freight rate of, say 7c per lb. to start with, and this elevates it above the purses of the great middle classes, and makes it a luxury which the rich only can enjoy. Thus unless freight can be greatly reduced, the demand for California fruit at the East must be limited. No slight reduction can change this condition of affairs. If the fruit could be put down at the East at anything like the cost of Eastern fruit, then the California fruit growers might go on increasing their orchards for perhaps 50 years, for no fruit can be grown at the East like California fruit, but as the matter now stands there seems little reason to send forward more fruit than was sent this year.

In conclusion Mr. Brewer urged forcibly the absolute need of greater care of fruit and fruit trees, the careful and conscientious packing of fruit, and the combination of all efforts to crush out the army of insect pests, which threaten our fruit interest. He alluded eloquently to the needs of the hour in this regard, and paid a fitting tribute to the zealous work of Matthew Cooke. He believed if the people would work together to carry out his relief measures the orchards might be rescued.

W. R. Strong, of Sacramento, being called upon by the president, stated that he was not prepared to speak at length upon the subject, but he could affirm all that Mr. Brewer had said concerning the great risks attending the business and the losses which had been incurred. He knew of no other business which is attended by such difficulties and has to face such losses.

Mr. Cooke spoke of the damages by the eggs of the codling moth hatching out during the transit of the fruit, and reducing its value almost to nothing. Concerning the general conflict with the insects now inaugurated, he foresaw success if general effort could be enlisted, and he urged all fruit growers to labor toward this end.

Mr. Wilcox, of Santa Clara, remarked that it had been said in his county that the fruit shipping was being monopolized by certain firms combining and getting a low rate of freight overland which other shippers could not obtain. It was said that Porter Bros. were buying large quantities of real estate in Chicago from the profits in their fruit

trade, and that the business was a very profitable monopoly.

Mr. Cooke said that he understood that Porter Bros. had made much money from some of their operations but not by their trade in California fruit. Mr. Brewer stated that he understood the matter that way. He considered the firm fully responsible and rich but they had not made their money in shipping California fruit. Mr. Porter was represented to have said that if he could get 10 more carloads of Winter Nels pears he could make his expenses on this year's work.

Mr. Hatch remarked the common interests of fruit growers and fruit shippers and that they should work harmoniously together.

Mr. Webster said that in view especially of the uncertainties which attend the green fruit trade, every orchard planter should plant varieties which he could turn to account himself if the shippers or canners should not call for them. He feared that growers were making themselves too dependent on the green fruit trade. If you plant grapes and they are not wanted fresh, they are valuable for raisins or wine. Apricots are worth 2c per lb. for drying if the canners refuse them; so with proper drying plums and prunes can be turned to account at home whenever the first market is glutted. When it will pay to sell these varieties fresh, do so; when it will not pay, dry them. This is the sovereign road out of a glutted market and is coming to be generally recognized.

Mr. Jessup gave an account of what a fruit merchant told him about a layer of small apples which he had put in to keep the large pears from jostling about. "Don't do that," he said; "don't mix the fruit. It is easier to sell the hole than the apples in it."

Mr. Dwinelle alluded to the need of great discrimination in the selection of buds for propagating trees. Even two trees of the same variety differ considerable sometimes. He instanced two Baldwin apple trees near each other, one of which had beautiful, sound apples, the other being spotted with dry rot.

Mr. West said the Baldwin trees often

the whole State. Mining seems to be in its infancy, and may yet prove to be much the more important industry of the State; and the very farmers, that years ago, as miners, helped to fill the mountain streams with debris that is now coming down upon them, may yet abandon their farms, after wearing them out in the present fashion, say in 15 or 20 years, and return to the mountains in search of gold, as a more profitable employment and a more permanent investment.

Both interests should be protected and harmonized, and the great question is, how can it be done at an expense that will be justifiable and in time to save further destruction.

I believe that much of the demoralization of our people on this subject has been caused by the large outlay already without much perceptible benefit, and the statements from prominent sources that it will require at least \$5,000,000 the first year and about \$1,000,000 annually thereafter to impound the debris and clear the navigable rivers sufficient for navigation. This would be impracticable, as no such sums could be raised.

I will now give you the conclusion I came to after looking over and considering the matter of the remedy:

1. I would throw up stone dams in the canyons of the streams, in the mountains, as near the mines as practicable, holding what debris there is in the beds now, and what may be put in hereafter. This is admitted practicable, and I learn that the majority of the hydraulic mining companies are willing to attend to it at once, if all the lawsuits against them are withdrawn.

2. To impound and utilize the fine sediment, or slickens, say, take the Yuba river as an example, I would build a canal or ditch on both sides of the Yuba, taking out the water and slickens at the foothills about 14 miles above Marysville, and large enough to carry all the water and slickens flowing in that river during the dry season, and with this slickens, and what could be saved in the winter season, I would build large, broad levees along the river on both sides, and around Marysville, so as to protect it

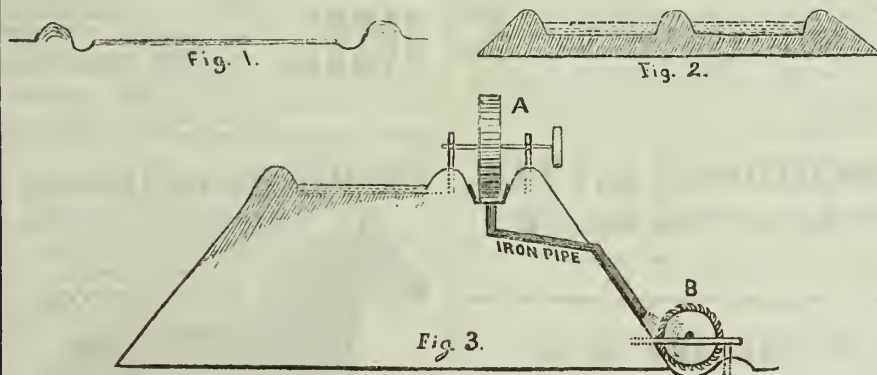


DIAGRAM SHOWING PROPOSED LEVEE BUILDING WITH SLICKENS.

showed different characteristics. He thought the soil often had much to do with it. The Baldwin needs a deep soil, as it roots deeply.

As the afternoon was well spent, the choice of a subject for the next meeting was taken up. Mr. Klee urged the necessity for taking up some other subject than fruit growing, as the other branches of horticulture were being neglected by the society. Two subjects were therefore chosen—the "Apple," to be opened by Prof. Dwinelle, and "Flowering Bulbs," opened by Mr. W. G. Klee. The next meeting will be November 25th.

## Levee Building with Slickens.

(Written for the RURAL PRESS by R. G. SNEATH.)

I had the pleasure of visiting Marysville and vicinity, and many of the hydraulic mines, with the committee lately appointed by our citizens for the purpose of examining into this great question which is now absorbing the attention of the people of the whole State; and although an old resident, and somewhat familiar with the situation, I was surprised at the large amount of damage done the agriculturists in that vicinity.

Much of this damage, especially that on the low bottom lands, cannot fairly be charged to hydraulic mining, as it happened from 1857 to 1862, which was before the Giant was invented, I believe, and when that class of mining was in its infancy, every year, however, has increased the spread of the debris until now, and must increase unless some remedy is applied, even if mining of all kinds should cease altogether, as the mountain streams, gulches and valleys are choking full of gravel, sand and slickens, and must come down to the lower valleys, if not stopped, and for this reason it is well that the farmer should look to the miner to assist in stopping this flow, for the farmer cannot do it unaided.

Much has been said by the newspapers of late concerning the extent of the damage, and very little in relation to any remedy. The papers of the agricultural districts claim that the miners shall stop until they can impound their tailing; and the miners claim that they must continue, in order to get the gold to build the necessary impounding dams.

Both interests are very large, and to kill or cripple either, would result in great injury to

from the possibility of any flood, raise the whole town if desired, and then spread it after that, over the red, gravelly, poverty-stricken land near the foothills, and generally designated as sheep pasture, or continue it down to the overflowed lands of the lower valleys.

Before going further, I will cite the Cherokee or Spring Valley hydraulic mines and canal as an illustration. The slickens from this mine is now carried for nearly 40 miles in a canal 500 to 600 ft. wide, and it is receiving the deposit along its line to the extent of building it up rapidly, and delivering the water free from sediment at its terminus. This company has customers also for the slickens at various points on its line. Farmers find that if it is mixed with the adobe soil, that the latter becomes friable, and can then be cultivated at any season of the year; and evidence was furnished from reliable sources that pure slickens has and will produce a fair crop of both wheat and barley, and I saw a good stand of corn and alfalfa growing in slickens 16 inches deep on the bottoms of Bear river.

I have also seen the building of a large addition to the dam of the Oakland Water Works Co., back of San Leandro, upon the same principle as the Cherokee Works—that is, the material from which the dam was built was carried in solution to the point needed, and there deposited by settling. The earth having been thrown into a ditch of water a considerable distance from the dam that it might be transported economically.

Now, if the miners will continue to furnish this slickens free of cost and in large quantities during the dry season, when it may all be utilized, I do not see why all of the levees required on the upper rivers may not be made from it, all the low lands filled in, all the foothill poor lands accessible redeemed, and water for irrigation purposes furnished plentifully at slight cost, and at an elevation sufficient to furnish power, and made applicable by gravitation.

I feel confident that slickens will in turn be made to do all these things, and at a very moderate expense, if commenced on a small scale and allowed to work its way along; and judging from the quantity now in the rivers of the north, there will be an ample supply for all, in time.

To those not acquainted with the nature of slickens, I will say that it is about half light-colored mud, and the other half water; and that on a moderate grade, all the mud will settle on

the bottom in a distance traveled of about 40 miles, so that the deposit of the first mile traveled would be much more than the next, and would continue thus until the grade it established increased the velocity of the water and lessened the deposit, so the second mile would in turn receive the larger deposit; and each succeeding mile would thus receive its quota.

Between the foothills and Marysville, the Yuba river and bottom land has been filled with debris, and is now a waste covered with willows to the extent of about ten miles long and two miles wide—in all, say 22 square miles. These willows cause the rapid deposition of the debris, and this space will perhaps hold all that may escape over the miners' dams, or that may not be caught in the side canals, for many years to come; so the remaining difficulty will be to clear the navigable streams below, that navigation will be possible at all seasons, and the channels enlarged, that the floods of winter may have a free outlet. And in this, in the interests of commerce and navigation, I think we can rely on Congressional aid largely, should the people of this State act harmoniously in asking for an appropriation; and I would suggest that, as Congress has done but little in keeping our rivers navigable, that \$500,000 annually, for few years, would not be considered extravagant, considering the situation.

This money I would expend in dredging the rivers and in building broad levees along the principal streams.

Dredging is now done so cheaply that the task will not be so great as many would imagine. Machines are now in operation on this coast that will take the sediment out of the river beds and place it on the banks from 100 to 300 ft distant from the banks, at one cent per cubic yard, and which material is the very best obtainable for levees, and thus forming a wide, solid embankment that would be an ark of safety to those living along the rivers, on which both man and beast might congregate in time of flood.

To dredge along the banks of the Sacramento, say for one mile or 1,760 yards, 5 yards deep and 30 yards wide, would cost \$2,640, at the rate of one cent per cubic yard; and it would take about one month's time with one machine. Now, with several machines it would require but a few years to lift the principal portion of the debris out of the streams, and at the same time secure most of the agricultural land from overflow, if not all in time, by the construction of immense levees, and the deepening of the channels.

The owners of the lands reclaimed could well afford to contribute largely toward this work, and the State at large, or that portion especially benefited, should also do their portion and thus all combining a substantial work could be accomplished that would not only save a large territory from destruction, but would reclaim an immense area of land now of no value.

I believe that the value of "slickens" as applied to adobe land, is imperfectly understood, and that when it may come into more general use, that it will be found to be of great value in tempering that vicious soil to the consistency of garden land.

And who can estimate the value to the country of a grand canal on each side of the principal rivers of the State, with an elevation sufficient to irrigate the adjoining lands throughout, and furnish motive power sufficient for the purposes of each and every farm!

In conclusion, I would suggest that the whole debris question should be referred to a committee large enough to represent the several interests fairly, and let them prepare a detailed plan, in connection with competent engineers, that would harmonize the many interests involved, and allow a continued prosperity to all.

## Explanation of Diagrams.

The diagrams on this page show the manner in which levees can be built with slickens, and the flow of water used to furnish power for useful purposes and for irrigation.

Fig. 1 shows the beginning of the levee. After the canal has reached moderately sloping land, plow up two ridges, about 100 ft. apart, and confine the slickens and water between them.

Fig. 2 shows the deposit several feet deep. The center division will allow the slickens to be diverted to either side alternately, that the sediment may dry enough to sustain horses and plows, by which the embankments can be raised from the inside from time to time.

Fig. 3 shows the levee and canal completed—say from 15 to 25 ft. high; the ditch on the right made lower than the canal, to receive its water by crosscuts and from near the surface of the larger canal. After being used as power (on a plain paddle wheel, marked A on the top, or on a turdy-gurdy, like B at the bottom), the water can be dropped in the ditch at the base, marked C, and conveyed for irrigation where needed. The paddle wheel should be boxed in at its sides, that the full force of the water would apply. The slope of the sides of the levee should be much greater than shown on the diagram, that a sod might be grown thereon.

ONE lithographing firm in this city have within two years increased their label-printing facilities from \$13,000 worth of machinery to \$65,000 worth. The increase in the fruit-canning business of the coast is the cause. Their orders for lithograph labels for next year represent \$150,000.

SEVERAL of the Arctic whalers have arrived in port, but there is no news of the Jeannette.



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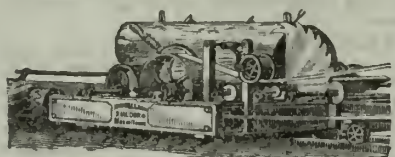
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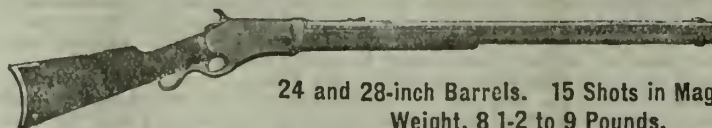
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Office for all the Southern Mountain Towns. The Yo-  
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**MUSICAL ALBUM.**

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A collection of weird, strange, and yet strangely capti-  
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just the music that inspired his imagination. Norse and  
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Admirable collection of interesting, wide-awake, effective  
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Manufactured, 431 Fourth St., S. F. Local or traveling  
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A Box Churn with dashers, or can be used without  
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It can be run by a common windmill. Any orders re-  
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PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

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HENRY PIERCE, 728 Montgomery Street, S. F. Jersey Cattle, bred from Importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted hutter strains on the Island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound hutter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn cattle and Berkshire hogs. A choice lot of young stock for sale.

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R. McENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

## HORSES.

HENRY MILLER, San Francisco, Cal. Breeder of Thoroughbred Norman Horses of the Stock Imported by Mr. Perry, of Illinois, took First Premium at San Jose Fair, 1880.

P. J. SHAFTER, Olema, Marin Co., Cal. Breeder of choice Jerseys, bred from hutter strains. Hambletonian horses by the Silver Gray Stallion, "Rustic," remarkable for size, speed, and kind disposition.

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W. A. MUNNION, Dixon, Solano Co., Cal. Owner and Breeder of the celebrated Jack, "John Henry," Took First Premium State Fair, 1881, also Percheron Half-breeds.

J. W. BRYAN, Santa Clara, Cal. Breeder of Norman-Percherons from the celebrated Hercules Stock.

## SHEEP AND GOATS.

JOHN S. HARRIS, Hollister, Cal. Breeder of Thoroughbred registered Goats. Took Eight Premiums at the State Fair of 1880. I had one Buck at the State Fair with staple 16 inches long. Correspondence solicited.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep, Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

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F. FULLARD, Woodland, Yolo Co., Cal. Breeder of Thoroughbred Spanish Merino Sheep.

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A. O. RIX, Washlughton, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rock, Pekin Ducks.

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T. WAITE, Brighton, Sacramento Co. Breeder of Thoroughbred Berkshire Hogs and choice Imported Poultry. Took Premium State Fair, 1880 and 1881 of Leghorns (brown and white), Speckled Hamburgs, Plymouth Rocks and Pekin Ducks.

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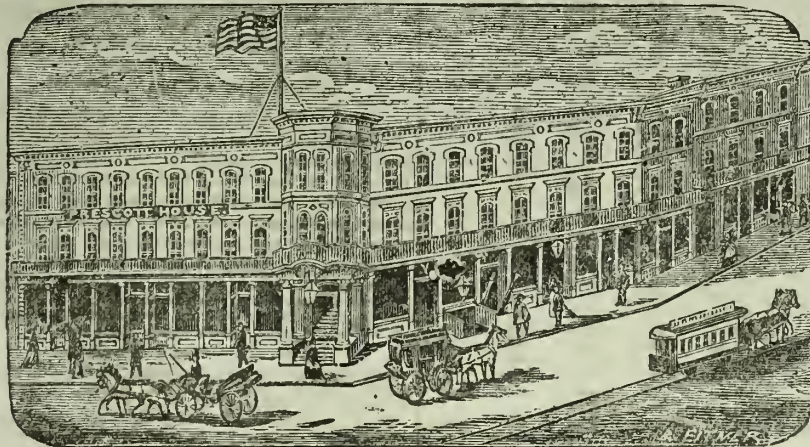
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S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House.

O. F. BECKER, Proprietor

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PORTABLE STRAW-BURNING ENGINES.

The above Engine is the safest and most powerful in the market, lighter than other Engines, and no danger of explosions. An explosion of Heald's boiler has never occurred. Two sizes are made; either size will run the largest separator. All the latest improvements have been added to the boiler and engine. Is ready to stand a test any time. Is guaranteed perfect in all its parts, and will do the same work with less water and fuel than any other engine in the market. With one of

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It will thresh and grind at the same time, all the separator can thresh. For further particulars, Address

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Engine can be seen at D. M. OSBORNE & CO., 33 Market St., S. F.

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Thursday,.....July 28th.

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Woolsey's Steam Generator and Power  
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This is the Cheapest and Best Steam Generator ever invented; and the cheese vat is so constructed that the temperature can be kept even and steady.

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Tanks, Troughs, Etc., Etc.,

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TWELVE HEAD OF

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of two months old. Also one BOAR eight months, fit for service. Inquire of G. M., 39 Clay Street, S. F.

## Colonies of Pure Italian Bees,

In movable (10) frame hives prepared for shipping, \$12.50 each. J. D. ENAS, Sunnyside, Napa P. O., Cal.

## Agricultural Articles.

THE CALIFORNIA ADJUSTABLE  
Spring Tooth Harrow  
CULTIVATOR & SEEDER.

As IMPROVED and PERFECTED for 1881 will work equally as well on loose or wet land as in hard or dry soil, and are what every farmer needs to destroy vegetation on the summer fallow. Will save reaping and put the land in the best possible condition for early sowing.

## LOOK TO YOUR INTERESTS

And make money by saving time and working your fallows before harvest. Our new size six foot ORCHARD or VINEYARD HARROWS are provided with handles, rendering them as easily controlled as the Cultivators. These implements are acknowledged by all who are familiar with their work, to be the most practical for general use in the orchard or vineyard of any yet offered to the public. Manufactured only by

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Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to

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Gang Plow and Manufacturing Works  
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Improved Stockton Gangs and Reversible Molds, wholesale and retail, at reduced prices. Every one warranted. Shipments made to all ports with promptness. Iron and Brass Castings. Agent Holt & Young's Combined Header and Thresher. Address,

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## The La France Steam Fire Engine.

Circulars furnished on application.

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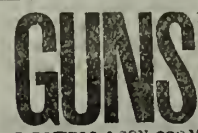
I am now ready to furnish PURE ITALIAN QUEENS, Colonies, Nuclei, Comb Foundation, Vell, Snokers, Knives, Bee Books, etc. SAMPLE HIVE. Address for Circular

JOS. D. ENAS,

Sunnyside, Napa P. O., Cal.

Calvert's Carbolic  
SHEEP WASH.  
\$2 per Gallon.

After dipping the Sheep, is useful for preserving wool hides, destroying the vine peet, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



Lowest prices ever known on Breech-Loaders, Rifles, and Revolvers, OUR \$15 SHOT-GUN at greatly reduced price. Send stamp for our New Illustrated Catalogue (B) P. POWELL & SON, 239 Main Street, CINCINNATI, O.

## GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

Reserve Fund and Paid up Stock, 25,760.

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ALBERT MONTPELLIER, Cashier and Manager  
FRANK McMULLEN, Secretary

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 3 months; 5% per annum if left for 6 months; 6% per annum if left for 12 months. BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1881.

WINDMILLS! HORSE POWERS!  
TANKS AND ALL KINDS OF PUMPING MACHIN-  
ERY BUILT TO ORDER.

No. 51 Beale Street, S. F.

Send for Circulars.

## F. W. KROGH &amp; CO.

(Successors to W. I. TUSTIN.)

## JOHN JENNINGS.

Hooper's South End Grain Warehouses,  
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First-class Fire-proof Brick Building. Capacity, 10,000 tons. Goods taken from the Dock and the Cars of the O. P. R. R. and S. P. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

50 Lithographed Chromo Cards, no 2 alike 10c. Name in fancy type. Conn. Card Co., Northford, Ct.



## Driven Wells.

Within 100 yards of Shell Mound station, between the railroad track and the Oakland trotting park, may be witnessed now the successful operation, by a single engine and pump, of a gang of 10 driven wells, discharging a body of water sufficient to flush a four-inch pipe, and operated by Messrs. Babcock, Howard & Co., of No. 40 Merchants' Exchange. The American driven well is in no sense a novelty; it dates as far back as 1861, when Nelson W. Green, the inventor, first introduced them in aid of the operations of the Union army, while he was Colonel of the Seventy-sixth New York regiment. For campaigning purposes they were found indispensable, and they now form part of the equipment of every European army. For industrial and domestic purposes, experience has shown them to be almost equally useful, combining as they do cleanliness and cheapness, with a never-failing supply of water. In the Eastern States, it is said, there are over a quarter of a million of these wells in successful operation for the supply of hotels, factories, breweries, stables, marble-cutting establishments and private houses. The great English brewers of Burton-on-Trent, Allsop & Sons and Bass & Co., have 55 of these wells, from which, it is reported, they obtain a supply of 1,100,000 gallons daily; and the brewers of New York obtain fully as large a supply in a similar manner. Not long ago it was found necessary to increase and improve the water supply of Newark, N. J., and something less than 100 of these wells were driven within an area of four acres.

From these wells a daily supply of 2,700,000 gallons has been poured into the reservoirs; nor does there seem to be the slightest prospect of a diminution of the supply. The outside cost of the well and hand-pump is a dollar per ft. on the length of the pipe when the ground is of an unusually difficult nature, and in most cases 50 cents per ft. will cover the cost of the pipe and pump. The pioneer settler, stock raiser, miner or farmer can on the new land, and inside of three or four hours he can settle satisfactorily and cheaply the vital question whether a good and sufficient supply of water exists there. On a farm, there need be no necessity of driving the stock up once or twice a day from the fields to the house well, for the owner will in a short time save the cost of one of these wells in every field in the benefit which will accrue to his stock from having perpetual access to pure water, and also in the saving of his own time. Again, for purposes of irrigation, a gang of ten of these wells can be worked by a windmill or steam engine, and will supply more water, and it is claimed will cost less to put down, than an artesian well. For house and domestic purposes, the water from these wells has many advantages. It is impossible that any impurities shall work down into the reservoir or basin from which the water is drawn. The pipe itself is air-tight until the perforated tube is reached, which rests in the water, and the pressure of the atmosphere prevents any impurities from slipping down on the outside of the pipe. It is a mistake to suppose that these wells can only be used to tap the surface stream. As a matter of fact they are even better adapted for underground streams which come from a distance and have a head which is not sufficient to make them flow over the top of the pipe. There is no difficulty in driving one of these pipes 100 ft., and in some instances 130 ft. have been reached. If the water then rises in the pipe to within 33 or 35 ft. of the surface an ordinary hand pump will bring it to the surface. The inventor claims that the pressure of the atmosphere resting on the ground instead of the surface of the water, as in ordinary wells, gives a pump an additional suction power of some seven or eight ft. The method of operations is simplicity itself. A long-pointed bar is first driven into the ground, generally with a maul and by hand. When the required depth is reached the bar is extracted by a jack-screw, and what is called a pioneer pipe is driven. This is perforated coarsely at the bottom, and serves for the pumping out of mud and small stones which may be in the way. Finally a section of gas pipe sufficient to reach the water basin, and measuring from an inch to an inch and a quarter in diameter is driven in with a finely perforated brass chamber attached to the lower extremity. At the upper end the pump is screwed on and the well is complete. The wells at Shell Mound vary in depth from 10 to 50 ft.—*Evening Bulletin.*

**THE ENGLISH LANGUAGE.**—It is stated that a larger number and greater variety of ideas can be conveyed with more exactness in a given number of words in the English language than most any other. This is strikingly shown in the matter of telegraphy. It has been demonstrated that for all telegraphic purposes, the English language is from 25% to 33% cheaper than the French, German, or any other language.

The old proverb of the prophet, etc., is illustrated by the inventors of thermometers. In England they use Fahrenheit's thermometer, the invention of a German. In Germany, the thermometer of Reaumur, a Frenchman, is still the most common. In France, and in many other countries, the Centigrade thermometer, which was invented by the Swede, Celsius, is universally adopted.

CONFEDERATE bonds brought \$10 per thousand the other day in New York.

## Meteorological Summary for the Month of October, 1881.

Station, San Francisco, Cal.						
Date	Daily Mean Barom.	Daily Mean Temp.	Daily Mean Humidity	Prevailing Direction	Daily Rain-fall.	
1.....	29.886	55.7	79.0	SW	.....	
2.....	29.951	56.3	82.0	W	.....	
3.....	30.030	57.3	79.7	W	.10	
4.....	30.114	56.3	76.3	W	.....	
5.....	30.103	56.0	77.3	W	.....	
6.....	30.075	57.7	67.0	W	.....	
7.....	30.015	58.7	62.3	W	.....	
8.....	30.043	59.3	65.0	W	.....	
9.....	29.935	61.0	61.3	W	.....	
10.....	29.935	55.7	73.0	SW	.....	
11.....	30.407	55.3	74.7	SW	.....	
12.....	30.009	53.3	63.3	W	.....	
13.....	30.141	48.3	55.7	W	.....	
14.....	30.268	50.0	68.0	W	.....	
15.....	30.084	52.3	77.3	W	.....	
16.....	30.180	52.3	62.0	NW	.....	
17.....	30.167	54.3	63.7	W	.....	
18.....	30.119	55.3	77.0	W	.....	
19.....	30.091	56.3	91.0	W	.....	
20.....	30.027	55.7	81.7	W	.....	
21.....	30.042	55.0	78.3	W	.....	
22.....	30.018	57.3	69.0	W	.....	
23.....	29.959	58.0	70.7	W	.....	
24.....	29.919	53.7	77.3	S	.....	
25.....	29.892	57.3	75.0	SW	.01	
26.....	29.910	58.3	81.3	S	.20	
27.....	30.016	57.5	80.0	S	.01	
28.....	30.027	58.3	87.0	SW	.12	
29.....	30.245	58.3	70.7	W	.....	
30.....	30.239	57.3	70.7	W	.10	
31.....	30.198	58.3	61.0	NW	.....	
Sums.....	331.644	1,732.4	2,283.3			
Means.....	30.053	55.9	73.7	W	0.54	

**General Items.**  
Highest bar, 30.552, Oct. 14th; lowest bar, 29.801, 25th; monthly range of barometer, .651.  
Highest temperature, 72°, Oct. 9th; lowest temp., 45°, 14th; monthly range, 27°. Greatest daily range of temp., 15.5, 22d; least daily range of temp., 5, 3d and 24th. Mean of maximum temps., 61.6; Mean of minimum temps., 51.6; mean daily range of temp., 10.0.  
Prevailing direction of wind, west; total movement of wind, 6,219 miles, highest velocity of wind and direction, NW, 13th.  
Number of foggy days, 0; number of clear days, 17; number of fair days, 8. Number of cloudy days on which no rain fell, 1; number of cloudy days on which rain fell, 2. Total number of days on which rain fell, 5.  
Dates of frosts, 14th, 15th, 16th and 17th.

**Comparative Temperature.**  
1871.....61.8 1877.....58.6  
1872.....58.8 1878.....61.8  
1873.....59.7 1879.....60.6  
1874.....59.8 1880.....58.9  
1875.....61.2 1881.....55.9  
1876.....59.0

**Comparative Precipitations.**  
1871.....0.07 inches 1877.....0.65 inches.  
1872.....0.11 " 1878.....1.27 "  
1873.....0.83 " 1879.....0.78 "  
1874.....2.69 " 1880.....0.75 "  
1875.....0.24 " 1881.....0.54 "  
1876.....3.36 "

NELSON GORON, Serg't Signal Corps, U. S. A.

## Business and Patent Office Removal.

October 20th the patent agency and newspaper offices of Dewey & Co., were removed to the northeast corner of Front and Market Sts., occupying a large space on the upper floor, where we have spacious and pleasant rooms for the accommodation of our increasing business. Our apartments will have two entrances as shown in the following engraving: Our stairway, No. 252 Market St., and our elevator, No. 12 Front St.



**Take the Elevator at No. 12 Front St.!**  
Visitors will find it better to step around the corner from Market St., to the elevator rather than ascend the stairs.  
The building we previously occupied between four and five years is to give place to a new one, which fact caused our removal.  
Old and new friends are cordially invited to give us an early call in our new quarters.

**Attend to This.**  
Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

**OUR COMPLIMENTS** are due Heald & Banks, machinists and model makers, No. 514 Commercial street, for the substantial manner in which they have made fast our sign in a difficult position.

**MANSION HOUSE.**—First-class in every respect.—When you visit Stockton stop at the Mansion House. Free Coach to the house. J. H. CROSS, Proprietor.

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IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sealions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Nov. 2, 1881.

It has been rather an off week, and there have been several declines in Grain prices, for example, in Feed, Barley and in Corn. Wheat holds up well, as ships are plenty, and the dullness abroad reported this week is believed to be but temporary. At any rate, the prospect of a lower freight rate puts something into the price of Wheat here. The latest from abroad is as follows:

**NOVEMBER 1.**—Wheat, California, 11s 1d @ 11s 5d @ cti. Floating cargoes heavy. Cargoes on passage and for shipment very inactive. California cargoes off coast, 53s @ 500 lbs; just shipped, 51s 6d; nearly due, 52s 6d.

## Eastern Wool Markets.

**NEW YORK, Nov. 1.**—Wool is strong. Spring Clip, Fine, 22@35c; Burry, 14@25c; Pulled, 20@42c; Fall Clip, 15@35c; Burry, 12@14c @ lb.  
BOSTON, Oct. 28.—The Wool market is very firm though dull. Prices continue to be obtained. The demand is good for fine fleeces and desirable lots, and medium is met with ready sale. Sales of Ohio and Pennsylvania, 43@44; Ohio XX, XXX and above, 43@45. The bulk of fine fleeces on the market are now held at 45. Michigan X has been selling at 42@43, mostly 42. Medium and No. 1 Ohio and Michigan have been sold at 45@43. Sales of unwashed fleeces have been about 1,300,000 pounds, at 17@23 for low and coarse, 25@33 for fine, 28@35 for medium, including a lot of 400,000 pounds of Montana at 32@34. California Wool is quiet. The Fall stock is dull and salable only at low prices; no new is received and none is expected while prices are so high in San Francisco. Combing and delaine Wools are very firm at 47@50 for fine delaine and No. 1 combings, 20,000 pounds Ohio delaine selling at 50. Pulled Wools are firm and in demand at from 25 to 50 for low and choice super. In foreign Wools there have been sales of Cape at 33, Montevideo 35, Australia 42@44, and Mediterranean carpet at full prices. The sales of the week of all kinds reached near 3,000,000 pounds.

**Eastern Grain and Provision Markets.**  
**NEW YORK, Nov. 1.**—Wheat, unsettled, \$1.35@1.40.  
CHICAGO, Nov. 1.—Wheat, very unsettled, opened strong and higher, but closed heavy, almost panicky; \$1.29 1/2 cash; \$1.29 1/2 November; \$1.39 1/2 December; \$1.33 1/2 January. Corn, strong, higher, closing a little off; 62c cash for November; 61c December. Pork, steady and firmer; \$10 1/2 cash; \$10.45 November; \$10.70@10.85 January. Lard, firmer; \$11.40 cash for November; \$11.70@11.75 January.

**THE FOREIGN REVIEW.**  
LONDON, Oct. 31st.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The week's rain, whilst generally benefiting wheat sowing, was unfavorable for threshing or marketing grain. Samples are again proving unsatisfactory. Prices are inactive. Wheat was very irregular throughout the week. At most of the provincial exchanges prices declined one shilling. Sellers in London on Friday were willing to accept a further reduction of one shilling on Monday's decline if buyers were disposed to deal, and trade became very inanimate. The amount of business done was trifling. Flour was rather more plentiful, but was dull and slow of sale at a decline of about sixpence. Foreign breadstuffs were particularly dull, and values quoted irregularly lower. There was a fair consumptive demand in London on Friday at a decline of a shilling for red and from sixpence to a shilling for white. There was a liberal supply of Indian wheats in Liverpool. Bonhay grades declined 18d per cwt, while the floating bulk continues to increase. Buyers are holding off in anticipation of lower rates. The opinion prevails that the value of maize is too high to be maintained; substitutes, such as grinding barley and foreign oats are cheap, and therefore buyers are cautious regarding maize at its present value. In London, on Friday, mixed American was freely offered at 28s 6d, ex-ship. Barley remains dull and sales were difficult at Monday's decline. The off-coast market is very dull, red winter wheat declining markedly to 53s 6d. Trade is forward and very quiet. Only seven wheat cargoes arrived during the week, of which five were withdrawn. Twenty are due, of which about two-thirds are of white wheat. Sales of English wheat during the week were 55,639 quarters, at 47s per quarter, against 45,076 quarters, at 43s 7d per quarter for the corresponding week of last year.

**BAGS.**—There is talk of smaller supplies of grain bags but it is the wrong time of the year for it to effect much in values.

**BARLEY.**—Feed Barley is about 5c lower @ cti. Brewing holds its own. We note sales of 270 bags feed Barley at \$1.40.

**BEANS.**—There have been several changes in Bean values this week as shown in our table of prices.

**CORN.**—Offerings of large and small Yellow at \$1.25 to \$1.27 has brought quotations to that figure. There are holders who place the grain higher in view of a prospective demand in Mexico.

**DAIRY PRODUCE.**—Prices for Butter are unchanged and the market firm. The finest California Cheese brings 15c.

**EGGS.**—Eggs are still in good demand and Eastern arriving in good condition sell high.

**FEED.**—Middlings have been reduced to \$28 per ton. Hay is unchanged.

**FRESH MEAT.**—Beef and Mutton are unchanged. Pork is a fraction higher in sympathy with the high range of meat products.

**FRUIT.**—There has been quite a drop in Limes owing to free arrivals. Mexican Oranges are now in selling at \$20@25 @ M. Strawberries fluctuate greatly from day to day. Grapes are higher.

**HOPS.**—A shipment of Hops abroad took 2,000 bales. Prices are about 1c lower than last week. Emmet Wells, in his New York circular of Oct. 21st, says:

While the receipts show an increase of a thousand bales over last week, there have been some 800 bales less taken for export. Prices remain steady at late quotations, 50c being the extreme cash figure paid on the market for a choice article. In the interior growers are all asking 30c, but buyers are not quite ready to pay this price; they prefer to wait a little and see the result of the late shipments to London. A few more German Hops have arrived here this week, but the high price asked will make a slow market for them, and our growers used have no fears of serious competition from this source.

**CASH PRICE CURRENT FOR HOPS IN NEW YORK.**—New York, crop 1881, choice, 25@30; do, medium, 25@27; do, low, 22@24; Eastern, crop 1881, 23@27; Wisconsin, do, 22@27; Yearlings, crop 1880, 12@22; Olds, all growths, 5@15; Bavarians, 40@45; Bohemians, 45@60.

**OATS.**—Oats are held about the same, but sales of the choicest milling have been on a lower level. The heat are now put at \$1.02.

**ONIONS.**—Onions are doing a little better, the best going at 90c.

**POTATOES.**—A lower range is reported for all sorts this week, as shown in our table.

**PROVISIONS.**—The trade is still in good shape and the inquiry fair. There is, however, a slight reduction on California Bacon and Eastern Hams—the latter being now above general consumption.

**POULTRY AND GAME.**—Roosters and Broilers are doing a little better. Turkeys are abundant and dressed are 1c lower. Snipe and quail are cheaper.

**TALLOW.**—There is a sharp inquiry for export.

**VEGETABLES.**—Cucumbers and Peas are higher this week. Green Corn and Cabbage have dropped off.

**WHEAT.**—The best Wheat is now quotable at \$1.77 1/2. There are few sales, as the freight rate is now in dispute, with the advantage on the side of the shippers rather than the ships.

**WOOL.**—The situation remains unchanged, prices stationary and no significant sales.

## Domestic Produce.

WHOLESALE, WEDNESDAY M., November 2, 1881.

WEDNESDAY M., November 2, 1881.					
BEANS & PEAS.					
Bayo, cti.....	2.00 @	2.25	Almonds, hd sh lb	7 @	9
Butter.....	3 1/2 @	4.00	Soft shell.....	14 @	16
Chestnut.....	3.00 @	3.50	Brazil.....	10 @	11
Peas.....	3.00 @	4.00	Pecans.....	13 @	15
Red.....	1.80 @	1.90	Peanuts.....	8 @	9
Pink.....	1.80 @	1.82 1/2	Filberts.....	14 @	15
Large White.....	3.00 @	3.25	ONIONS.		
Small White.....	4.00 @	4.50	Silver Skin.....	— @	75
Lima.....	5.75 @	6.50	Oregon.....	— @	90
Field Peas, hickory.....	50 @	75	POTATOES.		
do, green.....	2.60 @	2.25	Early Rose.....	70 @	80
BROOM CORN.			Petaluma, cti.....	1.00 @	1.15
Southern.....	3 @	3	Tombals.....	1.00 @	1.15
Northern.....	4 @	6	Humboldt.....	1.25 @	1.35
CHICKEN.			Kidney.....	— @	1.00
California.....	4 @	4 1/2	Peacocks.....	— @	1.00
German.....	6 1/2 @	7	Jersey Blue.....	1.35 @	1.40
DAIRY PRODUCE, ETC.			Cuffey Cove.....	1.25 @	1.35
Butter.....	— @	—	River, red.....	75 @	87 1/2
Cal. Fresh Roll, lb.....	42 @	45	Swiss.....	— @	—
do, Fancy Brands.....	42 @	47 1/2	Wheel.....	75 @	87 1/2
Pickle Roll.....	— @	32 1/2	POULTRY & GAME.		
Firkin, new.....	27 1/2 @	30	Ilena, doz.....	4.50 @	6.00
Eastern.....	20 @	25	Roosters.....	4.00 @	5.00
New York.....	— @	—	Broilers.....	3.00 @	3.75
CHEESE.			Ducks, tame, doz.....	4.00 @	5.50
Cheese, Cal., lb.....	13 @	15	Mallard.....	3.00 @	3.50
Cal. Fresh, doz.....	40 @	45	Spring.....	— @	1.50
Ducks.....	— @	33	do, Dressed.....	— @	1.50
Oregon.....	33 @	38	Widgong.....	1.00 @	1.25
Eastern, by express.....	30 @	32 1/2	Geese, pair.....	1.50 @	2.00
Pickled here.....	— @	—	White do.....	— @	—
Utah.....	27 1/2 @	37 1/2	Turkeys.....	12 @	15
FEED.			Soy, Eng.....	1.50 @	2.00
Brant, ton.....	— @	22.50	do, Common.....	— @	50
Corn Meal.....	— @	34.00	Quail, doz.....	— @	1.00
Hay.....	8.00 @	14.00	Rabbits.....	75 @	1.25
Middlings.....	— @	23.00	Hare.....	1.75 @	2.00
Oil Cake Meal.....	— @	20.00	Venison.....	5 @	7
Straw, bulk.....	42 @	45	PROVISIONS.		
FLOUR.			Cal. Bacon, extra	15 @	16
Extra, City Mills.....	5.25 @	5.75	clear, do.....	15 @	16
do, Country Mills.....	4.75 @	5.25	Medium.....	15 @	15 1/2
do, Oregon.....	4.75 @	5.12 1/2	Light.....	15 @	16
do, Walla Walla.....	4.75 @	5.25	Lard.....	12 @	17 1/2
Superior.....	3.50 @	4.25	Cal. Sausage.....	12 @	12 1/2
FRESH MEAT.			Shoulders.....	8 @	9 1/2
Beef, 1st quality, lb.....	4 @	5	Hams, Cal.....	13 @	14
Second.....	4 @	5	Dupees.....	17 @	18 1/2
Third.....	4 @	5	Whitaker.....	— @	18
Mutton.....	4 @	5	Royal.....	17 @	18
Spring Lamb.....	2 @	3	Stewart.....	17 @	18 1/2
Pork, undressed.....	5 1/2 @	6 1/2	Eastlake.....	17 @	18 1/2
Dressed.....	5 1/2 @	6 1/2	SEEDS.		
Venison.....	6 @	7 1/2	Alfalfa.....	10 @	12
Milk Calves.....	1 @	2	do Chile.....	— @	12
do, choice.....	— @	8	Oats.....	3 @	4
GRAIN, ETC.			Corn.....	12 @	15
Barley, feed, cti.....	1.35 @	1.42	White.....	45 @	50
do, Browning.....	1.55 @	1.85	Cotton.....	— @	20
Chevalier.....	1.55 @	1.57 1/2	Flaxseed.....	2 1/2 @	3
do, Coast.....	1.42 @	1.47	Hemp.....	— @	5
Buckwheat.....	1.55 @	1.60	Italian Kye Grass.....	25 @	—
Corn, White.....	— @	—	Yarrow.....	10 @	12
Yellow.....	— @	25	Millet, German.....	10 @	12
Small Round.....	— @	27 1/2	Mustard, White.....	12 @	24
Oats.....	1.35 @	1.55	do, Brown.....	2 1/2 @	3
Milling.....	1.00 @	1.60	Rape.....	24 @	24
Rye.....	2.00 @	2.65	Ky Blue Grass.....	16 @	18
Wheat, No. 1.....	1.75 @	1	2d quality.....	16 @	18
do, No. 2.....	1.67 1/2 @	1 1/2	Sweet V Grass.....	— @	75
do, No. 3.....	1.45 @	1.60	Orchard.....	20 @	25
Choice Milling.....	— @	77 1/2	Red Top.....	— @	20
HIDES.			Hungary.....	— @	20
Hides, dry.....	18 @	13 1/2	Lawn.....	30 @	40
Wet do.....	10 @	11	Mesquit.....	10 @	12
HONEY, ETC.			Timothy.....	8 @	8 1/2
Bee-wax, lb.....	23 @	25	TALLOW.		
Honey in comb.....	15 @	20	Crude, lb.....	7 @	7 1/2
Extracted, light.....	10 @	11	Refined.....	9 @	10
do, dark.....	8 @	9	WOOL, ETC.		
HOPS.			FALL—1881.		
Oregon.....	— @	—	San Joaquin.....	12 1/2 @	14
California, new.....	23 @	27	do, Lamh.....	14 @	15
Wash. Ter.....	25 @	26	Southern Fall.....	14 @	15
Old hops.....	— @	—	do, Lamh.....	14 @	15
NET Jobbing.			Northern, free.....	17 @	20
Walnuts, Cal.....	9 @	9	do, defective.....	14 @	16
do, Chile.....	7 1/2 @	8			



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No. of Cert.	Name.	No. of shares.	Amt. of Assess.
1189	Alexander, Chas.	5	\$ 12 50
608	Black, W. H.	1	2 50
274	Black, W. H.	1	2 50
64	Boynton, F. Z.	5	12 50
1019	Bodfish, Olando.	8	7 50
1465	Brown, O. H.	2	5 00
530	Brown, Sberman.	4	10 00
595	Clark, Annetta.	1	2 50
276	Clark, Annetta.	1	2 50
994	Gartleman, Daniel.	2	5 00
1001	Gartleman, Daniel.	2	5 00
611	Clark, Jas. A.	8	20 00
277	Clark, Jas. A.	2	5 00
1686	Caldwell, D. A.	1	2 50
1867	Caldwell, D. A.	1	10 00
1146	Caldwell, D. A.	1	2 50
259	Campbell, Basil.	4	10 00
1621	Clock, Sarah D.	4	10 00
1481	Cleghon, J. A.	2	5 00
782	Colburn, B.	2	5 00
188	Colby, G. W.	40	100 00
750	Corpetein, J. P.	1	2 50
1603	Costigan, J. M.	2	5 00
507	Cox, E. J.	5	12 50
505	Crook, John.	5	12 50
509	Crook, Chrs.	2	5 00
980	Davis, G. W.	25	62 50
174	Downey, Patrick.	1	2 50
412	Ebi, J. H.	1	2 50
475	Emert, M. F.	5	12 50
189	Faber, G. R.	2	5 00
598	Finley, Miss Mollie.	1	2 50
271	Frost, T. G.	1	2 50
470	Gallup, E. E.	1	2 50
469	Gallup, Young A.	1	2 50
468	Gallup, Mrs. L. J.	4	10 00
1188	Galloway, A. J.	8	20 00
256	Gallup, T. A.	4	10 00
273	Glenn, D. C.	1	2 50
574	Glenn, Mrs. Mary E.	1	2 50
1023	Hamilton, Mrs. Lou.	5	12 50
1025	Hamilton, Emmor.	5	12 50
1598	Harlen, J. H.	5	12 50
1090	Helm, A.	2	5 00
1477	Howard, Chas. E.	1	2 50
794	Hunter, A. B.	4	10 00
6	Helpenstein, L. H.	2	5 00
1671	Helpenstein, L. H.	1	2 50
1634	Jones, R.	1	2 50
1258	Judson, Homer.	5	12 50
1494	Kellogg, G. P.	10	25 00
253	Kimball, G. W.	8	20 00
1681	Knoff, John F.	4	10 00
824	Langlois, Susan.	1	2 50
1087	Lantenschlager, C.	4	10 00
1270	Leffingwell, Wm. Jr.	4	10 00
1290	Leffingwell, Wm. Sr.	4	10 00
1271	Leffingwell, Adams.	4	10 00
1251	Little, Horace.	8	20 00
783	Linebaugh, A.	20	50 00
784	Linebaugh, John.	2	5 00
177	Lunney, Phillip.	2	5 00
1159	Matterson, F.	1	2 50
61	Menzies, Thos.	1	2 50
101	Middaugh, Gilbert.	1	2 50
1674	Meyer, Jacob.	5	12 50
5	Merrill, Chas. H.	1	2 50
1675	Merrill, Chas. H.	1	2 50
1348	Morrison, S. T.	5	12 50
1613	McCampbell, S. S.	5	12 50
1452	Nelson, C.	4	10 00
98	Niles, E. C.	2	5 00
642	Prince, N. J.	10	25 00
877	Prince, N. J.	5	12 50
236	Pendegast, M.	2	5 50
15	Quint, Frederick.	2	5 50
1670	Quint, Frederick.	1	2 50
1394	Roberts, Chas.	10	25 50
656	Roberts, Chas.	6	15 00
1282	Rauschamp, Geo.	2	5 00
252	Reese, Elizabeth.	1	2 00
250	Reese, David.	2	5 50
307	Sawyer, E. A.	5	12 00
502	Settle, C. T.	4	10 00
1139	Sherburn, D. N.	4	10 00
1546	Slayton, O. O.	10	25 00
406	Stockton, S. W.	2	5 00
445	Stevens, L. D.	4	10 00
461	Stevens, W. A.	2	5 00
855	Stanley, H. Y.	4	10 00
876	Stone, L.	10	25 00
189	Taher, G. R.	2	5 00
608	Talbotson, G. W.	1	2 50
191	Torry, Jas.	2	5 00
679	Veerkamp, F.	10	25 00
1458	Voorhes, Geo. W.	4	10 00
1489	Voorhes, Effie A.	4	10 00
1377	Watson, Mrs. Thos.	1	2 50
1659	Warner, Jas.	11	27 50
1443	Weymouth, Almon.	5	12 50
773	Wells, C.	1	2 50
609	Wells, Mrs. J. C.	1	2 50
436	Without, Jessie.	4	10 00
505	Welty, Jacob.	2	5 00
914	Wil-on, E.	3	7 50
113	Whitrow, C. W.	1	2 50
1032	Wiscarver, J. R.	4	10 00
731	Woodhams, A. R.	2	5 00
805	Woodward, F. J.	4	10 00
1611	Webster, John.	3	7 50
543	Webster, John.	2	5 00

And in accordance with law, and an order of the Board of Directors, made on the 9th day of September, 1881, so many shares of each parcel of such stock as may be necessary, will be sold at public auction, at the office of the Company, 38 California St., San Francisco, Cal., on Monday, the 21st day of November, 1881, at the hour of two o'clock, P. M., of said day, to pay delinquent assessments thereon, together with costs of advertising and expenses of the sale. AMOS ADAMS, Secy., Grangers' Business Association of California; office, No. 38 California St., S. F.

## To Fish Raisers.

I am now ready to sell Carp which were imported from Germany in 1872, in lots to suit. Address

J. A. POPPE, Sonoma, Cal.

## FARM TO LEASE.

That Splendid Farm belonging to the EXCELSIOR WATER AND MINING CO., known as the BONANZO RANCH, containing 1,700 acres in Yuba County, three miles west from Smartsville, on the Stage Road to Marysville, will be leased to a good tenant for a term of years, with privilege of purchase, 400 acres are in

## Alfalfa and Clover.

And more can be put in. Ditches are all ready for irrigation, and water abundant. Fine

## Vineyard and Orchard

Sites. Improvements are very complete. For further particulars and terms, apply to

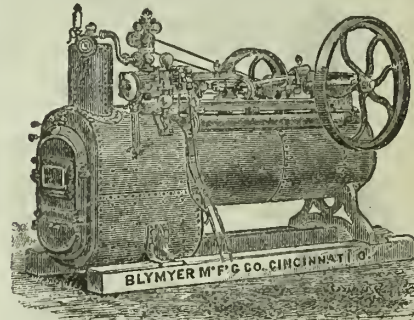
JAMES O'BRIEN, Assistant Supt.,

Smartsville, Cal.

or L. C. McAFFEE Secretary,  
323 Montgomery St., Room 6, S. F. Cal.

## STEAM ENGINES.

VICTOR, GREAT WESTERN AND NILES' SUGAR CANE MILLS from Blymyer Manufacturing Co.



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This Wonderful Improved SAW MACHINE is warranted to saw a 2-foot log in three minutes, and more cord wood or logs of any size in a day than five men can chop or saw the old way. Every Farmer and Lumberman needs one. AGENTS WANTED - Circulars and terms Free.

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Extract of tobacco, free from poison. Prepared by the Italian Government Co. Cures thoroughly THE SCAB OF THE SHEEP

And is an excellent Sheep Dip. The best and cheapest remedy known for curing the Scab.



SAN FRANCISCO, May 24, 1881.

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Plow Works.



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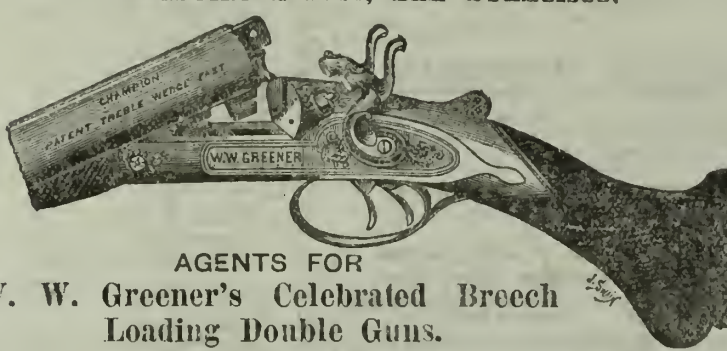
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Cahoon and Gem Seed Sowers, Harrows, Etc. Extras for all Plows and Machines I have sold for the past TWENTY YEARS in this valley. Send for Circular and price list. Always on hand a full stock of Single Plows. Have used these Gangs for over 15 years. Now using 70. Adapted to all soils. - JOHN W. JONES, Atiauta, San Joaquin Co., Cal.

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We also make a Cleaner to attach to Threshing Machines that will clean ALL any machine can thresh.

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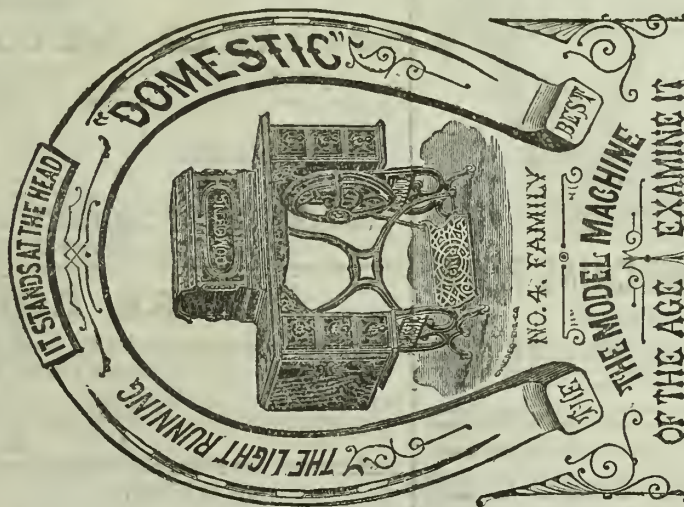
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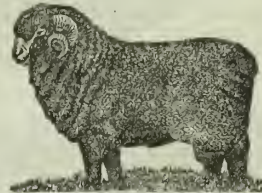
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All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information

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Price Reduced to \$1 Per Gallon.

**MOORE'S SULPHUR DIP,**THE BEST AND CHEAPEST PREPARATION FOR  
THE CURE OF SCAB.The General Health and Condition of the  
Sheep Promoted by its Use.  
For Non-Poisonous.

One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

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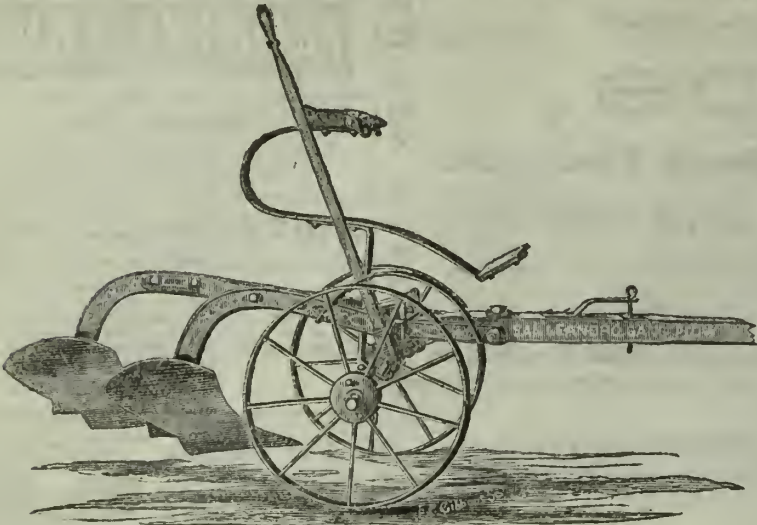
**Tempest Windmill Patent,**  
Self-Regulating and Improved Gear.

Using the Celebrated "Davis Wheel." Took First Premium at Stockton Fair, 1881. Water troughs always on hand. Address,

E. J. MARSTEN, Stockton, Cal.



# THE SAN LEANDRO GANG PLOW.

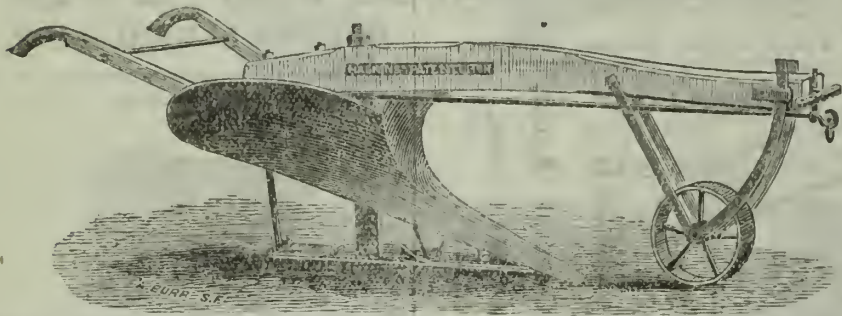


**Price Complete, - - - \$92.50.**  
Manufactured by the San Leandro Plow Company, San Leandro, Cal.

In this Implement is combined THE VERY BEST GANG PLOW CARRIAGE YET MADE with the three following styles of bottoms any of which stand at the head for the different soils for which they are intended: Style No. 1. Hardened Steel, same shape as the John Deere Moline No. 7 Single Plow. Adapted to a great variety of soils—in fact anything except the worst adobe. Style No. 2. Hardened Steel nearly the shape of the Furst & Bradley pattern, for sticky soils, made at Chicago. This Plow has a most beautiful form, with a long easy sweep to the moldboard, and while working very well in all soils is nearer perfection as an adobe Plow than anything yet tried on the Coast. Style No. 3. Oliver Chilled Bottoms. This is a remarkable Plow, in form, design and quality. Its reputation is almost world wide and its sides reach into the hundreds of thousands. It is made of Chilled Cast Iron, cast in such a way that the grain of the metal stands vertical to the face of the mold and is so hard that all attempts to file or drill it will be found useless. The form of the Plow adapts it for use in almost any soil, and no Plow is superior to it for leaving a clean, well turned furrow. The simplicity and neat appearance of OUR NEW GANG PLOW CARRIAGE is evident at a glance and yet it possesses with but a single lever all the advantages claimed by the most complicated implements with their numerous Levers, Spiral Springs, Cog-wheels, Racks, Segments, etc., besides some very important ones that are peculiar to this alone.

- 1st. It will strike out lands simply by throwing the lever well forward.
  - 2nd. It raises very high out of the ground.
  - 3rd. One wheel can be raised at any height above the other so as to plow at any depth desired.
  - 4th. The tongue can be set two feet to the right or left in a moment.
- The above are points possessed by many other Gangs, but in none are the results obtained so simply. The following advantages are peculiar to this Gang Carriage:
- 1st. Its Leverage is so perfect that a man can lift it with ease when there are two other men standing on the beams.
  - 2nd. The seat is so adjusted that the weight of the driver assists in raising the Plows instead of preventing it.
  - 3rd. The lever is pulled back to raise the Plows instead of being pushed forward, which enables the driver to exert his strength to much better advantage both in raising and lowering the Plows.
  - 4th. The Seat is high and comfortable and is placed on an easy spring.
- For Proportion, Workmanship, Simplicity, Strength and practical usefulness we challenge comparison with any Gang Plow made in the United States.
- The above Gangs are for sale at the Factory in San Leandro, and by David N. Hawley, 37 Market St., San Francisco; Bailey, Bagley & Co., Stockton; Haiman, Stanton & Co., Sacramento; White, Cooley & Untz, Marysville; Smith & Baxter, Gilroy, and at many other points in the interior.

**SAN LEANDRO PLOW CO., San Leandro, Cal.**



## THE MASKINS PATENT DITCHING & TRENCHING PLOW.

Manufactured and for Sale by the San Leandro Plow Co.

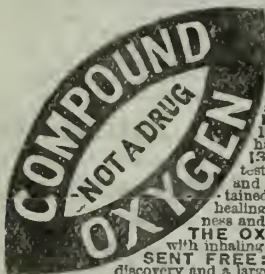
Adapted for cutting Trenches for setting out Grape Vines making open ditches for irrigating and for laying Sub Irrigating Pipes. With 8 animals and 3 men, a ditch 20 inches wide at top, 4 to 8 inches at bottom and 20 to 24 inches in depth, with flaring sides can be made at the rate of FOUR MILES PER DAY. It furishes the best method of planting vines known, as by it a cutting 40 inches long can be used (giving greater growing surface) while at the same time it is placed in mellow loosened soil.

This Plow or Ditcher is no longer an experiment. It has been in use in various parts of Yolo and Napa Counties for the past three years, and has shown itself to be capable of making a clean, deep, beveled sided ditch (with the earth thrown well back) from 12 to 24 inches in depth below the general surface of the ground.

The cut shows its construction. It is simple, free from complication, strong and yet so novel in form that a broad patent has been allowed upon it.

We shall make them to order only. Price according to size. They are made in three different sizes, cutting trenches from 12 to 24 inches deep, and ranging in price from \$100 to \$200. Some of the larger sizes have carrying wheels. Address

**SAN LEANDRO PLOW CO., San Leandro, Cal.**



**A NEW TREATMENT** for Consumption, Asthma, Catarrh, Debility, Neuritis, Rheumatism, and all Chronic and Nervous Disorders. ACTS DIRECTLY upon the great nervous and organic centres, and cures by a natural process of vitalization. HAS EFFECTED REMARKABLE CURES, which are attracting wide attention.

HAS BEEN USED BY Rt. Rev. John J. Keane, Bishop of Richmond, Va., Hon. Wm. D. Kelley, T. S. Arthur, and others, who have been largely benefited, and to whom we refer by permission.

IS STRONGLY ENDORSED: "We have the most unequivocal testimony to its curative power from many persons of high character and intelligence."—Lutheran Observer. "The cures which have been obtained by this new treatment seem more like miracles than cases of natural healing."—Arthur's Home Magazine. "There is no doubt as to the genuineness and positive results of this treatment."—Boston Journal of Commerce.

THE OXYGEN HOME TREATMENT contains two months' supply, with inhaling apparatus and full directions for use.

SENT FREE: A Treatise on Compound Oxygen, giving the history of this new discovery and a large record of most remarkable cures. Write for it. Address

**DRS. STARKEY & PALEN, 1109 and 1111 Girard St., Philadelphia, Pa.**

**Depository on Pacific Coast.**

WE HAVE ESTABLISHED A DEPOSITORY OF OUR COMPOUND OXYGEN HOME TREATMENT at San Francisco, Cal. This will enable patients on the Pacific Coast to obtain it without the heavy express charges which accrue on packages sent from Eastern States.

All orders directed to H. E. MATTHEWS, 606 Montgomery street, San Francisco, Cal., will be filled on the same terms on which we fill orders sent directly to our office in Philadelphia.

Patients ordering from our depository in San Francisco, should, at the same time, write to us, and give a statement of their case, in order that we may send such advice and direction in the use of the Treatment as their special disease may seem to require.

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Wanted, from TWENTY to FORTY GOOD DAIRY COWS that will come in between August and October.

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50 All Gold, Chromo and Lithograph Cards. (No two alike). Name on, 10c. Clinton Bros., Clintonville, Conn.

THE NEW IMPROVED VANELESS

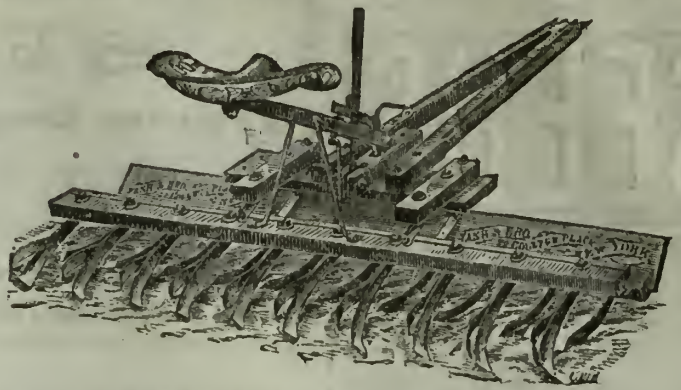
## ALHOUSE WINDMILL AGENCY.

S. H. KILMER, of San Rafael, has the Agency for all Counties North of the Bay. Having them in stock orders for any size can be filled at once.

50 All Gold, Chromo and Lithograph Cards. (No 2 alike). Name on, 10c. Clinton Bros., Clintonville, Conn.

# "ACME"

## PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.



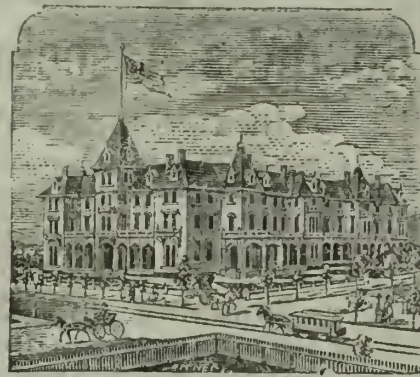
For the Orchard, Nursery and Grain Field.

Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, Turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

**NASH & BRO., Sole Manufacturers,**  
22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. E. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia.



## TUBBS HOTEL,

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Having been Thoroughly Refitted and Refurnished, Painted and Frescoed, is now Open for the Reception of Guests. Rooms can now be secured at the Hotel.

**S. I. KELLOGG, PROPRIETOR.**

## W. R. STRONG & CO., WHOLESALE SEED MERCHANTS.

Every description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. Can be obtained at our Establishment Fresh, Pure and Genuine, at the Lowest Rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. (Seed and Tree Catalogue sent by Mail free on Application.)

—ALSO—  
**Wholesale Fruit and General Produce Dealers.**

Special attention will be given and prompt returns rendered for Consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates.

Our constantly increasing line of customers attest to the fairness of our prices and quality of our goods.

**Nos. 106 to 110 J Street, Sacramento, Cal.**

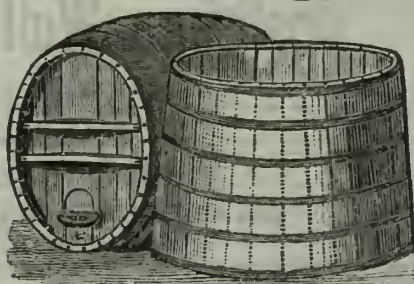
## PURE BRED POULTRY.

Langshans, Cochins Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for Sale Cheap, considering the quality of stock. For further information, send 3 cent stamp for new circular and price list to

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## CALIFORNIA Wine Cooperage Co.



**FULDA BROS., Proprietors.**  
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ALL KINDS OF CASKS, TANKS, ETC.

Ship, Mining and Water Tanks a Specialty.

## CAMPTON'S PATENT SINGLE FARM GATE.

Iron or Wood self-opening and shutting. No stock can unlatch. This gate always opens from you. Iron, \$40; Iron and Wood, \$50; Wood, \$20. Send for circulars to A. L. CAMPTON, Robinsonville, Humboldt Co. Farm, County and State rights for sale. Took First Premium State Fair, 1881.

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N. B.—Diseases of Women and Children a specialty. Prompt attention given to correspondence. Office and Residence, St. Ann's Building, opposite Baldwin, room 81. Hours, 1 to 4 P. M. Take Elevator from Eddy street.

## REMOVAL NOTICE.

The Sweepstake Plow Company's Works have been removed to

**Benicia from San Leandro.**

ADDRESS IN FUTURE:

**BENICIA AGRICULTURAL WORKS,**  
Benicia, Solano County Cal.

**Nash Bros.'s Pulverizing Harrow and Clod Crusher.**

The Best Implement for Pulverizing, Harrowing, Cultivating; using steel curved teeth, and can be regulated to any depth.

**GARDNER'S HAY ELEVATOR AND CARRIER.** This is Automatic and Self-regulating, raising hay or straw to any height, and carries to any desired point. It will pay for itself in one season. L. D. BURGESS, Agent, Rio Vista, Cal.

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**SPECIALTY FOR 30 YEARS.**

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The most complicated cases of defective vision thoroughly diagnosed, free of charge. Compound Astigmatic Lenses Mounted to order in Two Hours notice. Orders by mail promptly attended to.





Volume XXII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 12, 1881.

Number 20

### The Lotus.

We adorn another chapter upon aquatic gardening with an engraving of the famed "lotus" of the Nile, known also as the "sacred bean" of India, for the same aquatic plant (*Nelumbium speciosum*) is indigenous in widely separated parts of the world. It is a plant with a most enchanting history, as well as remarkable beauty, and it has also a food value in the countries where it grows wild, and thus it combines qualities appealing to sentiment, taste and appetite, a group of points not often found in a single plant. It has also been found quite tractable in the hands of the water gardener, and Mr. E. D. Sturtevant, of Bordentown, New Jersey, the well-known grower of aquatics, has found the plant quite hardy, even in the Eastern winters. In connection with the handsome engraving of the lotus on this page, which we take from Mr. Sturtevant's catalogue, we propose to recite some interesting points in its history and add notes on its culture:

According to Thumberg, as quoted by Rhind, it is esteemed a sacred plant in Japan, and pleasing to their deities, the images of their idols being often represented as sitting on its large leaves. The long stalks are used by the natives as an article of diet. Loureiro mentions that it abounds in muddy marshes in India and China, and is cultivated in large, handsome pots in the gardens and houses of the mandarins; that there is a variety with the flower of a pure white, and another with a very beautiful luxuriant flower, having about 100 large petals, white or rose-colored. Both root and seeds are esculent, sapid and wholesome. The Chinese call it *lien wha*, and the seeds and slices of the hairy root, with the kernels of apricots and walnuts, and alternate layers of rice, were frequently presented to the British ambassador and his suite at breakfasts given by some of the principal mandarins. The Chinese have always held this plant in such high value, that at length they regarded it as sacred. That character, however, has not limited it to merely ornamental purposes, for the roots are not only served up in summer with rice, but they are also laid up in salt and vinegar for the winter. The seeds are somewhat of the size and form of an acorn, and of a taste more delicate than that of almonds. The ponds are generally covered with it, and exhibit a very beautiful appearance when it is in flower; and the flowers are no less fragrant than handsome. Sir George Staunton remarks that the leaf, besides its common uses, has, from its structure, growing entirely round the stalk, the advantage of defending the flower and fruit arising from its center from contact with the water, which might injure them. He also remarks, that the stem never fails to ascend in the water from whatever depth, unless in case of a sudden inundation, until it attains the surface, where its leaf expands, rests and swims upon it, and sometimes rises above it. This plant bears the rigorous cold of the Pekin winter.

In ancient Egypt the *Nelumbium speciosum* was endowed with mystic honors and won the admiration of the earliest writers. Herodotus calls it the "lily rose of the Nile," and Theophrastus speaks of it as the sacred bean of Egypt or the lotus of Antinous. It would be indeed a distinguished inhabitant for our ponds.

Concerning its culture Mr. Sturtevant says: It may be grown and flowered in a large tub, or, better, in a cement basin sunk in the ground, such as we have described. It sends out creeping stems, which run a long distance in the mud. This is our reason for recommending a separate compartment for it in the lily tank. It is only when planted in a large pond and allowed to spread, that it will produce the largest floating leaves. A good way to naturalize it is to start it first in a pan or shallow box placed in water at 60° to 75°, then when the water in the pond is well warmed, turn it out carefully into very rich soil or mud where the water is about one foot deep. It will then spread and take care of itself. No aquatic plants have a more tropical aspect than the lotuses; and a large patch of them, with hundreds of flowers and buds, is a sight never to be forgotten. They can be raised from seed,

but it is a plan requiring a great deal of patience, as it takes three years to produce a blooming plant.

The lotus continues to bloom until cool weather in the fall. When just expanding, the flowers are especially beautiful, being of a rosy pink color. When open, they are creamy white and pink, and are very sweet. They open in the morning and close in the afternoon, like the common water lily.

JAPANESE PERSIMMONS.—Notes of this year's fruiting are beginning to appear. Two which come to hand this week are widely apart geographically. The Antioch (Contra Costa Co.), *Ledger*

A NEW PHYLLOXERA PRIZE.—We read, in connection with the reports of the meetings of the Phylloxera Congress in Bordeaux last month, that the French Society for the Encouragement of National Industry has proposed quite a new direction of research in connection with the prizes offered for the best remedy against the phylloxera. It is found that, though submersion kills the insects about the roots, yet it does not prevent them from being immediately attacked again by such as have survived on the stalks; while chemical remedies are open to a like objection, as they spare the insect either on the stalk or below the surface.



THE LOTUS OR SACRED BEAN OF EGYPTIAN INDIA—(*Nelumbium speciosum*.)

says: "Dr. Wm. T. Oden has a tree in his yard only two years old, which has 50 full-sized, well-matured persimmons. The fruit is of a bright yellow color, and is as palatable as it looks." The San Diego *Union* says: "We are indebted to Mr. George A. Cowles, of Cajon valley, and Mr. Harvey, of Jamul, for some beautiful specimens of the Japanese persimmon. The fruit was grown in localities widely apart, yet it is equally perfect, showing that it can be produced in any part of the county. The Japanese variety is at least ten times as large as the old-fashioned Eastern persimmon; and while the flavor is somewhat similar, it is more delicious."

A FREAK IN ROSES.—Dr. Conger, of Pasadena, shows the Los Angeles *Commercial* a curious production, being a bunch of half a dozen small roses springing and blossoming from the center of a large rosebud that had recently blossomed and gone to seed.

DEATH OF J. B. SAUL.—J. B. Saul, manager of the Oak Shade orchard at Davisville, and well known through the bay counties, died last week.

THE INFIDEL GRAPE.—We read that the farmers of the Ojai valley are largely engaging cuttings of the "Infidel" grape. Is it a new grape, or does the writer mean Zinfandel?

### Australian Meat and California Pastures

The last English mail brings information that the last cargo of Australian frozen meat exported came to hand in excellent condition, and sold well on the London markets, the average price of the mutton carcasses being about 12½ cents per lb. The success of these shipments is firing the agricultural heart of Australia. The revival of interest in meat production in those parts of the great island continent available for the industry amounts to a "boom," and pervades all branches of stock growing. The preparation of what is expected to be a great business extends even to the production of new pastures, and that is where it, singularly enough, treads upon California toes.

Mr. Sneath, of Jersey Farm dairy, who annually imports tons of rye grass seed from Australia, tells us that he has just been informed by his correspondents, that he can probably get no rye grass seed this year, as the local demand for meat-producing pasture-making will absorb the whole supply. But this fact will only lead Mr. Sneath to use more orchard grass seed from the East in the place of the rye. It may interest our dairymen to know that he finds orchard grass even better than rye grass on some accounts. It is not so good for hay, but in unfavorable spots, as for example on high, wind-swept knolls, with a shallow layer of soil on the rock, he has found orchard grass yielding him a wonderful growth of feed. Of course, orchard grass does not dislike a better place, but it surpasses his expectations even there. The success of orchard grass, which is generally employed at the East in shaded locations where other grass does not succeed, is somewhat anomalous in sun-burnt California, but it must be remembered that Mr. Sneath's pastures are adjacent to the coast, and have the advantage of moisture-laden breezes from the ocean and many fogs. Possibly his experience with orchard grass in such a location may be of value to other dairymen.

### Doctored Milk.

The law against adulterated milk evidently needs enforcing now and then. The Sacramento *Bee* describes a case of adulteration as follows:

A few days ago a reputable dairyman in this city ran short of milk for his customers, and the lad who was driving the delivery wagon purchased a small quantity from another vendor. This was furnished to three families, none of whom were able to use it, for the simple reason that it was not milk at all, but some vile adulteration composed of chalk and water, flour, or similar ingredients. After standing in a vessel for a few minutes a thick, whitish sediment settled at the bottom—enough to furnish the required coloring matter for the liquid. The stuff bore no resemblance to milk in taste, and even in appearance it was readily distinguishable from the genuine article.

This is evidently a case of the purest adulteration, or rather most impure adulteration, as the reader chooses. It is seldom we hear of a case of absolute manufacture like this. The addition of water is of course bad enough but harmless compared with the manufacture of a whitish liquid from indigestible imitations and dangerous materials. It is for the public interest that all cases like the above should be diligently sought out and the penalties inflicted unsparingly.

We read of a case the other day where it was shown that a milkman in a New England city had doubled his supply of milk by the use of a whitish emulsion of which he had made ten gallons for a few cents, and that he had sold the recipe to a milkman in another city for \$25. Such things as this are bound to propagate themselves because of the cupidity of men, unless some check be placed upon them, and it is the duty of every one who finds the traces of adulteration to do what he can to bring the law to bear upon the offenders.

THE RURAL PRESS.—I expect to take your paper as long as I live, and hope your reward will be commensurate with your endeavors to supply us with such an excellent and reliable journal of agriculture.—C. H. CHENEY, Sonoma Co.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Lands and Crops in Ventura County.

EDITORS PRESS:—I have received inquiries from three readers of the RURAL in regard to land and crops in Ventura. As each of the inquirers refers to articles in the RURAL, I thought I could answer them collectively through the PRESS just as well as to write separately to each.

First, I am unable to advise anyone in regard to hest unoccupied land favorable to the culture of apricots. Every year men locate tracts of Government land, clear and cultivate parts of it, and build pretty homes. And every year men leave Ventura, declaring every acre of good land in the county taken up. The apricot is one of the few fruits which seem to grow equally well in the humid, cool, summer atmosphere near the coast, and the dry, warm climate of our inland valleys. For instance, the Chaffee orchard, which is less than a mile from the wharf, has for the last ten years borne a full crop of excellent apricots annually. And the orchard of Mr. Hobarth, which is 20 miles inland, on the upper Ojai, has produced heavy crops of No. 1 apricots every season for the last six years. The apricot requires a deep, rich soil, not too wet; and yet the tree will not do well if the land is at any time permitted to become very dry, even after fruiting. Apricot trees which I set in 1872 bore this season over 200 lbs. of fruit per tree, and there are plenty of places where trees would thrive as well as there. But choicest locations of Government land were taken long ago, therefore at present there is not so much unowned land to choose from as formerly. Besides, a location which would just suit one man might not satisfy another. Besides, I think every man can select a home for himself better than anyone not familiar with his tastes and circumstances could select for him. For instance, an able-bodied, industrious man could soon clear and bring under cultivation a rough, bush-covered piece of land which, in its wild state, would make a timid, feeble man shiver at the bare thought of trying to clear it. The best land for apricots is likewise the best land for Lima beans, and this season some fields of Lima beans in Ventura paid over \$70 per acre. I mention this because a man can plant a row of Lima beans between the rows of trees in a young orchard, and thus derive a revenue from his orchard land from the start.

The price of improved land ranges from \$5 to \$100 per acre, according to improvements and locality. The raisin grape and orange are grown here, and both succeed well. Good land for apricots is not always good land for orange or grapes. The English walnut and apricot will do well where the raisin grape and orange would be a total failure. Better see the land and judge what it will produce by land similarly located, before you buy it. The Ventura Signal, our principal county paper, is the best source of information in regard to lands, crops, prices and products, for a non-resident.

Farewell to Mr. Enas

Since writing the above in answer to inquiries made by letter, concerning land and products in our county, I received the RURAL PRESS of Oct. 29th, and read with surprise the communication of Mr. J. D. Enas, to which the only comment I have to make is, I am greatly astonished to find that such an article can obtain a place in the RURAL PRESS. The readers of the PRESS can compare that, and his former articles on bee culture, with the criticisms on the same, which was published in the RURAL PRESS, and judge for themselves of their merit and utility.

ROBERT LYON.

Cliff Glen, Nov. 3, 1881.

### Santa Cruz County Notes.

EDITORS PRESS:—In consideration of the fact that a large portion of humanity prize very highly a comfortable, healthy and pleasant home, I want to inform your readers that there are thousands of chances for just such homes in Santa Cruz county. Of course, everybody knows that Santa Cruz is a great summer resort, and visitors come in by the tens of thousands every year from the interior, hot valleys and from San Francisco, to enjoy for a season our balmy and bracing atmosphere, bathe in our gentle-rolling surf at some of the many watering places along the bay, have a good time picnicking in some of the many pleasant groves, take drives through the wild, picturesque and grand scenery of the mountains back of the bay, where they may easily get to elevations that overlook the towns of Santa Cruz, Soquel, Aptos, Watsonville, Castroville and Monterey on the one side, and San Jose, Santa Clara and all the smaller towns on the other side of the mountains. But these people, as a rule, are pleasure seekers, and not home seekers. They have their established homes; and after they have enjoyed for a season in the way described above, they go back to their business to make money to spend with us at another time.

This class of people know but little about our county, except the chances for fun, hotel

and hack accommodations, and consequently the chances for "homes" here are not generally known outside the county; but having thoroughly acquainted myself with the county, with regard to its natural advantages, I can assure your readers, that in my estimation, there is not another county on the coast that offers such advantages for homes, in the true sense of the word, as Santa Cruz. Just think of a climate that gives you nine days out of ten clear sunshine, without unpleasant heat, or drought; regular crops of a great variety of choice orchard fruits and grapes, without irrigation; heavy crops of wheat (last year 100 bushels to the acre in some cases), barley, corn, potatoes, squash, etc., and in fact anything that grows on the coast, will grow here and will grow big.

We have plenty of excellent timber and fine wood, cheap and handy, pure running water all over the county, excellent roads, schoolhouses at convenient distances, railroad and water transportation, cheap and convenient; building material cheaper than anywhere else on the coast, and the most evenly tempered climate to be found anywhere, and without storms—they never occur, nor do we have any thunder or lightning.

But besides the advantages and attractions of our glorious climate, we have the best fruit-growing region known. Our fruit crop is regular and of first quality and clear of bugs—no worms in our apples, no mildew on our peaches, nor curculio in our plums; and our facilities for getting to market are good.

I will tell you now about the chances for getting homes, for that is what I started to do. We have a varied soil and climate, and a varied topography. We begin at the bay with comparatively level land, some places quite level, and very rich, and the climate moist and evenly tempered all the year with fog night and early morning a good part of the summer, and sunshine throughout the balance of the day, and sunshine all through the winter except an occasional rainy day—we have scarcely any cloudy weather. As we go back we gradually over the foothills, to the mountain tops, and rise nearly all of this land is excellent fruit land, with plenty of pure water and good timber, and a mild climate with less fog than near the coast. As we ascend to the mountain tops we get above the fogs, except one occasionally. From the bay to the top of the mountains, the land is good and easy of access, and the greater portion of this land is uncultivated, and for sale at reasonable rates, and in quantities to suit purchasers.

The higher regions produce regular crops of excellent grapes, as well as orchard fruit. Now, when we take into consideration all the advantages of climate, soil, water, timber, building material, good roads, cheap and convenient transportation, productiveness of soil and certainty of crops, with good market and the chances for getting land in quantities to suit, I think it is hard to find a country that offers better opportunities for comfortable homes than Santa Cruz county.

M. P. OWEN.

Santa Cruz, Cal.

[We like Santa Cruz first-rate. We also like other counties, and like to hear about them. What county speaks next?—Eds. PRESS.]

## THE FIELD.

### Potatoes at Bodega.

EDITORS PRESS:—Seed time and harvest for 1881 has passed and the crops are garnered up; and although the season has not been so propitious as usual, yet "old Sonoma county," with her diversified farming, has been very prosperous, and a good balance will be found upon the right side of the ledger.

Bodega, once so famous for its fine potatoes, has almost ceased to be an important feature in the raising of that valuable esculent. The blight has caused such a shrinkage in the yield and quality of the crop, and the low price ruling for the last three years has made the raising of potatoes a poor investment.

The dairy interest, which will be the subject of my next communication, and is more certain and profitable in its returns, has so crowded upon the domain of the potato field that many do not raise enough for their own use.

The potato blight that has been so destructive the last few years on the "Bodega Rede," did not make its appearance this year until the potato was nearly matured, and was of milder type. The new varieties that I have introduced and tested have never been the least affected. My aim has been to find some potato that is adapted to the Coast range, that would contain all the good qualities of the old Bodega Red for hardness, flavor and keeping qualities. This potato has never been excelled, if equalled. It was brought from Peru by the late Capt. Stephen Smith and planted in Bodega, and thus became distributed over the State. Will not some captain sailing to that port try and obtain a few that they may again be tried in this State?

Among over 30 varieties I have tested the last few years, only a half dozen have any value. Some promised well when dug, but were poor keepers; others were destitute of flavor. The varieties that I have tried and found adapted to the climate of the Coast range, and which I would recommend as free from blight, are Bur-

bank Sports, Jersey Peachblow, Red Jackson, Peerless Sports and Pinkey Sports. These varieties I have found hardy, very prolific, of good flavor and good keepers. Occasionally I find a sport upon a vine in digging, and save them and propagate them, and thus far I have found them superior to the parent stock, more prolific, larger size, but generally later.

E. H. CHENEY.

Smith's Ranch, Sonoma county.

## THE VINEYARD.

### Grafting on Resisting Roots.

[Written for the RURAL PRESS by W. G. KLEE.]

The following is a review of the experiments with grafting of European varieties of grapevines on the native California grape seedlings (*Vitis Californica*), and the raising of the plants for this purpose on the grounds of the College of Agriculture at Berkeley, California:

In January, 1880, seeds of the wild California grapevine, gathered in Lake county, were received from Mr. C. A. Wetmore, of San Francisco. The seeds were kept dry until the 19th of February, when they were immersed in water, and after having skimmed off the floating ones, which were at least one-third of the whole, the remainder were left to soak for 48 hours. They were then taken up and mixed with moist sand, and left in this condition for eight days. On the 28th of February they were finally sown in a square in the Garden of Economic Plants.

The seed bed, which was naturally of a rich black loam, received a dressing of slacked lime at the rate of 1,000 lbs. to the acre. It was then forked (dug) to the depth of 15 inches, taking care to mix the lime thoroughly with the soil. After a good raking, pulverizing the soil finely, drills 18 inches apart were made and the seed sown about two inches apart and covered with about one to one and a half inches of soil. Owing, probably, to the cold weather prevailing, no seed commenced germinating before April 20th, and May 12th passed before the majority of the seeds, starting this season, were above ground. Quite a number remained dormant until the next season. The young seedlings grew finely and received but one irrigation, in the middle of July. In June they were thinned out to a distance of about six inches, and in January were taken up. There were found to be about 40% available for grafting, though rather small, the diameter being, on an average, but three-eighths of an inch, or even less. This year (1881) experience has, however, proved the advantage of longer soaking and later planting of the seeds. Their treatment was as follows: Seeds (of 1879) were left standing for one week, covered with water, in a tin can; after the water was drained off, they remained for fully three weeks in a moist condition. Planted in April, they germinated in two weeks and made better plants without irrigation than those of the previous year, the number missing being also much less.

### Manner of Grafting Employed.

After the seedlings were taken up the long roots were cut back, leaving about 12 inches, and the plants heeled in for a couple of weeks. In February (the 14th) they were removed to a table, after previously having been dipped in paste of soil and cow dung, so that the fibrous roots should not suffer by the exposure necessary for the grafting.

The kind of graft made was the so called English cleft graft, as described in the Viticultural report of 1880 (and illustrated in the RURAL Feb. 5, 1881). Owing to the small size of the seedlings, the union had to be made very low down—just at the root neck, or even a little below; the intention, nevertheless, being to raise the point of grafting above ground. The graft was firmly tied with raffia, and then covered with grafting wax; afterwards covered with strips of cotton cloth. After the operation was performed, the grafted stocks were again heeled in in the shade of a large tree close to the bed destined for them. On the 11th of March they were finally planted in rows 3 ft. apart and 18 inches in the row.

As soon as planting was done, the soil was hoed up around the graft so as to cover it up to the upper bud; and to retain the moisture as much as possible, somewhat later a mulch of partly decayed straw was put around them. Once or twice in the beginning of the season, just after a hot wind, the grafts were sprinkled with water. In the beginning of July, almost all the grafts that took had made a start; but three or four coming afterwards. When the young shoots of the graft showed that their first growth was finished, the soil around them was removed, leaving in all instances the point of union above ground; before this, it was found that roots had started from the grafts, and in some instances it was found necessary to remove them twice, or even three times. On account of the many different varieties grafted and their different times of starting, this work took up considerable more time in proportion to what it would have done when only a few kinds had been used and the same number of grafts made, as it did not allow of any systematic method.

### Results of the Grafting.

The following tables show the number of grafts made and the number of those taken. They were from three distinct localities. 1. From the University grounds, which were of a rather pithy nature. 2. From Dr. Strentzel's

Alhambra ranch, Martinez, Contra Costa county, which were rather of a medium firmness. 3. From the Eisen vineyard, Fresno, of very ripe wood, but perhaps rather dry. The reason for classifying the graft as below, will perhaps be better understood after a glance over the tables.

GRAFTS FROM ALHAMBRA VINEYARD, MARTINEZ.			
I. Partly or all taken.	Number of Grafts Made.	Number of Grafts Taken.	
Black Hamburg.....	3	1	
Muscadel.....	5	1	
Mission.....	3	1	
White Madeira.....	5	4	
White Malvadier.....	5	5	
White Corinth.....	2	1	
Chasselas Rose.....	2	1	
Purple Constantine.....	3	2	
Total.....	29	15	

GRAFTS FROM VINES ON UNIVERSITY GROUNDS.			
II. All failed.			
Seedless Sultan.....	6		
Flaming Tokay.....	2		
Black Corinth.....	6		
Total.....	14		
Grand Total.....	43	15	

GRAFTS FROM EISEN VINEYARD, FRESNO.			
I. Partly or all taken.			
Black St. Peter.....	6	5	
Bowker.....	3	3	
White Tokay.....	3	1	
Madeleine Royal.....	3	3	
Mill Hill Hamburg.....	3	3	
Muscadel Hamburg.....	3	1	
Rose of Peru.....	3	3	
Golden Hamburg.....	3	1	
Foster's White.....	3	1	
Syrhan.....	3	1	
Reine de Nice.....	3	1	
Victoria Hamburg.....	3	1	
Deacon's Superb.....	3	1	
Total.....	42	23	

GRAFTS FROM EISEN VINEYARD, FRESNO.			
II. All failed.			
Early Suzyra Frontignan.....	5		
Early Black Bordon.....	3		
Lady Down's Seedling.....	3		
Champion Hamburg.....	3		
Barbarossa.....	3		
White Nice.....	4		
Purple Damasc.....	3		
Child's Superb.....	3		
Treblan.....	3		
Canon Hill Muscad.....	3		
Royal Muscadine.....	3		
Golden Chasselas.....	3		
Black Lombardy.....	11		
Black Morocco.....	3		
Cornucopia.....	3		
Muscadel d'Aout.....	3		
Willnot Black Hamburg.....	3		
Duchesse of Buccleux.....	3		
Newton's Guest.....	3		
Early Silver Frontignan.....	3		
Total.....	60		
Grand Total.....	102	23	

GRAFTS FROM EISEN VINEYARD, FRESNO.			
Names of varieties partly taken.			
Pedro Zimenes.....	5	1	
Gamay de Gamay.....	5	1	
Malbec.....	5	1	
Black Ferrara.....	2	1	
Sauvignon.....	5	2	
Chile Rose.....	5	1	
Mataro.....	5	1	
Verdel.....	5	1	
Chablis.....	5	2	
Chignanne.....	5	3	
Miller's Burgundy.....	3	2	
Black's Graceland.....	5	4	
Marcellus.....	5	2	
Kakauer Blanc.....	5	2	
Cheres.....	5	1	
Total.....	70	26	

GRAFTS FROM EISEN VINEYARD, FRESNO.			
Names of varieties all having failed.			
Pinot Noirien.....	5		
La Folle Blanche.....	5		
Jurancon.....	5		
Charbonneau.....	5		
Yellow Orleans.....	3		
Merlot.....	5		
Faherzagos.....	5		
Micord.....	6		
Verdelho.....	5		
Gamay.....	5		
Malvoisie de Puy di Dome.....	5		
Zinfandel.....	5		
Total.....	60		
Carried over.....	70		
Total of all grafted.....	130		
Total grafts taken.....		26	

Comparing the proportion of the grafts taken from each locality, we have a little more than half of those varieties that grew at all, for Berkeley and Martinez, and somewhat more than one-third for the Fresno, while, if we compare with the whole number of those grafted, we have a little more than one-third for Martinez; Berkeley, less than one fourth, and Fresno about one-fifth.

That the condition of the grafts had a good deal to do with the failure is quite certain; the Berkeley grafts on the whole being too pithy, and the Martinez wood corresponding more in ripeness with the stock, while the Fresno kinds were rather too firm, and a little dry besides. Still, the results seem to justify the conclusion that there is considerable difference in the ease with which the union of the different varieties is effected; for the taking of 100% or 80% of some against none of a great many varieties, not of the one group alone, but of all three, is too decided to be dismissed as accidental or due to the condition of the graft.

Although too limited in extent, these experiments have produced results that demand their repetition on a larger scale. They prove that many varieties of the European (*Vitis vinifera*) vine are well adapted for the wild California stock, for not alone do they grow with an unusual vigor, but the union formed is with but few exceptions very perfect, and in some cases it is almost impossible to tell the transition from root to stem, it being very gradual, and no swelling above or at the graft. For a locality as unfavorable for the grape as Berkeley, the growth from a graft, of canes two to three ft. long must be regarded as very good, and can only be explained by the adaptation of our wild California grapevine to the climate. Another interesting result is the entire absence of mildew on the plants, and the still more remarkable fact that three of the grafts maturing a bunch of grapes also entirely free from mildew, viz: Mataro, Miller's Burgundy,



Chasselas Rose. Of these, as far as come under my observation in Santa Cruz, the Miller's Burgundy is very subject to mildew. Whether this is only an accident or not or due to causes having no connection with the grafting it is certainly too interesting to pass by, and the very fact that the three only kinds that produced grapes all matured them in perfect condition certainly deserve attention.

As has been stated above the stocks grafted on were only one-year-old seedlings, and really too small for a fair trial of what could have been done if the stock could have been twice the diameter and allowing the use of larger scions. On a whole I think that stocks of less than three-eighths of an inch ought not to be used, as it is difficult to obtain good grafts of less than this diameter; these may with care be raised in one year, but it is a question whether it will not be cheaper to raise them first planted close together and the next year plant them on the spot where they are destined to remain, grafting them there the next year. It is to be hoped that others will publish their experience in this matter, that we may by comparison of various methods come to a definite conclusion which is the best. Experience of anyone in regard to the phylloxera proof qualities of the California wild vine will undoubtedly be greeted with favor by many and would especially be thankfully received by the writer.

Berkeley, Cal.

HORTICULTURE.

Fig Trees—the Selection of Sorts and Curing.

EDITORS PRESS:—Acting on your suggestion, I herewith send you some gossiping matter bearing upon the above themes. The fig tree appears to grow luxuriantly all over the State where the soil is deep and moderately moist. As to choice of situation, at least until the cultivation can take rank with other kinds of fruit suitable for preserving, the best and least expensive spots to work will be found in the lowest portions of vineyards where it will receive along with the vines the ordinary cultivation which the tree requires. In such locations it will be found of inestimable value in the future to the proprietor, not alone for its fruit, but because the figs, beginning to ripen just before the grapes, attract the mischievous small birds, which seldom desert them for grapes. That is the experience in other countries.

The varieties of fig trees, as at present classified, are very numerous; far too numerous for me to touch upon, so as even to give merely a superficial description of them. I propose, however, to say something about them at a future time. The varieties known in California have probably not been classified and defined botanically as yet. Still right here I may call attention to the two most commercially valuable sorts: the true White Smyrna and the true Purple. The one which is purple is often nearly black through both pulp and skin, not the kind common here which is purple outside, but dark yellow or brown inside. So far as my observations extend, I have not found the fruit of either of them offered for sale during the last three seasons. I believe they are not in the country. The original stock of your best trees are those raised from Smyrna, or Eleme figs, grown in different parts of Asia Minor and the Grecian Islands; but they are all hybrids, as the following extract from my correspondence with Sir William Macarthur, of Camden Park, New South Wales, will prove. Many years ago this great benefactor to New South Wales obtained cuttings from Smyrna, which grew rapidly and soon came into bearing, but which always dropped their fruit after the fashion he describes. The letter referred to was written in 1871, in reply to queries sent by myself when a commissioner for foreign industries and forests in Victoria, Australia. Six years later, when on a visit to Sir William, I was shown the ripe fruit upon the trees:

"We have also a very luxuriant growing fig, imported as the true Smyrna variety. It annually covers itself with fruit, but they all invariably drop off when about half grown. We learn that the variety has the same habit in Asia Minor unless the blossoms be fertilized with the pollard of the wild fig, and that it is the custom to hang branches in fruit of the wild sort in the trees of the cultivated sort when the young figs are about half grown, that is in their period of blossom.

Mr. George Macleay who learned this fact on the spot, also kindly sent us the wild fig, but it has never thriven well as yet and has never fruited. I can send you the cultivated sort, evidently a very large one, but am not sure that I can yet spare the wild one. The last grows feebly, and being very early in its budding, has frequently suffered from frost. This is, I believe, the chief cause of its feeble growth. Last winter I moved a plant or two of this sort into a situation not nearly so subject to late frosts, but we shall still be a year or two without fruit."

At Pera, near Lisbon, I know we grew the genuine, delicious Asia Minor fig, a most prolific bearer; so much so, that it was convenient to lay down planks in order to approach the trees when the fruit began to fall to the ground. The difference was that they were considerably smaller than the choice ones we usually see from Eleme. And I noticed the same fact always in

the case of dried figs grown in the Algarves. There it is cultivated for curing, and from thence shiploads are sent to Great Britain, though Lishon consumes a great quantity. The trees, however, are not nursed, nor the superfluous fruit picked off, as in Turkey, and countries where the fig is almost worshipped. We have all heard of the hawkers' cry in Cairo—"In the name of Allah, figs!"

In all the vineyards and nurseries where fig trees were planted, I cannot recall a single instance in which the real dark purple kind was not represented by one or more specimens; and I venture to say, that between currents of wind and insects, the fecundation was effected. Let us hope that some of our enterprising horticulturists or nurserymen will procure cuttings of the best kind from Smyrna and Eleme and give the State a chance of developing this profitable secondary branch of industry while it is yet in its infancy. It is always well to prevent a false start.

The black kind, which is so common in this market during the season is a remarkably good fruit for the table, and will always be preferred at first for table figs, on account of its slight sub-acid taste. The pure white, when perfectly ripe, appears to be free from acid. I have seen some very agreeably tasted hybrids of many shades from purple to the palest flesh-colors, but remember the names of hardly any. For domestic markets and home consumption any of them may answer very fairly. The points are to consider the habit of the kinds, their growth, and the sort of land each has hitherto done best upon; for some require much less water than others.

Infinite credit is due to professional gardeners and nurserymen for the labor they bestow in raising new varieties of fruit-bearing trees and plants. But in the instance of fruits intended for drying, like the fig, the prune and certain varieties of grapes, whose characteristics are known the world over, it would seem that the boundaries of perfection have been reached—and in the development of the new industry of fruit drying, what better example can we have than that which through ages has proved a success? Grapes, prunes and other fruits have been most successfully dried by artificial heat; but as I have never to my knowledge seen a fig so dried I shall continue to doubt.

Gathering Figs.

The fresh figs sent to our markets are never handled as they always are where they are a staple article of consumption; so a hint or two may be of advantage to our growers, for next year, if they will cut this out and keep it for a guide.

The Portuguese profiting by the experience of ages, has discovered that the limbs of fig trees are not always very safe upon which to risk his own limbs, and next, that there is not much need of handling the fruit. So he selects a long cane, and carefully splits the thin end four or five inches deep, and by separating the split portion and tying so as to form a cup a little wider than the diameter of a large fig, he has at once an implement that answers all his requirements. Standing near the tree he selects what he considers the ripest, and putting the cup end over the fruit, with the greatest ease separates it from the branch and deposits it in the basket.

Drying Figs.

It seems at first sight that nothing is easier than to dry and pack a box of figs; yet there are little points to be attended to which, if neglected, will cause disappointment and loss; and to these I will now invite attention. Previous to collecting the fruit, provide light wooden frames, battens will be strong enough, and they need not be more than 6 ft by 3, over which coarse wire netting is to be nailed, having meshes about an inch square, the object of which will be evident in a moment. The fruit should not be merely ripe in the sense of being ready for market, but the whole inside of it should look when cut like rather thick oil, and the outside just beginning to show signs of shrinking. Very little practice will guide the eye in selecting the right ones. Where they cannot be easily reached by the hand from the ground, the cane contrivance described above will be found useful. Care must be taken not to crush or damage them. Now the tray or frame above mentioned, is placed on any convenient support close to the trees, and as the figs are gathered they are placed in the tray, always with the little stalk downwards and nose of the fig upwards, and each in its own mesh of the iron net. The reason for this is that very often the finest and best ripe figs open at the nose, and lose all that is very valuable in their inside, long before they are dry. Neither should they be handled more than can be helped, for that removes the bloom. So soon as there is no more danger of their contents running out, which may be at any time from a week to a fortnight, according to the state of the weather and the ripeness of the figs, they may be placed without much danger on large canvas sheets and covered up, or taken in at night and exposed to the sun during the heat of the day. The object is to prevent mildew or incipient fermentation, and keep the drying in progress without interruption.

The Sweating of Figs.

When the figs have attained a certain degree of dryness, which may be known by their feeling firm in the hand, and upon cutting open one or two of the softest, finding the interior matter fairly solid, the time will have arrived for a most important operation, the sweating. What was used for this purpose in Portugal was a

sufficiently large sheet of thick, strong canvas, sail cloth in fact. Upon this the figs should be laid, and during the day, if there be sunshine, opened out and exposed to it for a few hours, then at night packed in a heap in it, covered up and kept as warm as may be in any convenient place. After perhaps four days, according as the weather is warm or not, the sweating will commence; and as soon as it does, throw in a handful or two of hay leaves, Portugal bay is the best.

The color will darken, often become quite dark, even if the figs were of the pure white kind, and will become quite soft and pasty, and throw out strongly their natural odor. At this point no rule can be laid down—each must judge for himself; but it is best at first not to let it run too far. They are now ready for the last operation—packing. Have plenty of fresh bay leaves ready and use them freely all around the inside of the boxes.

Whether rapid artificial drying will answer as well as the slower process, i. e., whether it will prevent future heating and fermenting, and so destroy the product, is a very interesting problem. With care there appears to be no reason to fear. Experiment alone can prove it. The danger will come in at sweating; but it may arise after the packing through heating, especially if the boxes or barrels be of a considerable size. Figs properly sweated and packed I have never yet seen offered for sale in our market.

Packing Figs.

Turkey and Smyrna figs come to us usually in small boxes, and these are good where the fruit is large and of uniform size. But what I consider far more appropriate for this country, is the plan usual in the Algarves and some other parts of Portugal; and it consists in packing the figs in a sort of basket made from the leaf of a sedge, or something of the kind. These baskets (*alcofas* and *alcofinhas*) will hold from 7 lbs. to about 20 lbs. They must be strong. According as the dried fruit is put in, the sides are completely covered with a double thickness of hay leaves and the figs pressed firmly down, and when the *alcofa* is completely full, the mouth or opening is firmly drawn together, and sewed with some strong material. The nearest approach to the basket of figs that I know, to which I can direct the reader, is a basket of dates, and the firm way in which they are packed. Now, the purpose of packing thus tightly, is this: It prevents the fruit from throwing out that mealy substance so commonly to be seen, which is the natural fruit sugar; and supposing the fruit to throw it out, by excluding air and moisture it prevents decay or fermentation from taking place. Perfect dry figs should have no mealy coat on them. Packed as described above, our dry figs ought to keep for at least one year. So soon as the difference is discovered between fresh dried fruit and imported, the public will prefer our own for ordinary purposes, though it will be smaller and darker in color.

One of the prettiest domestic pictures drawn by the sacred penman, with all the fertility of the fine old Hebrew imagination at his command, will be found in the fourth chapter and 25th verse of the 3d Kings, vulgate edition of the Bible, where it is written about the glory of the reign of Solomon. "And Judah and Israel dwelt without any fear, everyone under his vine and under his fig tree from Dan to Beersheba, all the days of Solomon." No race of men has shown so rational an appreciation of the good things of this life, or a greater avoidance of excess in enjoyment of them than the descendants of Heber. But why allude to that race more than any other? For their love of figs and the shade of the fig tree? Trellising vines is practiced already to some limited extent; but anything like the enjoyment derived equally by the peasant and the noble in Southern Europe in spending the warm afternoon hour of a leisure day on a convenient seat shaded by a venerable vine, stretching over a trellis near his door, or an umbrageous fig tree, under which he also eats his fruit and sips his bottle of pure wine, and takes his invariable cup of coffee and a sweet cake along with his family, his neighbor or his friend, is I fear an unknown pleasure to us. It is a thing we have to learn—a new enjoyment still in store.

JOHN I. BLEASDALE, D. D.,  
613 Merchant St., S. F.

EFFECT OF PRESSURE ON SEED GERMINATION. In a note communicated to *Nature* by Mr. W. Carter, an account is given of the effect of pressure on the germination of seeds. He found that under a pressure of 2½ atmospheres, mustard seed germinated 25 hours earlier than under the ordinary pressure of the atmosphere; but that the early development became permanently arrested during the eight days of the experiment, and the cotyledons of one that had escaped entirely from the seed coat remained as etiolated as if grown in absolute darkness, while those under ordinary pressure grew rapidly, and their cotyledons became of a deep green color. The etiolated plants, when removed from the pressure, rapidly grew into vigorous young plants. An increased pressure would, therefore, seem to stimulate germination and prevent the formation of chlorophyll. The pressure was obtained by the use of a column of mercury. The seeds were sown on moist cotton-wool, placed in a small bottle, which was then secured to the curved extremity of a glass tube, into the long arm of which mercury was poured until it reached a height of 45 inches above the level of the metal in the short arm.

THE DAIRY.

A Coast Dairy.

Says the Santa Rosa Republican: When over the coast 10 days ago we visited the 2500-acre ranch and dairy of Aaron Schroyer, two miles south of Fort Ross, where there is a stage and telegraph office, and a good landing for coast-wise vessels. The ranch is partly on the slope of the mountain, facing the ocean, and a portion of it is level fields along the shore. It is all well set in native grasses, which the handling there has formed into a turf that the moisture keeps partly green in the dry season, making nutritious pasture at all times. From a spring several hundred ft. up the hillside a supply of cold water is brought by pipes to the dwellings and farm buildings. There is a barn 127 ft. long, two stories high, with stalls for 80 cows; also, a large enclosed shelter for young calves, with troughs for milk, which revolve, so as to be easily washed.

The dairy house is 56x28 feet, divided into four rooms. First the furnace and wash-room, with a sink where the cleansing of pans and other utensils is done. Next is the milk-room containing 1,300 one-gallon pans as bright as a dollar, arranged on racks around the walls. A thermometer hangs here, and the temperature of 60° is easily maintained in this regular climate by a fire in the small stove, or, when too warm, by opening a large ventilator in the ceiling. The tin tank, or receiver, into which the milk flows from the milk house, holds 100 gallons. The milk stands 36 hours before skimming. A table on castors, with a half circular indentation cut in the top at each end large enough for the side of a cream bucket, is the place for skimming. This is dextrously performed, not with a ladle or saucer, but with a small bit of triangular shaped wood as big as a child's hand. It is run around the edge of the cream, then the pan is tilted a little towards the cream bucket and another quick, sweeping motion slides the cream off the surface. The sour milk is poured into a sink which it drains away 300 feet to the pigs.

Next is the churning department where the butter is made. As in all the rooms there is plenty of water. A churning is 150 lbs., done in a square, rotary box, turned by hand. From this it is placed on a butter table, or worker, built to fit a corner, with an inclination sufficient for rapid drainage. Here it is that the buttermilk is worked out, and the salt worked in (from 8 to 12 lbs. as required), with a wooden lever attached to the wall at the point of drainage.

The dairy-rooms are scrupulously clean as soap and sand can keep them. They are absolutely free from smell, except the fragrance of the new butter. Mr. Schroyer's herd numbers 162, of which nearly one-half are grade Alderney heifers. There are three Alderney bulls on the premises. This we consider better management, not only on account of the superior butter-making qualities of the breed, but for another sufficient reason, which is, the owner is no longer obliged to kill off his heifer calves; for each of these grade Alderneys as soon as six weeks old, is worth more to sell than a common full grown cow.

What does a Pound of Butter Cost?

In order that our dairymen may be prompted to figure for themselves what a lb. of butter costs them, we give a little paragraph setting forth the cost under Eastern conditions. By changing the factors to meet local prices for feed, etc., a conclusion can be reached nearer the truth than rough guesses usually attain. The Eastern writer says:

The most costly food for a cow is hay and corn meal and wheat middlings. With hay at 1 cent a lb. and corn and middlings at 1½ cents, it will cost to feed a cow, 15 cents for hay and 7½ cents for meal per day—in all, 22½. A cow that will make 250 lbs. of butter in a year, will cost at least \$60. She will repay her own cost in calves and her carcass when 12 years old; so that to pay for her feed will cost \$81 yearly, if it is purchased, and if it is provided by the farm it comes to the same end, for the feed might be sold; and against this there are 250 lbs. of butter, worth, at the market price, for the best quality, about \$50 net. Now, what should this butter cost? If the cow is at pasture for six months of the year, the pasture will be worth, at \$60 an acre for the land and four acres to the cow, in interest alone, \$8.40; taxes will add at least \$2 more to that, and the cost of the grass will be at least \$2 an acre more; so that, with the winter feeding, the cost will be in all, \$53.90, and the skimmed milk and manure may pay for the labor. Then, can a lb. of butter be made for less than 25 cents? and if not, the dairyman is not likely to be troubled about the high price of four per cents. But what of the dairyman whose cows will make but 150 lbs. of butter in a year, and whose butter causes the nose of the commission man to turn upward? How do they live and how much do they earn per day?

ELECTRIC LIGHTING is in successful operation on more than 60 steamers of the Mississippi river and its tributaries. It is believed to add much to the safety of that kind of traffic and traveling.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### The Grange and the Transportation Question.

The W. M. of the National Grange has given his approval to a petition to Congress for fitting legislation for the regulation of railways in this country. The following is the endorsement and the petition:

#### Endorsement of National Grange.

I have examined the petition drafted by the Hon. Jeremiah S. Black, referred to in the above circular, and find that it comprehends every question relating to the regulation of interstate commerce by national legislation embraced in the memorials which have from time to time been placed before Congress by the National Grange, and I recommend, and earnestly request, that every subordinate Grange in the land commence at once an active canvass for signatures to the petition among all the citizens of the locality, without regard to occupation or profession, and to promptly and fully carry out every suggestion in the above circular. I further recommend that this matter be placed upon the "regular order of business," and be considered and discussed at every regular meeting of the Grange until the canvass is completed and the petitions put into the hands of members of Congress.

J. J. WOODMAN,

Master of the National Grange, Patrons of Husbandry, Paw Paw, Mich.

To the Senate and House of Representatives of the United States, in Congress Assembled:—The petition of the undersigned citizens of the United States, respectfully sheweth:

That the railways of our country are public highways, built for the public benefit, and all the people have an equal right to use them on equal, just and reasonable terms, without extortion and without discrimination.

Yet so it is that these indispensable thoroughfares of trade and commerce have fallen under the control of individuals and incorporations who do not faithfully execute the trust committed to them. Instead of running the railroads in the public service, as they are bound to do, they habitually disregard all interests except their own. Through combinations and consolidations, the railroads of the United States have become such a monopoly as was never contemplated when charters were granted; beneficent inventions which ought to inure to the public benefit are largely monopolized, and, through construction companies and other devices by which a fictitious basis of cost is established, the public are everywhere enormously overcharged for the construction and use of steam highways. Through excessive charges and unjust discriminations, enormous wealth has been suddenly accumulated by those who control these highways, while the farmer, the manufacturer, the miner and the merchant have been deprived of their fair profits, and labor has been robbed of its just reward.

Besides the mere business aspect of this subject there is another, and most alarming one, to which we would invite the notice of your honorable bodies. The methods adopted by the monopolists to obtain and enlarge their power have a tendency to corrupt public morals, to pervert legislation, to poison the stream of justice at its fountain and all along its course.

We look to Congress for a remedy. We pray that you will exercise the power conferred by the Constitution "to regulate commerce with foreign nations and among the States" by enacting a federal statute which will compel railroad corporations and their agents, and all common carriers upon them, to perform their duty to the public of furnishing all reasonable facilities for travel and transportation, for a certain prescribed, reasonable and just tax or toll, to be charged against all alike, according to the use they make of the roads—to forbid, under adequate penalty, the extortions and discriminations now practiced, and thus compel these corporations to occupy their legitimate position as public servants performing a useful and necessary service for a reasonable and fixed compensation. And your petitioners will ever pray, etc.

#### Thanks.

At the last meeting of Santa Rosa Grange, resolutions of thanks were adopted to G. A. Tupper & Son, of the Occidental hotel; and William Montgomery, of the Grand hotel, of Santa Rosa; to the officers and employees of the S. F. & N. P. R. R. Company, for many favors shown, especially to Mr. Charles Thorn, Jr., the local agent, and Mr. H. E. Whiting, superintendent; to the Board of Trustees of the Masonic Hall Association and the members of the various Masonic bodies of Santa Rosa; to Prof. A. C. McMeans, for the free use of his large and commodious school hall for the "Feast of Pomona;" also to the officers and members of Bennett Valley Grange, for their invaluable assistance contributed to the success and pleasure of the State Grange.

NORTH BUTTE GRANGE.—The ceremony of conferring the fourth degree and the ever pleasant harvest feast were celebrated at the Grange hall, North Butte, on Saturday. The attendance was unusually large, and the meeting very pleasant. Interesting addresses were delivered by D. A. Ostrom of Wheatland, G. L. Douglas of Yuba, B. F. Frisbie and Bro. Nelson of North Butte.—*Sutter County Farmer*.

### The Mussel Slough Settlers' Monument.

The Monumental Committee of the proposed Mussel Slough Settlers' Monument, met at Hanford, Tuesday, Oct. 25th, pursuant to adjournment. Maj. T. J. McQuiddy presided. Rev. N. W. Motheral, Sec'y. The Committee on Address reported through Carl Browne a draft of an address, which was considered and amended by the committee as a whole and adopted, and the signatures of the committee attached. After which the committee selected a number of names of persons whom it is believed will set as agents to receive contributions; also instructed the Finance Committee to take the necessary steps to open correspondence, and to provide for the printing of the address and certificates, etc. All daily and weekly newspapers on the Pacific coast were, by resolution, asked to receive contributions to the monument. Adjourned to call of the Chair.

#### To the Lovers of Liberty Everywhere.

On the 11th day of May, 1850, there occurred an event in the Mussel Slough country, California, of as great moment to the cause of freedom as the event at Concord bridge, over a hundred years ago. Like that ever memorable circumstance, this, too, was consecrated with the blood of outraged manhood. Six American citizens, sons of liberty, gave up their lives in behalf of anti-monopoly, four of whom, James M. Harris, John M. Henderson, Iver Knutson and Edwin Iveymaker, left disconsolate, faithful, patient helpmeets, to cherish with their orphaned offspring, the memory and good deeds of those murdered husbands and fathers. The other two martyrs, Daniel Kelley and Archie McGregor, being single men, and good types of the foreign American ancestry whose brain and brawn have figured so much in our country's history to develop and make it illustrious—namely, Ireland and Scotland.

To commemorate the names and virtues of these men and the nobleness of the cause for which they died, by portrayal in stone or bronze, the lineaments and characteristic of the monsters who plotted their untimely and heroic death, it is proposed by the survivors of those men to erect a monument or monuments to their memory, while those live who can truly say, "All of which I saw, part of which I was." This committee having been selected to carry out said purpose, have adopted a suitable design, and now propose entering upon the work of constructing said monument at or near the scene of the tragedy, or as has been suggested by prominent friends of the movement, "on Nob Hill in San Francisco, near the blood-bought palaces of the railroad magnates, the real instigators of the sad event it is designed to commemorate." When the brief statement of facts that led to the tragedy is made, the committee will, without embellishment, leave the matter with the people—that supreme tribunal of all mundane questions—as to whether the monument should be erected or not, as the liberality of contributions with which this appeal is met by the sympathizers of the cause for which our fellow citizens died, will so determine.

Thus an opportunity is presented to test the question whether our Fourth of July orators' oft repeated boasts of "equality" is a myth or reality; whether the American people will respond as promptly and liberally to provide a monument to the memory of "murdered freemen in the less conspicuous walks of life, as they do for an assassinated President, inasmuch as the principles of American freedom recognize the fact that the humblest citizen is a peer of the highest official in the land.

The people's response to this appeal will also solve an important problem at this time, to earnest patriots, whether the descendants of our Washingtons, Jeffersons, Franklins, Montgomeries, Lafayettees, Steubens and Kosciuskos propose to maintain intact those principles of anti-monopoly in which those heroes so effectively rebuked monopoly in the Government of George III.

It will show whether the spirit of liberty is really dead in America, as is glibly stated by certain modern generals of notoriety, and their shoddy aristocratic claqueurs, who dream of American empire—monopoly.

It will also demonstrate if anti-monopolists can really cope with monopoly in the field of intellect; whether they, too, have the wisdom to use the arts of the classics in their defense.

Believing that the anti-monopolists have that wisdom, intelligence and spirit of liberty to so cope, and will respond to this call, especially believing the people of California will respond with their proverbial liberality, without further appeal, we will close this address with a few facts for the consideration of friends elsewhere.

Within the past 12 years, hundreds of poor, though enterprising men and families, have settled in what is known as the Mussel Slough region of Tulare and Fresno counties, then a desert.

The settlers, by hardship, toil and industry, overcame the natural defects of the country, and by means of many miles of irrigating ditches, surcharged the desert waste with producing qualities almost unparalleled.

Having faith in the ability and honor of the Government to protect them in the fruits of their labors, and at the same time believing in the integrity of the railroad claimants to the land, to allow them to pay the nominal price which they, by authorized agents, proclaimed, through broadcast circulars, they labored on.

So that what erstwhile was an alkaline, barren plain, the home of the ground-owl and coyote, is now a modern Eden.

The covetous eyes of the Southern Pacific—or rather the Central Pacific corporation, for there is really no Southern Pacific corporation known to law were soon longingly fixed upon this prosperous region whose Aladdin-like developments only need an old castle in ruins here and there to complete the picture of the "Arabian Nights."

Under the faulty legislation of a monopoly-controlled Congress, through a mere flimsy joint resolution, which, with other acts, has brought such well deserved reproach, if not infamy, upon our Government at Washington, the railroad company sought to exact enormous prices per acre for the land that these same settlers had themselves made of any value whatever; this too, in violation of positive promises previously made.

The settlers quietly and determinedly, within the pale of the law, as becomes law-abiding citizens, resisted this mandate of monopoly. Finally, on a beautiful May morning in 1880, the railroad monopoly, represented in the persons of two parties in their employ, armed with double-barreled shot guns, repeating rifles and English bull-dog revolvers, opened fire upon a body of these settlers, who had peaceably assembled to present a manly protest against an unnecessary and premature eviction at the hands of the United States Marshal, who was in the neighborhood, at the behest of the railroad highwaymen. As before stated, six of these unoffending settlers were shot down in cold blood before they could make any effectual resistance, being totally unprepared for the unexpected onslaught.

The design of the proposed monument represents a double-headed, hydra-winged, massive-bodied beast, representing the railroad corporation and exemplifying "monopoly," which figure is in the act of crushing down under its ponderous arms the form of a resisting farmer amid the products of his own labor and the soil's. Near at hand is the terror-stricken wife and babe, powerless to interfere, while the figure of the Goddess of Liberty, with bowed head and eyes bathed in tears, has dropped the scales of justice, signifying that such virtue had fled the scene. The statutory is to be life-size and placed upon an octagonal pedestal, 8 ft. high, on 6 sides of which are to be shields bearing the names of the deceased. The immediate front panel is to bear the following inscription: "Sacred to the memory of six men of Mussel Slough, who were killed defending the sweetest, the dearest of all rights—the sacred right of home. Victims to corporate monopoly, May 11, 1880." The opposite panel is to bear in basso-relievo a representation of ditch building, through which alone the country was made productive.

It is estimated that the cost of this monument will not exceed, with rigid economy, \$5,000. Volunteer contributions to this fund are requested to be promptly made, as it is desired to have the work completed at once, in order to have it unveiled at the anniversary of the sad occurrence, May 11, 1882. All contributors will receive a certificate of the amount contributed, printed upon it and countersigned by the Finance Committee of this committee. The certificate will bear an engraving of the monument and may be treasured as a souvenir of the cause for which the money was freely given.

M. Shea, 805 Market street; Frank Ziegler, 521 Montgomery street, and John Luttrell Murphy, present City and County Attorney of San Francisco, and the different daily and weekly newspapers of San Francisco are respectfully requested to act as special agents for contributions to this fund. E. J. Schellhouse and J. M. Zion are authorized as general agents for the fund. Contributors will please pay 10 persons money for this fund unless they are given in return, certificates. The certificates will be in denominations of 25 cents, 50 cents, \$1 and \$5. All authorized solicitors for this purpose will be provided with these certificates, also written authority signed by the Finance Committee of this committee. A strict observance of this feature will prevent the occurrence of any persons giving their contributions to impostors. All remittances to this fund must be made to Joshua Patterson, Treasurer, through the Secretary, N. W. Motheral, Hanford.

It would require volumes to describe the various phases of the unequal contest between monopoly and anti-monopoly represented in this controversy. But we think enough has been said to convince every lover of liberty that this monument should be built, not only to serve as a history of the time in America when it seemed a crime to till the soil, but to serve as a platform around which all true anti-monopolists should rally as one man to prevent, if possible, our democratic institutions from all going down under the hydra of monopoly now threatening the American people, even as the poor Mussel Slough farmer is represented in the design for this monument.—Thos. Jefferson McQuiddy, Chairman; N. W. Motheral, Sec'y; Carl Browne, B. F. Burr, J. W. A. Wright, J. M. Zion, C. H. Robinson, J. F. Godfrey, F. J. Clark, Francis Wyruck, Joshua Patterson, T. W. Standart. Hanford, Oct. 25, 1881.

#### Decisions by the W. M.

W. M. Daniel Flint has made the following decisions in answer to questions from Newcastle Grange:

Can a member be reinstated without the payment of back dues?

As the finances of a subordinate Grange are in its own keeping, it can require the back dues to be paid up before reinstatement, or can remit the same.

Can a member withdraw without a withdrawal card?

It is clearly evident that a member cannot withdraw without being clear on the books, and paying one dollar for a withdrawal card, unless the dollar be remitted by the Grange.

#### Resolutions of Respect.

SANTA ROSA GRANGE has adopted resolutions to the memory of Sister Amanda Teague, one of its most useful, honest, attentive and devoted members. E. W. Davis, John Adams, Nancy Mills, Committee.

FOR THE NATIONAL GRANGE.—W. M. Daniel Flint and his worthy wife started for the East last week, to represent California in the National Grange, which will convene in Washington City on the third Wednesday in this month.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### DEL NORTE.

THE DAIRY INTEREST.—Crescent City Record, Oct. 8: Since the opening of the present season, up to the time of the last sailing of the steamer *Hume*, the following shipments in butter have been made: Boxes, 684;  $\frac{1}{2}$  bbls., 888; tierces, 34;  $\frac{1}{2}$  tierces, 11; firkins, 116. The shipping accounts of the Crescent City wharf company, from which the above is taken, also shows, during the same length of time, a shipment of 70 cases of cheese. The amount in pounds of the butter shipments, as nearly as can well be estimated, is 134,600, which, at the average price of 32 cts. per pound, again amounts to the nice little sum of \$43,072. We have had occasion more than once to refer to the already large, and constantly increasing product of this article in question, but have never produced in the setting forth of the amount the exact figures. They will be of interest to all our citizens engaged in the pursuit on which they treat. Those whose memories still retain the figures of the limited amount shipped only a few years ago will regard the increase as truly marvelous, and will unite with us in the assertion that now, at least, though the business has reached but a low state of development to what it will reach in a few years to come, butter is one of the most important of Del Norte's articles of export, without growth prosperity would be uncertain.

#### KERN.

CHESTNUT TREES AT BELLEVUE.—*Californian*: In the orchard at Bellevue farm are several fine, thrifty young chestnut trees, and this year they have borne a heavy crop. The nuts are the largest and finest we have ever seen. Judging from the way these trees have grown, and bear, the soil and climate of this locality have peculiar adaptation for them. The trees have grown rapidly, and the idea suggests itself that they might be extensively planted to great advantage, taking the place, to a considerable degree, of the comparatively useless trees that are used for shade and ornamental purposes.

#### LOS ANGELES.

VERNON DISTRICT.—*Commercial*: One of the largest and best exhibits in Turnverein hall comes from James Entwistle, of Vernon district. The exhibit consists of apples, pears,

peaches, oranges, lemons, limes, grapes, English walnuts, sweet potatoes, corn and pumpkins. Blue ribbons decorate Mr. Entwistle's table from end to end. All these different products, from one section of our county, tells the story of the wonderful diversity of the capacity of our country. Here we have the tropical, semi-tropical, and temperate climate productions. Who could wish for more? People looking for homes would do well to look among other of our desirable sections around Vernon. Mr. Entwistle is a genial, social gentleman, and will be pleased at any time to give his personal experience to the new comer. Mr. Bartholomew Towney makes a creditable display of a fine lot of Jonathan apples. Mr. J. W. Hooper also makes a fine exhibit of three varieties of first class apples, and Mr. J. Q. A. Stanley got away with a premium for the best three varieties of apples, all from Vernon. Hereafter Vernon can be counted upon as one of the material supports of our annual fair.

IRRIGATION.—*Commercial* Nov. 3: At an annual election of the Santa Ana Valley irrigation company held on Tuesday last, at the new building lately erected by the company, the following directors were elected: P. Bowers, re-elected; W. H. Spurgeon, re-elected; J. R. Toberman, Geo. C. Hagar, and Mr. Geo. B. Lyon, of Tustin, re-elected. The affairs of the company are in a flourishing condition, with \$2,000 in the treasury, and ample facilities for supplying all settlers who need it with abundant water for irrigation. We congratulate the good people of Santa Ana upon the excellent management of this company during the past year. It has done a noble work for the Santa Ana valley and promises to do even more in the year to come.

#### MENDOCINO.

MEETING OF WOOL GROWERS.—*Ukiah Press* Nov. 5: In our advertising columns will be found a call for a meeting of Mendocino wool growers, to be held at the Courthouse on Saturday the 12th instant, to consider their interests. The country cannot show a more independent class of producers than the wool men of this county, and they are very likely to find a remedy for any real grievance that exists. They have large possessions, mostly unencumbered; their product is in increasing demand, and is as exempt from the caprices of trade as any article in use. Their wool brought top prices for years, and is quoted in the Eastern markets as choice California. Heretofore dealers have importuned for it at their doors, but this fall they have been unusually indifferent, and what has been sold has brought less than similar wools have realized, with free sales, in the Boston market. Apprehensions of a "corner," and natural indignation thereat, is the result. This is but a trivial matter, however. The real complaint is that the choice wools of Mendocino are not put on the Eastern market in proper shape. It is charged that San Francisco buyers mix them with inferior Southern wool to raise the grade of the latter, thereby destroying the distinctive value of our product. Our wool is of good quality and long fiber, and is free from dirt of all kinds. It loses from 50% to 65% in the process of cleaning. Southern and San Joaquin wools lose from 70% to 90% in scouring. The mixing these wools is said to be the common practice. The meeting is called to discuss these matters. Our growers want their wool to go unmixed into the Eastern market, and will be satisfied with the results. If they should determine to ship, the middlemen of this coast would be lesers, and San Francisco would not receive a cent of tribute.

#### MERCED.

GERMAN CARP.—*Valley Argus*: Last January Mr. M. D. Atwater placed in an artificial pond at his place, about five miles from Merced, a number of German carp. At that time they were about four inches long. Good judges estimate that the largest of them will now weigh over five pounds, and they are about 20 inches in length. The growth of these fish is remarkable, to say the least. They have been well fed all the time, and possess voracious appetites. Mr. Atwater has succeeded so well with his first venture in pisciculture that he has decided to construct two more reservoirs this fall and stock them with carp.

#### PLUMAS.

INTRODUCING LARGE PANS.—*Greenville Bulletin*: One who has never seen any other style of milk pan than the little flat, round dish in common use, might hardly believe that pans are in use that will hold the milk of 80, or even 100 cows; yet this is the kind used by John L. Crow, of Red Clover valley. The pans are about 8 ft. long by 4 ft. 4 inches wide, and 8 inches deep though the milk is never made to exceed 3 inches in depth. They are divided into two equal parts by a partition across the middle, through which there is an opening from one to the other. Each pan has two bottoms between which there is a space of about two inches, where water of any desired temperature can be introduced under the milk. A wooden frame about 20 inches wide is laid across the pan, over this is placed two or more thicknesses of butter cloth, the whole forming a strainer through which no speck of any kind can pass. When enough milk is placed in a pan, it is covered with a screen of gauze, and is not touched again until ready for skimming. The pans are set at a slight incline, and at the lower end is a valve connecting with a pipe through which the skimmed milk is run off whenever wanted. The pans being all on the same level, an equal temperature is secured for each; with the old style of pans set on shelves,









## Twilight Musing.

(Written for RURAL PRESS by G. W. McGrew.)

The toll of the day was ended,  
And I turned for a little rest,  
But a feeling of sadness lingered  
Like a pall o'er my weary breast;  
The thought that my lot was a hard one  
Came up—but I turned it aside,  
While I groped in the dark for the promise  
That in some way the Lord would provide.

With burdens so great and so many,  
And the strength of a broken reed,  
I asked, in my anguish of spirit,  
O how can a mortal succeed?  
I knew that to groan was not manly,  
To distrust, I knew was a sin,  
Yet still the dark billow came o'er me  
With naught to resist it within.

O'erwhelmed with a sense of my weakness,  
I ventured to lift up my eyes;  
Through the mist that was gathering o'er them,  
To the glorious light of the skies.  
The sun had passed over the summit,  
That stands by the western main,  
The foothills, all draped in the shadows,  
Stretched out like a veil toward the plain.

The mountains encircling the valley,  
Enrobed in their purple and blue,  
Proclaimed as of old the sweet promise,  
That God to his people is true.  
"His righteousness like the great mountains,"  
Came down, as it seemed, from the light  
Where the last ray of daylight lingers,  
And the dawning first heralds the light.

In silence I gazed at the wonders  
Displayed by the changing light,  
As the earth beneath grew darker,  
And the heavens above grew bright,  
Till filled by the inspiration,  
As upward it bore me along,  
Till the pall from my heart was lifted,  
And my groaning was tuned to a song.  
Los Gatos, Cal., Nov. 5th, 1881.

## The Fifty-Dollar Bill.

Mrs. Dean sat alone in her little kitchen. She never used her parlor. There was the extravagance of an extra fire to be considered—the fact that the best rag carpet, woven by her own skillful hands, must not be worn out too recklessly, the dread possibility of sunshine fading out these chair covers. Mrs. Dean was an economist. She believed in making everything last as long as it possibly could. And so she made the kitchen her headquarters, and sat there knitting, with her feet comfortably balanced on the stone hearth, the saucepan of apples bubbling softly away at the back, and the sound of her husband's ax ringing from the back shed as he cut and split the kindling wood, piled up there in well-seasoned logs.

She was a little, wrinkled-faced woman of 50, with stiff ribbon bows to her cap, hair that seemed dried up instead of silvered, and keen, blue eyes that twinkled as if they had discovered the secret of perpetual motion. To save money was her chief end and aim in life. The very mittens she was knitting were to be sold at the village store in exchange for tea, sugar, spices and all necessary groceries. "A penny saved is as good as a penny earned," was the golden rule by which she shaped her life.

"I'm glad I took that money out of the savings bank yesterday," said Mrs. Dean to herself as the bright needles clicked merrily away; "people say it isn't quite safe. And one can't be too careful. But then, again, there's the danger of burglars—though, to be sure, no burglar," she added, with a complacent inward chuckle, "would ever think of looking in the folds of the old *Clinkerville Clarion* newspaper in the pocket on the wall. It's the bureau drawers, and the trunks, and the locked-up chests that they aim for. A fifty-dollar bill! a clean, crisp, new fifty-dollar bill! And all savings, too, out of the house money."

Just then there sounded a knock at the door, and in came old Dr. Bridgman, rubicund with the touch of the March wind, and muffled up in the furs of the wild animals which, from time to time, he himself had shot.

"Good day, Mrs. Dean, good day!" said he. "No, thank you; I can't sit down. I'm a deal too busy for that. But I heard yesterday that you took \$50 out of the savings bank?"

"Yes," said Mrs. Dean, her face involuntarily hardening, "I did."

"We are taking up a subscription to get little lame Dick Bodley a cart and donkey, so that he can go around peddling tinware," said the doctor. "It's pretty hard for any one afflicted as he is to get along, and if you can help us a little—"

"But I can't," interposed Mrs. Dean, breathlessly. "The money was an investment. I don't propose to cut it up into little bits."

"It's a deed of charity, Mrs. Dean," said the good old man, "to help lame Dick Bodley."

"I dare say," said Mrs. Dean, a little irritably. "But I never pretended to be a charitable character."

The old doctor went away, and the next visitor was Helen Hurst, a rosy girl of 18. "Excuse me for interrupting you, Mrs. Dean," said she, "but Larry Johnson was at

the bank yesterday, and he tells me that you drew out your money!"

"Was all creation there?" thought Mrs. Dean.

But she said nothing, only knit away until her needles seemed to glance and glitter like points of fire.

"I am trying to get a boarding place at Mrs. Swipes'," added Helen, coloring, "so as to be near the district school, where I am to teach this spring. But Mrs. Swipes requires payment in advance by the month, and, unfortunately, we have used up all our slender means in providing my outfit. A teacher, you know, must be dressed decently to command the respect of her pupils. But if you would kindly lend me \$10—"

"I never lend," said Mrs. Dean, curtly.

"I will be sure to pay it up when I receive my first quarter's salary," pleaded Helen.

"And I don't know of any one else to go to."

"It's altogether against my principles," said Mrs. Dean, with her face as hard as if it had been carved out of hickory.

Helen Hurst crept out, feeling humiliated and disappointed beyond all expression.

Mrs. Dean chuckled at her own shrewdness; but she hardly had time to stir up the apples in the saucepan, before Mrs. Graham entered with a little leather-covered memorandum-book and pencil.

"I am looking for charitable people, Mrs. Dean," said the Squire's wife, with a laugh.

"Then you've come to the wrong place," said Mrs. Dean, frigidly.

"Poor Patrick O'Hara was killed yesterday, in the machinery of the rolling mill," said Mrs. Graham, ignoring her neighbor's response. "He has left a wife and eight children, totally destitute."

"And whose fault is that?" said Mrs. Dean.

"Will you not contribute something toward relieving their destitute condition?" urged Mrs. Graham, opening the book and holding the pencil ready for use.

"Certainly not," said Mrs. Dean. "I've no money to spare."

"But I was told—"

"Oh, yes—about the money that was drawn out of the savings bank!" said Mrs. Dean. "But I intend to keep that money for myself, Mrs. Graham."

"He that giveth to the poor lendeth to the Lord," softly spoke Mrs. Graham.

"Yes, yes—I know!" said Mrs. Dean.

"But nobody interprets the Bible literally, nowadays."

Mrs. Graham took her departure, acknowledging within herself that her errand was a failure; and Mrs. Dean, left to herself at last, indulged in a nap, with the knitting-work in her lap—a nap wherein she dreamed that the fifty-dollar bill had taken to itself legs and was running away from a crowd of pursuers, herself among the number.

When she waked up, roused by the noise of coal being poured upon the stove, a candle was burning and Mr. Dean was laughing at her.

"Why, Betsy," said he, "I thought you never were going to wake again. Here you sat with the fire dead out, and I've had to kindle it up again."

"Bless me!" said Mrs. Dean. "I must have been asleep quite awhile. But"—as she started up she saw that the old wall-pocket, opposite, was empty—"where is that old number of the *Clinkerville Clarion*?"

"It was last week's paper," said Mr. Dean, calmly. "We had both of us read it, so I just took it to kindle the fire."

"You burned it up?"

"Yes," said Mr. Dean; "I burned it up."

Why shouldn't I?"

For half an hour Mrs. Dean sat silent and never spoke a word. Her first utterance was:

"It's the Lord's judgment upon me!"

Mrs. Dean was a resolute woman, full of character. She went to her table-drawer, took out a sheet of paper and wrote to Dr. Bridgman, inclosing a dollar toward lame Dick Bodley's cart and horse. She sent another dollar to Mrs. Graham for the poor little O'Haras, and promised to donate a barrel of russets, a bushel of potatoes and some of her husband's cast-off clothes to cut over for the children. And she sent for Helen Hurst to come and see her.

"I can't lend you \$10, my dear," said she, "because I haven't got it. But I'll tell you what I will do. I'll let you make your home here as long as you please. There's a nice spare room, and it's an eighth of a mile nearer than Mrs. Swipes' to the district school."

"O, how very, very good you are!" said Helen, her eyes swimming with grateful tears.

"Good!" cried Mrs. Dean. "I'm just beginning to see what a selfish, greedy creature I've been all my life. But you're welcome, my dear, and your board shall not cost you a cent."

She opened her parlor, shook out the curtains and built a fire in the air-tight wood-stove.

"Dean likes the parlor," said she, "because it has such nice south windows, and I don't see why we shouldn't enjoy it."

She baked a fresh batch of gingerbread, and sent a loaf to old Mrs. Mudge; she took out a basket of hickory nuts for poor little Harry Jones, who was trying to crack dried-up pig-nuts on the stone by the roadside; she renewed her subscription to the church charities.

"I can't be very liberal," she said; "but I am determined to do what I can."

"That's right, my dear,—that's right!" said her husband. "We shall be prosperous, never fear. I'm awfully sorry about burning up

your fifty-dollar bill; but, if it's going to open your heart like this, it's the best thing that could have happened to us."

Mrs. Dean was sweeping out the kitchen. She looked around with a smile as she moved the wide-leaved table which always stood under the wall-pocket, and took down the pocket itself, a rude structure of splints, lined with red cambric and tied with cords and tassels of red worsted, to dust it out.

"Yes," she said, "I am afraid I was getting to be a little miserly, and—why, what's this?"

Mr. Dean stooped and picked up a slip of crumpled, dark-green paper, which had fallen out from the wall-pocket as his wife turned it upside down and tapped her finger against it to remove all possible dust.

"It's the fifty-dollar bill!" said he, with mouth and eyes opening in unison. "It must have slipped down from the folds of the newspaper and lodged here."

"The Lord has sent it back to us," said Mrs. Dean, reverently; "and He has sent a lesson, wise and merciful, with it."

"Well," said Mr. Dean, after a moment or two of silence, "there's a lesson in almost everything He does, if we did but know it."

And all the theologians in the world could not have improved upon the faith of this simple, unlettered old farmer.

## Remembered.

(Written for the RURAL PRESS by JULIA M. GOODLETT.)

In every clime and under all circumstances a nameless, yet irresistible charm clusters round the word "remembered;" into every mind, however embittered by toil and strife, this sweet word ever brings a ray of comfort. When separated from those who hold within their keeping our affections, 'tis sweet to know that we are remembered. It cheers and encourages the man of business when difficulties and cares would fain bow his spirit in the dust, to feel that there are those at home, by whom, during every moment of his enforced absence, he is remembered with affection and gratitude. Many are the offices of love which the mother performs for her child, strengthened and comforted by the thought that at some time—it may be when the dust is over her brow—they will cause her to be lovingly remembered. We all know how it used to stir our hearts with joy and make every pulse bound with gladness, when far away at school, to receive even the least valuable packet with the simple, yet beautiful words, "Believe me, my child, this was a work of love; with every stitch has been interwoven a thought of you. You are constantly remembered by your mother." Though our minds were dull and weary, these words ever came fraught with sweetest comfort, and threw a radiant light upon the most difficult problem, or rendered quick and clear the lagging and clouded brain through the medium of a happy heart.

But the thought of being ever remembered after death is far dearer. That the desire to be remembered when the heart has ceased to throb with life, and the soul passed to other realms, has reigned supreme within the minds of men in all ages, is everywhere proclaimed. This is a laudable desire, implanted by Him who "doeth all things well," deep in the heart of man, for the purpose of promoting his happiness by inducing him to do good. But many, alas! pervert this blessing into a curse by seeking its gratification through wicked, selfish means, rather than by goodness and purity; forgetting that *oblivion* is, to the noble mind, preferable to fame gained by spreading ruin and sorrow throughout the earth. Scan closely the blood-stained pages of earth's history, and mark with careful eye the immense number which, but for the manner in which unprincipled men have striven to gratify this desire, would have been spotless as Sierra's snows. Take only one instance of earth's great men—Napoleon. The blood-stained fields of the principal countries of Europe, and the marks of flame still to be seen in the City of Moscow, tell us more plainly than the tongue of man or the historic pen can ever tell us of his insatiable desire to be remembered. Truly, he has his reward!

Happy would the world be if those whose names are ever chasing each other over the historic page, were the only ones who have spent their lives upon the field of battle merely to win a name. Many are the fathers and brothers who under pretense of love for their country, but really actuated by a restless desire to make for themselves a name which should live after they had passed beyond the hourne, sacrificed home and loved ones—even life itself—mid scenes of blood and carnage. And after all this, they lie upon the plains forgotten—unmentioned in their country's annals.

Everywhere—not only in the public field of action but in the more secluded walks of life do we see that sweet to the human heart is the thought of being remembered after death. All! All! from the king to the serf, from the aged man to the beardless youth, from the gray-haired grandmother to the laughing girls, have thought, "what shall I do to be remembered?" And truly, what shall we, on whose brow the brilliant stamp of genius is not—do to be remembered?

Shall it be by sacrificing our principles of right to gain the friendship of those whom we hope will remember us? Others have yielded to this desire, and even ere the end asked in bitterness of spirit, "what is friendship but a

name?" Shall we build for ourselves monuments of granite, and think by these mighty buildings to be remembered? Egypt's ancient kings thus sacrificed the lives of thousands of their subjects; their ashes lie in some obscure spot, and the pyramids but serve to show the skill of the architects of past ages, and to make the heart of every noble reflecting person turn in disgust from ambition so debased as to require so great a sacrifice, merely for its gratification.

Seldom does the gaining of earthly fame render its possessor happy. Who will say that Napoleon's was a happy life? Never allowing himself a moment's rest, ever urged on and on to boundless cruelties by his insatiable desire to win fame, could his have been a happy life? And his death! On the rocky isle of St. Helena lies this man, whose genius has never acknowledged a superior, and who has probably never had an equal. He is dying now—a captive; he is going to meet the God whose goodness he has constantly abused, and to answer for the use which he has made of the brilliant talents which have been bestowed upon him. His many cares have wrinkled his fine brow, but they have been unable to dim the fire of his eagle eye; his mind is with the past; no remembrance of good done or others made better by his brilliant talents comes to cheer and soothe him in the hour of dissolution; even his last moment is spent midst dreams of conquest; as his eyes are closed, pictures of battle fields flash o'er his frenzied brain. Earnestly during life he strove to be remembered after death, and he is remembered—as an unprincipled tyrant.

'Tis a cosy room in a simple cottage, the last rays of the setting sun are gleaming through a half-open window, and lingering as if to shed a halo o'er the dying head of an aged woman, whose days have been spent in doing all the good those poor, wrinkled hands have ever found to do, or that pure heart suggested. As we smooth back her snowy hair, gaze, ay, gaze on that brow! She boasts no gigantic intellect; there is no mark of brilliant talent, but gaze on. There is something sweeter, nobler far than the mere trace of intellect; in every line on that pale, wrinkled brow is written goodness and purity; every glance of her soft eye speaks of love to all mankind. Though her face is wrinkled and her eye dim, round her are gathering many loved ones who will remember and teach others to remember her with unflinching devotion. Ah! sweetly does she realize that

"To live in hearts we leave behind  
Is not to die."

Is it not better than all earth's renown to be able at the close of a long life to say, as she trusts herself in the hands of her ever present Friend,

"Fading away like the stars of the morning,  
Losing their light in the glorious sun,  
So let me steal away, softly and gently,  
Only remembered by the good I have done."

San Bernardino, Cal.

## Let It Alone.

"No, liquor won't hurt you if you let it alone," said one man, with a sneer, to another who was making a strong light to have it kept out of town by law. "You needn't meddle with it. If others take it, that is their lookout."

"But liquor does hurt thousands who let it alone; who hate it utterly, and never set foot in a saloon."

"I should like your evidence," said the other, a little puzzled.

"Just step around the corner into Mrs. Watson's house—a pretty little house, but it will not be her's much longer. The rum-seller has it in his grip. I hear she must move out this week. Watson is working on his new veranda, which is to run around three sides of the tavern, to pay up another liquor bill, while his wife and children are starving. They never touch liquor, but it has hurt them."

HOW TO FURNISH A BED ROOM.—A bed-room should impress the observer with the idea of a dainty cleanliness reigning supreme in every part of it, while the prevalence of cool, soothing tones of color suggest repose and rest. The paint might be delicate chocolate, the walls soft pea green; no color equals green for giving rest to the eyes, and in its paler tints it offers a pleasant sense of coolness during the most sultry days of summer, while they are free from the suspicion seen in many of the gray shades commonly used. Light colors make a room appear larger than the dark shades. Woodwork painted chocolate and cream walls, look well with bright blue furniture coverings and curtains, or maroon paint and citron wall with deep blue. A wall of a pale tone of blue and sage green woodwork will harmonize with furniture coverings bearing a design of autumn-tinted leaves. Stained boards are without doubt best for bed-rooms. A square of carpet covers the center, leaving three ft. clear all around the room. Dust invariably collects under furniture and chairs; dresses and drafts of air sweep it up into the corners; but the boards, being without covering, allow of its being easily taken up with a duster. Then, too, the carpet being simply laid down, there is no difficulty in the way of its being often shaken; no ticks have to be taken out or heavy wardrobes moved, so that there is no possible excuse for its being left down until the dust accumulates thickly.

THE HAIR.—The microscope shows the hair to be like a coarse, round rasp, but with the teeth extremely irregular and ragged.



## Chaff.

NEIGHBOR'S pretty daughter: "How much is this a yard?" Draper's son (desperate "spoons" on her): "Only one kiss." "If it is so cheap I will take three yards, and grandma will pay you."

"STOLE any chickens this week, Brudder Jones?" said a searching class leader to a member of suspiciously thieving proclivities. "No, sah—tank de Lor," "You're done well," said the leader, and passed on, while "Brudder Jones" turns to "Brudder Brown" and whispers: "Lucky he said chickens; if he'd said ducks he'd had me suah."

THE TRUE LANGUAGE OF COMPLIMENT.—Frenchman (to lady who has been singing): "Ah, what a voice! No, it is not a voice, it is ze warbles of a bird. Is it zat you in your throat what you call ze—ah, yes ze thrush?" Vocalist: "The thrush in my throat, Monsieur?" Frenchman: "Ah, I perceive zat I have make some mistake. It is anoder. Yes, I have him now—ze martingale!"

LAST week a strapping negro woman was up before and Austin justice, charged with unmercifully beating her boy, a saddle-colored imp. "I don't understand how you could have the heart to beat your own child so cruelly," "Jedge, has you been a parent of a wufless yaller hoy like dat ar cub of mine?" "Never!" ejaculated the judge with great vehemence, getting red in the face. "Den don't talk."

AN officer of an army relates that upon one occasion after a charge upon the enemy's works, a fierce encounter and a fall back for reinforcement, a bright young Irish soldier was found to have a rebel flag captured from the foe. Approaching him he said: "I'll send that to the rear as one of our trophies; give me the flag." "Sure, I'll not give it ye," said Pat; "if ye are wanting one, there's plenty av 'em behind that ridge over beyant where I got this; sure ye can go and get one for yerself."

## The Dolls Fete.

[Written for the RURAL PRESS by OLIVER HYDE.]

There is a very worthy charity in San Francisco, known as the "Old Ladies' Home." It was organized to furnish shelter and a pleasant home to old ladies who are so unfortunate as to have no other. It has been in existence 13 years, and there are now 20 inmates enjoying its benefits. It has been found necessary to enlarge its accommodations, and to that end a large building has been rented, and is now being arranged with a view to extend its usefulness.

The ladies of the Episcopal churches in San Francisco are now preparing a novel entertainment or exhibition, to be held in Platt's hall, beginning November 28th and continuing one week. It will be called the "Dolls' Fete," and the idea is to present the entertaining part of human children's lives, in its pleasantest aspect, by a parody on it with dolls. It is intended to have dolls' houses—real homes—furnished, and inhabited by dolls, in which they will appear as doing the honors and attending to the duties of housekeeping. There will be miniature gardens, in which all the sports of childhood will be represented; croquet grounds, with the mallets in hand and spectators standing or seated around, in and about summer houses for rest and retreat. There will be parks and pavilions, where lunch parties, dance parties, skaters, lawn tennis, and every other amusement which picnickers and pleasure seekers have to while away their day, all and everywhere personated by dolls. There will be the fine doll ladies promenading. There will be the rollicking boys and girls rolling in fun. There will be swings and dolls swinging. A bicycle track and its riders. There will be mamma dolls and baby dolls, dolls sleeping and waking, fretting and fuming; in fact it will be a Lilliputian world personated by dolls. And the object of it all is to make such a novel attraction that not only all San Francisco will go to see it, pay their two bits for entrance, and buy their lunches and ice creams for themselves and friends, but that its fame will spread far and wide, wherever the RURAL PRESS finds its way, so that the ruralist will also rush to witness so novel a sight and help so worthy a charity.

For this purpose the ladies wish you to publish this programme in your excellent RURAL to acquaint your patrons with the novelty which is being prepared for them. And everything in the exhibition will be for sale at as low rates as can be purchased in any store in the city.

THE REPRESSION OF EVIL.—George Kingsland, who was clerk for P. Beamish, and was arrested for stealing from his employer, pleaded guilty to a charge of petit larceny when arraigned in Department No. 1 of the Police Court, yesterday, and was remanded for sentence. Four years ago, Kingsland was employed in a large dry goods store, and was found to be \$400 short in his accounts, and was about to be arrested, but the prosecution was abandoned, on account of a strong plea he made on behalf of his wife, who was at the point of death.—Daily Paper. It is a question whether there is enough severity used in the punishment of such speculations. One would think that the earlier experience of this man would have made him honest ever afterwards, but it is not so. Possibly if leniency does not cure, severity may.

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of sixteen letters.  
My 8, 2, 15, 7, 14 is one of the United States.  
My 6, 13, 12, is anger.  
My 1, 9, 15, 11, was a murderer.  
My 10, 5, 10, is a division of time.  
My 3, 14, 2, 4, is a kind of fuel.  
My whole is the name of a distinguished novelist.

LEO P.

## Decapitations.

1. Behead a testament and leave sick.
2. Behead a kind of fuel and leave to consume drops.
3. Behead part of the head and leave water falling in drops.
4. Behead slang speech and leave an insect.
5. Behead a period of time and leave a personal pronoun.

F. E. M.

## Hidden Towns.

1. Sleep is necessary to health.
2. He sent Mr. Day to Newbury after stock.
3. Well, sir, what would you have?

C. B. A.

## Cross-word Enigma.

My first is in hammer, but not in drive;  
My second is in struggle, but not in strive;  
My third is in six, but not in four;  
My fourth is in hatch, but not in door;  
My fifth is in iron, but not in stone;  
My sixth is in talk, but not in tone;  
My seventh is in flake, but not in snow;  
My eighth is in wind, but not in blow;  
My ninth is in gravel, also in sand;  
My whole is a far distant land.

THEODORA.

## Curtailments.

1. Curtail a heavy weight and leave a preposition.
2. Curtail a market and leave to injure.
3. Curtail a portion and leave of equal value.
4. Curtail a beverage and leave to achieve success.
5. Curtail possessing heat and leave a contest.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—Be just and fear not.  
TRANSPPOSITIONS.—1. Time, item. 2. Hose, shoe. 3. Earl, real. 4. Eat, tea. 5. Arm, mar. 6. Eli, lie. 7. Road, door.  
CROSS-WORD ENIGMA.—Chicago.  
FLORAL ACROSTIC.—Iris  
Night-blooming cereus;  
Daphne odora;  
Ivy;  
Azalea;  
Nettle;  
Jacob's ladder;  
Acacia;  
Side-saddle flower;  
Myrtle;  
Ice-land moss;  
Nightshade;  
Evergreen thorn.  
CONUNDRUMS.—Because it is always in the midst of fight.

## What do You Think of this Story?

EDITORS PRESS:—I, the undersigned, am 13 years of age. And I think that I would like some day to become an author if I can. So I have written a short story, which I hope you will like well enough to print in the RURAL PRESS.—M. L. H. A.

## The Trouble that a Printing Press Caused.

"Yes, I shall have it."  
"No, I forbid it."  
The former words were spoken by a very dark complexioned boy, with black curly hair and large blue eyes, and about 14 years of age. This personage was Ned Zephyr. He was a good boy but he had two bad faults. He was very disobedient and never did what he was told. The other fault was that he was very stubborn, and when he set his mind on anything, he never gave up the object in view until he gained his point.  
The other speaker was a middle-sized man with brown hair and brown eyes.  
This gentleman was Ned's Uncle Fred with whom he lived.

The subject in discussion was a printing press. Ned's schoolmate, Frank Riddle, had a printing press, and that was what Ned wanted. When Ned asked his uncle if he could buy one, his uncle said, "Ned, you have so many things, that I should not think that you would want a printing press, and I am positive that you do not need one."

"I think that you might let me have everything that Frank does."

"No, I forbid you from having a printing press."

"Yes, I shall have one."

"No, you cannot have one."

Ned knew that his uncle's words were meant to rule so he said no more. But still he thought of the printing press. His uncle owned two very handsome and costly rifles; one was not as costly as the other, so Ned's uncle had promised to give it to him when he was 16 years old. His uncle had told him not to touch them, but to-day Ned was tempted by a printing press, so he went to the place where the rifles were kept.

As he was very excited he took up his uncle's rifle instead of his own which he meant to take. Ned shouldered the rifle and went down the road until he met Frank.

Ned began the conversation:

"Well, what will you take for your printing press?"

"Why, I don't think of selling out quite yet."

"Well, I have a rifle that I will give you for your printing press."

"Is the rifle yours?"

"Yes, of course."

"Well, I will give you my printing press for your rifle, that is if it is yours, which you said it was, and I would not doubt your word."

When Ned brought the printing press home, his uncle asked him what he gave for it, but Ned declined to answer. When Ned's Uncle Fred went to get his rifle he could not find it;

but about an hour afterwards he saw Frank Riddle have it.

So he went to S—and had Frank arrested for burglary.

The case was tried and Ned had to confess all about the printing press. The people and his uncle were very much shocked.

So his uncle told him to throw the printing press into the river. But Ned disobeyed and left the printing press at the side of the road, in a ditch.

One day, as his uncle and a gentleman were driving along the road, the horse stumbled and overturned the buggy. His uncle escaped uninjured, but the gentleman fell with great violence against the printing press, sustaining serious, but not fatal injuries.

There was a lawsuit commenced against Ned's uncle, all on account of the printing press.

Ned's uncle had to pay out a great deal of money, all because Ned disobeyed. So, boys, never disobey or take anything that does not belong to you, as Ned did. I forgot to add that Ned is now a young man, but he never forgets his first lesson in disobedience and taking things.

[Our little friend has certainly written a very "harrowing tale." We have printed it because we wish to give our young folks a lesson in composition. We hope all will read the story, and write us what are the mistakes in it; not mistakes in spelling or grammar, because it is nearly correct in these respects, but what criticisms can you make on the improbabilities or impossibilities in the incidents. Let all point out to us the faults they see in the story, and then we will take up the "printing press" subject again.—EDS. PRESS.]

## GOOD HEALTH.

## The Diphtheria Plant.

In an address delivered a few weeks since before the Academy of Natural Science at Philadelphia, Prof. Horatio C. Wood announced as the result of recent investigations, that diphtheria was propagated "by a microscopic plant or fungus, existing in all human beings, especially in the mouth and throat, but lacking the power of reproduction until given increased vitality by those disordered conditions of the mucous membrane which attend sore throat when caused by a cold."

The investigations were made at the instance of the National Board of Health, and were extended over considerable time and in diverse localities. Prof. Wood proceeded to state that in all blood there are two kinds of corpuscles—the red or color giving, and white. By careful study and experiments, both in human beings and the lower animals, it was found that this infinitesimal plant fastens upon the white corpuscles and multiplies its cells, altering their character, until with the interior destroyed they burst, and the plants, set loose in an irregular mass, separate and go off individually, to continue the destructive work on other corpuscles. Thus increased, they poison the blood, choke the vessels and are found in myriad numbers in the spleen and bone marrow, where the blood is manufactured. Prof. Wood's investigations show that the false membrane supposed to invariably indicate the presence of diphtheria, may be caused by ammonia, Spanish fly, or any other irritating influence in the throat, so that its presence is not infallible as indicating the existence of this disease. But in any case, the false membrane is built up by this parasitical plant, which grows and multiplies upon its inflamed surroundings, whatever may be its cause. It is when the plants grow strong enough to extend to the blood, either poisoning it themselves or carrying the poison with them, that diphtheria sets in. The little plant is exactly the same as found upon a coated tongue.

When Prof. Wood put plants such as found on a healthy tongue, in sterilized water, they failed to grow. On the contrary, plants from the throat or blood of persons affected with diphtheria multiplied rapidly. The practical result of the investigation pointed out, was the possibility that diphtheria, if existing theories prove good, may be prevented by artificial vaccination. In the case of splenic fever, caught from animals, which has been proved to originate in a somewhat similar plant, Pasteur has found that the plant, when exposed a sufficient time to the air, by the action of oxygen loses its poisonous character, and when then introduced into the system makes the animal sick, but is no longer fatal. The deduction is, that this diphtheric plant, scientifically known as "micrococi," may in time be cultivated so that when inoculated with it the system will no longer be subject to the disease in its fatal form.

A NATURAL DEATH.—Natural death is to die sweetly, without a sob, a struggle or a sigh. It is the result of a long life of uninterrupted health; of a long life of "temperance in all things," and such a death should be one of the ends and aims of every human being, so that we may not only live long, but in that long life, be able to do much for men and much for God. The love of life is a universal instinct; life is a duty; its peril or neglect a crime. We are placed on earth for a purpose; that purpose can be none other than to give us an opportunity of doing good to ourselves and others; and to be anxious

to be "off duty" sooner than God wills, is no indication of true piety. The good man has one ruling, ever-present, desire, and that is to live as long on the earth as his Maker pleases, and while living, to do the utmost he can to benefit and bless mankind, and to accomplish a long, active and useful life. The study how to preserve and promote a high degree of bodily health is indispensable. And it seems to have been ordained by a Providence both kind and wise, as a reward of a temperate life, that such a life should be largely extended; that its decline should be as calm as a summer's evening; as gentle as the babe sleeps itself away on its mother's bosom.

## DOMESTIC ECONOMY.

## Bacon.

EDITORS PRESS:—What is the most approved method of curing and preparing bacon?—SUBSCRIBER, Snipe, Oregon.

§ Pigs must not be extra fat to make the best of bacon, and the spare-rib lean must be left on the ribs, the bone must be cut out, and the sides cut square and smooth; the trimmings can be made into sausage or go with the fat into lard. The first six months is the most growing age for a pig, and at this age they are suitable for the purpose. After that they begin to get too thick and fat. Bacon may be cured the same as hams and shoulders, only it does not require so long salting. Usually the salt is rubbed on the pieces, and they are piled up for a few days to let it strike through. Three rubbings are enough. It should never be allowed to freeze during the curing, and if frozen it must be thawed out by soaking in water. Bacon will take in salt enough, unless the sides are very thick, in three weeks, when it is ready to be smoked. After smoking it may be hung in a dry, cool place or packed in dry salt or in tight boxes.

SOFT SOAP.—An old housekeeper says: Take 21 lbs. of clean grease, free from lumps; put it into a clean barrel, which is water-tight; purchase 14 lbs. of potash at any wholesale druggist's, the price of which is usually eight cents per lb.; dissolve the potash in a brass kettle over the fire; pour the solution into the barrel, and stir the same well two or three times the first day; then add one or two pails of water morning and evening as it thickens, and stir thoroughly every time you add water; continue to add water until the barrel is full; I usually procure an empty fish barrel for the purpose, which I cleanse with hot water; in winter I use warm water to make the soap; cold will answer in summer; concentrated lye in cans, and sold by all grocers, is too expensive to use; therefore, procure potash, as stated above.

FLORENTINES.—Roll some nice puff-paste to a thickness of the eighth of an inch, and lay it on a thin baking tin. Spread over it a layer of green gage, or any other preserve or jam, and bake it in a moderate oven. Take it out, and when partially cool, having whipped some whites of eggs with sugar, put the whip over the preserve, and strew some minced almonds all over the surface, finishing with sifted sugar. Put it once more into the oven until the whip is quite stiff. The florentines should be of a pale color, and a few minutes after the paste is finally removed from the oven it should be cut into diamonds, and when served up, placed on a serviette, or on ornamental paper.

A DISH OF POTATOES.—A nice dish for supper is made of sweet or Irish potatoes, which have been left from dinner (either baked or boiled). Slice them, but not in very thin slices, lay in a baking tin or pudding dish, and cover each layer with little lumps of butter and with pepper and salt. If you like the flavor of pork put two or three thin slices of salt pork on the top. Bake for half an hour. Raw potatoes may be prepared in the same way, but will require a longer time to bake them. To give an excellent flavor to warmed-over potatoes take some of the fat that you cut from slices of beefsteak, fry in the pan till you have as much as you need, then take out the scraps and put in the potatoes. This is better than butter.

CHOCOLATE CAKE.—One cup of sugar, table-spoonful of butter, one heaping cup of flour, one teaspoonful of cream tartar sifted in flour, and half a teaspoonful of soda dissolved in a table-spoonful of sweet milk. Filling—Whites of three eggs beaten to a stiff froth, one cup of sugar (pulverized), and three table-spoonfuls of grated chocolate, and vanilla to taste. Bake the cake in jelly-cake tins in three layers, and spread the mixture between and on top. Eat within 36 hours after baking.

WHITE CANDY.—One cup of granulated sugar, one pint of water, two table-spoonfuls of vinegar; boil just as you do molasses candy, but do not stir it. You can tell when it is done by trying it in cold water. Pull as if it were molasses candy; have a dish near by with some vanilla in it, and work it enough to flavor it as you pull; pull it in a cold room, and the next day you will have delicious candy.

BREAKFAST ROLLS.—Warm a quart of milk, add a quarter of a lb. of butter, two beaten eggs, one cup of yeast, and flour to knead. Make them at night, if wanted for breakfast, and bake a light brown, having them hot for the meal.





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SAN FRANCISCO:

Saturday, November 12, 1881

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## The Week.

The symptoms of old age in the year are multiplying fast. The persistent norther which has prevailed with slight respites for a week or more, grows more chilling, and one would think it would be so, for Boreas has blown out all his surface wind and must be drawing upon the polar reserves. Let him blow while he may, for it will be turned back upon him warm and moist before many days. Another sign of a closing year is the official proclamation of thanksgiving—and surely there will be many things to be thankful for in the United States this year. Let all arrange to observe this day in the way which brings most heart into it for them. Life is too short to let slip one of the days whose experiences cheer in anticipation, enthrall in realization and delight in memory. Let the family love and spirit flow forth freely and re-unions be held wherever parents have children and children parents, and wherever friend is still left to friend.

It is our present intention to issue an enlarged edition of the RURAL PRESS on Thanksgiving week, and to fill it with themes fit for the occasion and of especial home interest. We follow close upon the practical and industrial in our conduct of our journal, and this is no doubt one secret of its success, but it will do no harm to branch out for a week into subjects more recreative in character. Therefore we invite all to send us early favors of such matter as will be appropriate to the Thanksgiving time. Pictures of California home life or studies of nature and humanity—we care not whether they take the form of sermons, essays, poems, or fleeting notes. If all will join hands in the making of a Thanksgiving RURAL the editor will become for once the audience—enraptured and outspoken. We order a lean-to built upon our box at the postoffice to accommodate the new material; so let the pens and pencils fly.

## The Wool Trade.

The wool market has been decidedly unsatisfactory for the last two months. Our fall clip has come in, and has for the most part gone into the warehouses, because no one would offer fair rates. We seem to have been left severely alone by the Eastern manufacturers, as no one has appeared to buy for them, nor have orders to any extent been sent to our local dealers. The result is that our wool growers are holding on, and propose to hold until the condition of affairs changes. The secret of the present neglect is apparently attributable to a general disregard of the grades of wool which we chiefly produce. While there is a fair trade reported in washed fleece wools, and the price for them is continually advancing, the demand for unwashed wool is dull, and has not shown any improvement since Sept. 1st. The trade in Boston for the last week in October, is reviewed by Walter Brown & Co. as follows:

The past week has shown a healthy trade in wool, with a fairly active demand, and an aggregate in the sales of nearly 3,000,000 lbs. A comparison of the transactions shows a decrease in foreign and a large increase in domestic wools. Fine grades continue to attract the principal attention of manufacturers and constitute the largest portion of the week's business, although there has been a little more inquiry for the better class of medium wools, than has prevailed for some time past.

In values, the position is unchanged except for fine washed fleeces which show more firmness, and what a week ago was considered an extreme outside price, is today the general holding figure by the trade, with considerable indifference on the part of owners whether it is accepted or not. This hardening tendency appears to be almost entirely confined to washed fleece wools. It is a singular fact that unwashed, Territory, Texas, and similar wools, in spite of the improvement in washed grades, do not show the corresponding advance since Sept. 1st, choice conditioned fine unwashed, Montana, &c. will command an advance over August prices, but average and inferior lots, are neglected by consumers except at old prices. Medium and low grades are also to be classed in the same category, the figures obtainable to-day showing no rise over those quoted two months ago.

Of course the future is somewhat uncertain, but the accumulation which has been permitted to occur must be regarded as unfortunate, as the season is late and the time will be comparatively short, before the coming of the spring clip. However, there is fair reason to expect unchecked consumption of woolsens, although the Eastern manufacturers are prone to be very cautious and conservative.

In order to see what light the experience of the last 10 years might cast on the usual course of prices for fall wool, during the months intervening between the present time and the incoming of the spring clips, we prepared the following table:

WOOL PRICES IN SAN FRANCISCO FROM NOVEMBER TO FEBRUARY FOR THE PAST 10 YEARS.

		Nov.	Dec.	Jan.	Feb.	Mar.
1871-2	N.	26@32	26@32	25@30	24@29	22@28
	S.	18@24	18@24	17@25	16@24	15@21
1872-3	N.	18@24	17@23	17@25	21@30	18@24
	S.	12@17	12@17	13@17	14@19	12@16
1873-4	N.	16@22	16@23	16@23	15@22	14@18
	S.	11@16	11@17	13@17	12@16	10@13
1874-5	N.	15@21	16@22	15@21	17@23	14@18
	S.	12@16	11@16	10@16	10@16	10@14
1875-6	N.	14@18	15@19	13@17	13@16	13@16
	S.	10@14	10@14	9@13	9@13	8@12
1876-7	N.	15@21	15@21	15@20	15@20	14@18
	S.	10@14	10@14	10@14	9@14	8@12
1877-8	N.	16@22	16@21	15@20	15@20	15@20
	S.	11@15	11@15	9@13	10@14	10@14
1878-9	N.	13@18	13@18	12@18	12@18	11@17
	S.	9@12	9@12	9@12	9@12	9@11
1879-80	N.	21@30	21@30	20@30	20@30	No fall
	S.	15@19	15@20	14@20	14@20	Wool not sold in Mar. 1880
1880-1	N.	21@30	21@30	17@25	17@25	Mar. 1880
	S.	15@19	15@20	14@16	14@16	and 1881.

These figures are interesting to refer to, but they are of little value in forming a judgment this year, because heretofore our fall wool has in great part gone forward by the time covered in the table, the best prices usually occurring at the date of the brisk trade, say during September and October. As the fall trade this year has not come at all, so far, there is an element introduced in the calculation which has not prevailed hitherto. It is of course possible that the Eastern manufacturers may have their views enlarged on the desirability of our fall wool, and may begin ordering at any time, although it must be acknowledged that the sooner it is done the better, in order to dispose of the stock before another clip is taken off.

It is quite natural that the wool growers should become impatient under the unexpected and prolonged stagnation in this fall's market. As may be seen under Mendocino county in our "Agricultural Notes" this week, there is to be a meeting of wool growers at the Courthouse in Ukiah on Saturday, Nov. 12th. The call for the meeting mentions several alleged abuses in the trade, and the best thing the growers can do is to appoint trustworthy committees to examine the matters under suspicion. There seems to be an impression that the indisposition to invest in wool this fall is attributable to San Francisco in some way. It seems to us that the trouble is at the East, for the East is surely to blame for the fact that Eastern buyers have not been sent here as usual, and that orders have been restricted to rates at which no wool could be purchased here. However,

it is well for the growers to look into the matter carefully, and to this end we trust the next meeting at Ukiah will be well attended and active.

## The English Wheat Crop and Requirements.

This week's cabled quotation from the *Mark Lane Express* sets forth that the "worst" concerning the unsatisfactory character of the English wheat crop of 1881, "has not yet been written." This means that the threshing, which is always long deferred after the reaping in England, is making some startling disclosures, and that the new light on the home supply of breadstuffs indicates even greater requirements from importation than has been mentioned hitherto. The influence of these facts upon the value of wheat in all leading supply countries must be notable.

Without this latest assurance, the English demand for wheat this year had already reached the largest figures. In the last received copy of the *Mark Lane Express*, there is an article by the well-known English agricultural authority, Dr. J. R. Lawes, of Rothamsted, which figures the supply and requirements for the year as follows:

According to the returns of the Registrar General, the population of the United Kingdom was a little below 35,000,000 on June 30, 1881. Making due allowance for the natural increase, the mean population to be fed during the year commencing September, 1881, and ending August 31, 1882, will be 35,250,000. Estimating the consumption at 54 bushels of wheat per head, the quantity required to feed the population will be a little under 25,000,000 quarters.

The area under wheat in the United Kingdom was, during the past harvest year, slightly under 3,000,000 acres.

The produce in my experimental field, taking the mean of the same selected plots as for many years past, shows an average of 24 bushels per acre, reckoned at 61 lbs. per bushel; and assuming an average crop of wheat to be 25 bushels, the crop is 14 below the average.

If the yield in my experimental field be taken as a guide, the total wheat crop of the country would not amount to 9,000,000 quarters; and deducting from this the amount required for seed, the quantity of home-produced wheat left available for consumption would be only about 8,000,000 quarters; and we should thus have to depend upon foreign supplies for nearly 17,000,000 quarters. As, however, wheat has risen considerably in price, and the potato crop is likely to be abundant, it is probable that our requirement for foreign wheat may be satisfied by an import equal to that which we have received during the last two years, namely, from 16 to 16½ million quarters.

With a stationary or decreasing area under wheat, and a rapidly increasing population, it is probable that before many years are past, the home produce of wheat will not furnish more than one-fourth of the total amount required.

These facts taken in connection with the reduction in the wheat yield of this country, and the large requirements on the continent of Europe as well as in Great Britain, have undoubtedly lain at the basis of the increased prices, which our growers have been enjoying this season, and the outlook now is most certainly as fair for maintenance, if not of farther increase in values, for if the worst has not been written about the English crop, the more will be required to satisfy British appetites.

Another fact which should strengthen California wheat growers' views, is the number of wheat ships now in sight. The fleet of "square riggers" in San Francisco bay, attracts the attention of all crossing the ferry, and the availability of tonnages should reduce the excessive rates which ship brokers exacted during the first three months of the shipping year. It can hardly be otherwise, and the reduction of freight should place its equivalent upon the local value of wheat, for this is the place where it undoubtedly belongs.

THE SURVEY OF THE NORTHWEST.—Mention has been made of the projected scientific survey of the country tributary to the Northern Pacific railway and the Oregon railway and navigation companies' lines, under Prof. Raphael Pumpelly. The work, which will be organized for a term of years, contemplates mapping the country "on a published scale of four miles to the inch," in order to show the geological structure, the distribution of minerals, of the different varieties of soils, of plants and animals, and the climatic conditions. For the thoroughness and high scientific quality of it the director's name is a guaranty, but he has also associated with him a number of trained men from the United States Geological Survey, including Mr. Wilson, the able topographer of the Fortieth Parallel Survey. The classification of the lands of the railroad companies according to their fertility and their mineral and timber resources will, of course, furnish a rational guide to the extension of branches, and will have a wholesome effect in turning immigration into remunerative channels. The bulletin which the survey contemplates publishing will thus be eagerly consulted. Meantime, the Signal Service will welcome the new meteorological stations to be established in the pre-eminent weather-breeding section of the continent. In every way this country at large will profit by this nominally private enterprise, which anticipates the national exploration of the great northwest territory.

RETURN TO THE SANCTUM.—Ex-Governor, Wm. Irwin has purchased the Yreka *Tribune* from G. R. Remms and gone back into his old sanctum-sanctorum once more to the paste-pot and scissors. We hope the governor may have lots of success, and make loads of ducats.—*Tehama Tocsin*. So say we all of us.

## Thanksgiving Day.

## Proclamation.

It has long been a pious custom of our people with the closing of the year to look back upon the blessings brought to them in the changing course of the seasons, and to return solemn thanks to the All-Giving Source from whom they flow; and although at this period, when the falling leaf admonishes us that the time of our solemn duty is at hand, our nation still lies in the shadow of a great bereavement, and the mourning which has filled our hearts finds sorrowful expression toward the God before whom we but lately bowed in grief and supplication; yet the countless benefits which have been showered upon us during the past 12 months call for our fervent gratitude, and make it fitting that we should rejoice with thankfulness that the Lord, in His infinite mercy, has most signally favored our country and its people. Peace without and prosperity within have been vouchsafed to us; no pestilence has visited our shores. This abundant privilege of freedom which our fathers left us, in their wisdom, are still our increasing heritage, and if, in parts of our vast domain, some affliction has visited our brethren in their forest homes, yet even this calamity has been tempered and in a manner sanctified by the generous compassion for the sufferers which has been called forth throughout our land. For all these things it is meet that the voices of the nation should go up to God in devout homage. Wherefore, I, Chester A. Arthur, President of the United States, do recommend that all people observe Thursday, the 24th day of November, as a day of national thanksgiving and prayer, by ceasing, so far as may be, from their secular labors, and meeting in their several places of worship, there to join in ascribing honor and praise to Almighty God, whose goodness has been so manifested in our history and in our lives, and offering earnest prayers that His bounties may continue to us and to our children.

In witness whereof, etc.

CHESTER A. ARTHUR.

By the President:

JAS. G. BLAINE, Secretary of State.

## QUERIES AND REPLIES.

## Rabbit-Proof Fence—Granite Soil.

EDITORS PRESS:—Will you please let me know through your paper if it is necessary to protect a young vineyard with a rabbit-proof fence? What are the best ways of making rabbit-proof fences with pickets and also with common fencing? Is granite soil suitable for rain and wine grapes?—AMATEUR, Lincoln, Cal.

Rabbits are very destructive to vineyards and where they are abundant a rabbit-proof fence is the safest guard. The best we have seen are tight board fences, six feet high, made with two horizontal string pieces and boarded up and down. This is rather an expensive fence. Perhaps some reader can give points on the use of pickets and the cost as compared with boards. Decomposed granite is the basis of the soil in the famous Riverside colony where first-class raisins are grown. We believe it is counted good for grapes generally, provided other conditions are favorable.

## Dried Fruit Prices.

EDITORS PRESS:—In your report for dried fruit—apples and peaches—are the quotations for sun dried?—L. J. D. Soquel, Cal.

Our prices mean to cover the range for the fruit generally marketed, and most of it is sun dried. There are fancy styles prepared by some of the patent driers and bleachers which sell higher than the prices given. For example some fancy dried apples sell at 12½¢ per lb.

## Blindness in Cattle.

EDITORS PRESS:—I have a cow which I value very highly, and about two weeks ago one of her eyes began to run water, and it finally turned white and she is now quite blind in that eye, and now I notice that the other eye is beginning to run as the first one did. Can you, or any of the readers of the PRESS tell me what to do for it?—E. T. P., San Joaquin.

## Who will prescribe?

## Wild Oat Seed.

EDITORS PRESS:—I would like to inquire through your paper if there is any one that has any California wild oats to sell.—A SUBSCRIBER. San Buena Ventura.

Wild oats are sometimes in the market. If our correspondent had sent his name we would ask any one who has them for sale to let him know. Always send the true name with an inquiry.

## To Artesian Well Experts.

EDITORS PRESS:—The people of this place intend to form a joint stock company and bore an artesian well to find flowing water if possible. We desire to obtain all the information in regard to cost, etc., and will you kindly publish this that any one interested in doing such work may be informed of our desire and correspond with us.—GEORGE B. OTIS, Selma, Fresno Co.

## Stump Machine.

EDITORS PRESS:—Is there a machine in your market used to pull stumps. Should there be such a machine, please let me know the price, make, etc.—J. P. SARGENT, Sargents, Santa Clara Co.

Stump pulling machines are plenty at this East, but we are not aware that much has been done with them here. Those who have them would do well to write to Mr. Sargent, and advertise in the RURAL PRESS.

ARTESIAN water was struck Saturday at Paiga & Morton's ranch, four miles west of Tulare, at a depth of 330 ft.



### Bean Thresher Wanted.

A cry comes from the great Lima bean district of Santa Barbara county for a threshing machine for Lima beans, and it would be well for our inventors to go to work at the problem. The price has ruled very high this year, and the result will be a more extensive planting next season. The beans are in demand for export, and have sold this year as high as 6 cents per pound wholesale, and perhaps higher. The crop is subject to much fluctuation from year to year, it is true, but it is quite possible that, as California Lima beans become more generally known to the Eastern trade, the value will become more constant. At all events, there will be much preparation made for a large production of Limas next year, and the growers are looking to the inventors to aid them in the harvesting. A good idea of the needs and the opportunity for improved mechanism can be had from the following extract from the Santa Barbara Press of last week:

A threshing machine ought to be invented to thresh Lima beans. The losses which annually occur by the early rains could frequently be obviated if it were possible to thresh the bean crop as speedily as grain is threshed. Should the weather remain cloudy and rainy for any great length of time, many of the beans in Carpinteria and Pateros will molder and become worthless, just as they did last year. The fault would lie almost wholly with the present mode of threshing the beans. The crop as a rule, has been sufficiently ripe for several days, but animals could not be obtained to trample the beans from the pods. Bands of mares, commonly called *manadas*, have been driven into the bean-producing districts from all portions of the country for miles around. Circular pens or corrals are built, within which the beans are placed. The horses are turned into these corrals and driven around until the beans are trampled out. Then other beans are thrown in to undergo the same process. The lack of sufficient horses in Carpinteria was the real cause of the delay in harvesting. Parties had only 10 or 12 horses where they needed 25, and others could not obtain a single animal. Many drove wagons over the beans because horses could not be obtained. The process is a very faulty one. Ten days or two weeks are required to thresh out a crop that could be run through a suitable machine in one or two days. Threshing time comes always at the season of the year when rains are expected. The utmost haste is required. The only trouble with machines is that they break the beans. This must be overcome. If inventors would put their wits at work, some simple method of threshing beans would certainly be discovered, and the result would be a great saving of time, and a great lessening of the risk which annually attends the bean harvest.

Certainly, the rude methods in this important industry should be superseded, and if inventors will acquaint themselves with the nature of the material to be handled, they will doubtless succeed in aiding the farmer in this matter, as they have heretofore in other branches of agricultural work.

### A State Fruit Growers' Convention.

At the last meeting of the State Board of Horticultural Commissioners, it was arranged that there should be a general convention of fruit growers, to discuss matters affecting their interests, held in Sacramento in December, and the details of the arrangements were entrusted to Horticultural Officer Matthew Cooke. We learn that the convention will be held on December 6th, at the Senate Chamber of the Capitol, Sacramento. All fruit growers, fruit packers, shippers and nurserymen in the State will be requested to attend. Tickets will be issued by the railroad company from all its stations throughout the State at a two-third rate of fare to Sacramento and return, to be accepted as good on all trains arriving at Sacramento on the 5th, 6th and 7th of December, remaining good for return until the 12th.

It is to be hoped that the occasion will be accepted by fruit growers generally as a fit opportunity for the discussion of all the important considerations now affecting their industry, in order that by a multitude of counsels, there may be wisdom attained and a unity of action and sentiment disseminated. Naturally, the insect question will be a prominent theme for consideration, and the result may be a better general appreciation of the present and impending evil, and more general and resolute steps taken to meet it. Matters are proposed which come close to men's property and interests, and they should be frankly and freely discussed. This can only be done by men of all views convening and bringing forward their several views and observations. Let them all who have enlisted their fortunes and their futures, in the grand fruit industry of California, prepare to give a few days to the subjects in hand. It would be a leisure time with fruit men, and it could hardly be better employed than by conference on matters of so great importance to them. No doubt more full details proposed for the meeting will be announced in due time, but the notice is early, and all interested may prepare for attendance.

**GUARDING AGAINST SMALLPOX.**—Inasmuch as smallpox has been introduced into several counties of our State by passengers on the overland emigrant trains, the State Board of Health, under special authorization by Gov. Perkins, has undertaken to arrange for an inspection of incoming trains, and quarantine of all infected cars and immigrants. Probably the inspectors will visit the trains on the C. P. R. R. east of Truckee, and the S. P. R. R. east of Colton. It is announced that the railway officers have promised to co-operate with the health authorities in carrying out the sanitary regulations which may be adopted.

### A Distinguished Percheron Mare.

We give upon this page an engraving of a famous Percheron mare and her colt. The mare is imported "Mignonette," who won a first prize and gold medal at a grand horse show in France, before she was brought to this country, and distinguished herself since her arrival by capturing the grand medal at the Centennial in 1876, and the grand sweepstakes prize and gold medal for the best mare of all breeds at the great Chicago fair in 1881, held in September last. This is indeed a record of much importance, and one in which the owner of "Mignonette," M. W. Dunham (Wayne, Dupage county, Illinois), no doubt takes due pride. Mr. Dunham's success at the recent Chicago fair has, we notice, been the theme of copious comment in our Eastern exchanges during the last month. His display of Percherons is conceded to have been the grandest exhibition of draft horses ever made in this country. There was a contest between the Percherons, as shown by Mr. Dunham, and the Clydesdales, shown by Col. Holloway, both these breeders and importers being acknowledged to stand at the head of their respective draft horse interests in this country. The stated grand sweepstakes prize of \$1,000 and gold medal was unanimously awarded to Mr. Dunham's Percherons, although the undoubted merit of Col. Holloway's herd was duly recognized by the recommendation of the societies' gold medal by the judges. The



IMP. MIGNONETTE N° 584 & COLT.

### A FAMOUS PERCHERON MARE, OWNED BY M. W. DUNHAM, OF ILLINOIS

victory of the Percherons was a signal one, and will be received with gratification by the many adherents of the breed in this State.

### The Awakened East.

If California had not secured so firm a hold upon the affections of our enthusiastic friend, Horace J. Smith, of Santa Barbara, we should fear that the East would recapture him from us, for we note from a letter just from his hand that the autumnal beauties and the signs of prosperity have made a deep impression upon him. Among other things he writes:

The weather is glorious. The severe drought continues; turkeys are \$1.50 per bushel—but I am exhilarated, charmed with the variety of the trees here instead of the monotony of California. Then too, the slight frosts have colored up the gum trees, sassafras, swamp maples, etc., to glory tints. I have been up to Chester county (our Pennsylvania garden) through New Jersey to New York, and over to Orange. The wealth, the luxury, the people, society so highly organized and specialized, the multifarious railroads, the rush of business—everything amazes me. People are so well dressed, and vying consciously and unconsciously in dress expenditure and lavish personal, household, architectural and gardenesque adornment, that it really is a new world to me even after an absence of only two years.

This does look a little as though the writer was a "little gone" on the East, but like his great prototype, Horace may be granted a little versatility in his (geographical) affections, for we are quite sure that when Pennsylvania begins to turn toward him the cold shoulder of her winter, the Smith part of his nature will proclaim California the true Pocobontas after all. And while we are thus confident of regaining him, we can be generously glad to hear that our Eastern friends are enjoying such a reign of prosperity as he describes. We have not room for all of them here. There would not be climate and strawberries enough to go around.

**KIEFFER PEAR.**—Those interested in the new Kieffer pear, which has been mentioned from time to time in our columns, will be attracted by the advertisement concerning them, by Mr. Winchester, of Columbia, in this week's *RURAL*. As the advertisement was printed last week, it read "5-year-old trees, 5 to 7 ft. high." It should read "one-year-old trees, 5 to 7 ft. high," as printed this week.

### The Grain Gambling at the East.

We have often lamented the grain gambling at the East, which sends prices up or down, with no reference whatever to the real value of the grain as fixed by the probabilities of actual supply and demand. As some readers may not understand how fictitious prices at the East sometimes are, we give a short description of the gambling. This is the method: Mr. A. offers to deliver to Mr. B., 1,000,000 bushels of No. 2 red wheat, \$1.22 per bushel, though he (Mr. A.), does not own a single bushel of wheat, and does not expect to. Mr. B. takes the offer, and makes a deposit of a small portion of the price or margin. In this case Mr. A. is said to be short, and Mr. B. long. Mr. A. is short of what he has agreed to deliver. If the closing sale of this grade of wheat on August 31st is only \$1.20, Mr. B. pays Mr. A. 2 cents a bushel, or \$20,000. But if the price is \$2.25, Mr. A. pays Mr. B. 3 cents a bushel, or \$30,000. Usually no wheat is delivered. Sometimes, however, if there is a limited supply of wheat available, and Mr. B. has capital enough, he secretly buys up all there is; he gets up a corner in wheat, and when settling day comes, he may require Mr. A. to deliver the wheat, or he may get others to try to buy it, while he refuses to sell until \$1.30 or \$1.40, or even \$1.50 is offered, and the price of the day is fixed at that rate. In the last named case, Mr. A. would have to pay him the difference between \$1.22 and \$1.50,

which, on 1,000,000 bushels, would be 28x1,000,000, or \$280,000. If, on the contrary, the prices could be beat down at settling day to \$1 per bushel, Mr. B. would have to pay Mr. A. 22 cents a bushel, or \$220,000.

We have named only two individuals, but there are hundreds of thousands of persons doing the same thing, some betting on a few thousand bushels, others on hundreds, and a few heavy operators on millions. In times of excitement and activity, the speculative sales of wheat during a few days amount to more than the entire surplus crop of the country during a year. And it is easy to see that this hollow sham is an outrage upon the true commerce of the country, and often works hardship to producers and legitimate traders. It should be done away with.

**ALMONDS AS A STOCK.**—There has been a wonderful amount of grafting unprofitable almond trees to other fruits from Sonoma on the north to San Bernardino on the south, and all notes of the success of the movement are valuable. Col. Armstrong, of the Santa Rosa *Republican* writes: "Almonds are the best stock for grafting prunes, nectarines and the like. Three years after grafting they would begin to yield so as to pay, according to our experience, and in five years it is doubtful if any other crop will be as profitable. Our almonds grafted three years ago to prunes, nectarines and apricots, have full, bushy tops with bearing branches, after heading back, ten ft. long. But it is only fair to state that apricots are not a reliable crop here."

**SANTA CRUZ HORTICULTURAL COMMISSION.**—So far as we have observed, no county board of horticultural commission has done such thorough and comprehensive work as the board of Santa Cruz county, composed of Messrs. S. Drennan, B. Pilkington and C. L. Anderson. They have reported in the local papers at length, and the notes will be of much importance to the horticulture of the county. They find no codling moth, and but little red spider and scale. They urge the non-return of boxes for these "empties" have already been found with codling moth larva in them, and if this method of importation continues the county must ere long become infested.

### Meeting of the Viticultural Commission.

A special meeting of the Committee on Phylloxera, Vine Pests and Diseases of the Vine, was held November 4th, at the office of the State Viticultural Commission. Present, I. De Turk, Chairman; Chas. Krug, Geo. West, Arpad Haraszthy, Chas. A. Wetmore, and the Secretary, John H. Wheeler.

Mr. Wetmore, the chief executive officer, made an oral statement of the results of investigations of the progress of diseases and of experimental work; also, concerning American resistant vines; and also concerning the reports of the Special French Commission to the International Phylloxera Congress held at Bordeaux last month, on the following subjects:

*First*—On the sulphide of carbon and sulfo-carbonates. *Second*—On submersion. *Third*—On American vines. *Fourth*—On plantations in sand. These reports had been promptly forwarded to the commission through the United States Consul at Bordeaux. The substance of these statements would be fully presented to the public shortly in the printed reports of the committee and of the chief executive officer, now being prepared for publication.

After a full discussion, it was agreed that the president of the commission call a special meeting of the board, to act upon the recommendations of the committee, to be held Friday, Nov. 11th. The main points agreed to were, viz.:

*First*—That the cuttings of grapevines made in this State for plantations outside of vineyards where made, shall be required to be made solely from the new wood of the preceding season's growth, all old wood to be removed in order to prevent spreading contagion by means of the winter eggs of the phylloxera, which, according to the best entomologists, is only found on the old wood, the new wood being free from them.

*Second*—That all cuttings and rooted vines imported from any region or country outside the State, shall be required to be disinfected at the place of first consignment within the State before distributed or planted; the method of disinfection to be at the option of the person to whom such cuttings or roots are consigned, provided that they be some one of the methods which have been experimented with and proved efficacious by the chief executive officer of the commission, full details of which will be made public.

*Third*—That all persons planting new vineyards within the State shall be advised and strongly urged to conduct all cuttings and roots suspected, regardless of origin, and to thoroughly disinfect them, thereby accomplishing the destruction of all possible germs of insect pests upon them, as well as also those of fungoid diseases, which are becoming dangerous in all parts of the country.

*Fourth*—That for the convenience and protection of all interested parties throughout the State, the chief executive officer shall be requested to appoint resident inspectors, as provided for by law, for each section or region where vine growers desire the same, and upon their application to him for such appointments; applications to be made by practical vine growers, and those intending immediately to plant new vineyards, directly to the chief executive officer, Chas. A. Wetmore, No. 111 Leidesdorff street, San Francisco, and also that he should appoint such inspectors at other points where their services seem positively to be required.

*Fifth*—That blank forms for certificates of disinfection shall be furnished to inspectors, and that the fees to be charged by inspectors for such certificates, made out in duplicate, shall not exceed 50 cents in each case, the fees and penalties in case of evasion of rules and seizures, to be the amounts provided for by law.

*Sixth*—That the report of this committee be prepared by the chairman for publication without delay.

The committee is still of the opinion that the remedies against the phylloxera must be grouped under the following heads:

*First*—Skillful applications of sulphide of carbon and sulfo-carbonate of potash, aided by insecticidal washes upon the wood of the vines above ground, and powerful fertilizers.

*Second*—Submersion in accordance with well-known experience.

*Third*—Plantations in sandy soil (not less than 60% silica).

*Fourth*—Grafting on American resistant stocks.

In these opinions the committee find themselves supported beyond question by the reports to the International Phylloxera Congress, held at Bordeaux last month, and by partial experience in this State. Each of these methods will be touched upon and explained in the forthcoming reports of the committee and of the chief executive officer, with full instructions also for the disinfection of cuttings and roots.

The substance of the conclusions of the committee as here stated, was expressed in resolutions introduced by Commissioners Haraszthy, West and Krug, which were unanimously adopted. Concerning the appointment of inspectors, the chief executive officer desires it to be known that persons requesting such appointments should nominate suitable persons for this office.

**SOUTHERN NEW JERSEY SINKING.**—Prof. Geo. H. Cook, State Geologist of New Jersey, concludes that the land in Cape May and Cumberland counties is gradually but certainly sinking. From knowledge now in his possession he estimates that the surface has settled about eight ft. during the last 100 years. During a recent visit he declared it his intention to test the matter by placing stone posts in the ground at certain localities, a record of which should be kept so as to insure their being found at any future time, said stones to be so set and marked with reference to their height above the sea level that it may be positively ascertained whether this portion of the State is becoming lower, and at what rate.

**IMMIGRATION ASSOCIATION.**—The Immigration Committee of the Board of Trade, on Monday afternoon, resolved to incorporate under the name of the Immigration Association of California. Messrs. Barker, Briggs and Merry were appointed a Committee on Organization. It is proposed to start branch organizations in every county in the State. The Secretary was directed to send replies to all communications asking for information concerning public lands.

**FOR RIVERSIDE.**—O. T. Johnson, Esq., of Riverside, has been spending several weeks at his former home in Galesburg, Illinois. He leaves that place on his return to Riverside this week, bringing with him a party of 35 or 40. Another gain for Riverside.



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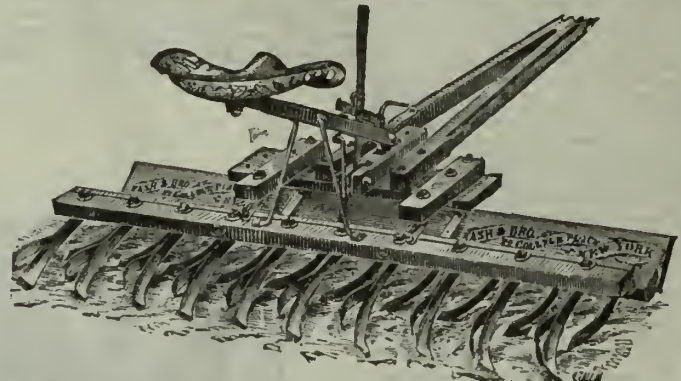
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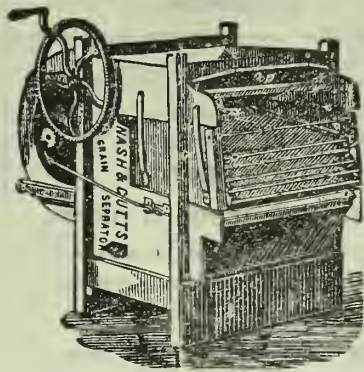
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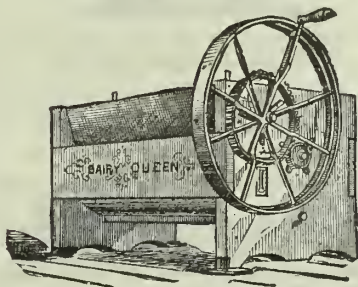
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E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Mens' Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12.10 pay the express charges. I sell nothing but my own manufacture.

54 All Gold, Chromo and Lithograph Cards, no 2 alike, name on, 10 cts. C. DePuy, Syracuse, N. Y.

## IMPORTANT TO THE FARMER.

-USE-

## Larroche's Fertilizer.

It is manufactured solely of Bones and residues of Meats dried and pulverized in such manner that all the Calcium, Phosphates, Carbonates, Nitrates and Potassium, which are the main assimilators to plants, are entirely preserved in the Fertilizer and render it most valuable to the cultivators of the soil.

Stable manures require frequent irrigation in order to develop its properties; it is expensive, voluminous, and requires great labor to spread and subsoil it; it propagates weeds, worms, snails and destructive animalcules, the pests of the farmer. On the other hand, Bone Powder can be easily handled, transported at low rates of freight, in bags. It checks the propagation of insects and luxuriates the growth of hops, vices, fruit trees, etc.; can easily be spread around the plants and is most efficacious as an imp-diment to the rapid and terrible encroachment of the PHYLOXERA. The Fertilizer should be sown by hand on the ground when it is moist like seed, and then harrowed. About 400 pounds is the quantity for an acre. Price, \$40 per ton. For further information apply or address to,

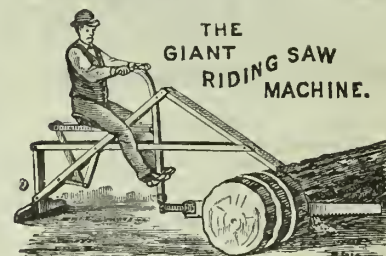
F. LARROCHE.

Stall 21, San Francisco Market, San Francisco, Cal.

-OR-

SEVIN VINCENT &amp; CO., Seedsmen.

607 Sansome St., S. F. Cal.



THE GIANT RIDING SAW MACHINE.

## This Wonderful Improved SAW MACHINE

is warranted to saw a 2-foot log in three minutes, and more cord wood or logs of any size in a day than two men can chop or saw the old way. Every Farmer and Lumberman needs one.

AGENTS WANTED—(Cash and terms Free)

SEND FOR CIRCULAR TO

LINFORTH, RICE &amp; CO.,

General Agents for the Pacific Coast,

323 and 325 Market Street San Francisco.

## BURNHAM'S ABIETENE, The Great Family Remedy.

No Compound but a Pure Distillation of a Peculiar kind of Fir Balsam found in a certain locality of the Sierras of California. It is used both Internally and Externally.

W. W. Haney, 221 Sacramento St., S. F., says: Abietene cured me of Rheumatism after other remedies had failed. Also relieved me of Dyspepsia and Kidney Troubles.

E. P. Baird, late City Assessor, Stockton, says: It cured me of Lame Back and Kidney Troubles after all other remedies failed.

W. L. Leadbetter, Ex-Member of the Legislature, says: We use Abietene for Coughs, Colds, Sore Throat, Hoarseness; also as a Liniment for Rheumatism, Sprains, Bruises, etc. It is also my wife's specific for Croup. We are never without it.

John E. Moore, Rancher near Stockton, says: Abietene is a General Remedy on my ranch. Use it for both Man and Beast. It is the Best Remedy ever used for inflamed eyes. It is a splendid Liniment. Have cured Sweeney with it. Am never without it on my ranch.

Those to whom its value and mode of application are known are never without it, at home or traveling.

Is a Sure Cure for Poison Oak, Headache, Skin Diseases, Etc.

None Genuine without the name of WM. M. HICKMAN, Druggist, Stockton, Cal., on the Label. For Sale by DRUGGISTS AND DEALERS GENERALLY.

Price, 50 cents and \$1 per bottle

## ITALIAN SHEEP WASH.

Extract of tobacco, free from poison. Prepared by the Italian Government Co. Cures thoroughly

THE SCAB OF THE SHEEP

And is an excellent Sheep Dip. The best and cheapest remedy known for curing the Scab.



SAN FRANCISCO, May 24, 1881.

MESSRS. CHAS. DUSENBERG & CO., San Francisco: I have used one can of the Italian Sheep Wash, as a test on my ranch in Stanislaus county, according to directions, and find it to be a sure cure for scab, and shall continue to use it in future, so long as I find it to come up to sample, for the reason I find it cheaper than other preparations; no trouble nor expense in preparing it for use. The principal ingredients being tobacco, it gives greater growth to wool than other dips, and I find it to be all that is claimed for it. Where sheep are passed through the vat in the usual speedy way, I suggest the use of tepid or warm water but am of opinion that if allowed to remain in longer, cold water will do as well.

WM. L. DICKENSON.

CHAS. DUSENBERG &amp; CO., Sole Agents.

314 Sacramento Street, San Francisco.

## Harvey's Hot-Water Radiator

For Warming and Ventilating Private Residences and Public Buildings.

Introduced into TEN PUBLIC BUILDINGS and over FORTY PRIVATE RESIDENCES the past year with satisfactory results. Less attention and less fuel required to heat 4 rooms with this system than would warm 1 room with the open grate. Highest testimonials. Address

C. D. HARVEY,

213 Mission St., bet. Main and Beale, S. F. Residence, 1227 Eleventh Avenue, East Oakland.

## FOR SALE.

TWELVE HEAD OF

CHOICE BERKSHIRE PIGS

Of two months old. Also one BOAR eight months, fit for serv. Inquire of G. M., 39 Clay Street, S. F.

50 Lovely Floral, motto, hand and bouquet chromo cards—beautiful colors, name 10c, Chas. Kay, New Haven, Ct.



## SAN FRANCISCO MARKET REPORT.

(CONTINUED FROM PAGE 317.)

## Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., November 9, 1881.

FRUIT MARKET.		VEGETABLES.	
Apples, bx.....	50 @ 1 25	Pears, sliced.....	9 @ 8
Bananas, bnch.....	2 50 @ 4 00	do whole.....	7 @ 8
Cocanuts, 100.....	6 00 @ 7 00	Plums.....	5 @ 8
Cranberries, bbl. 13 00 @ 14 00		Pitted.....	13 @ 14
Figs, bx.....	50 @ 75	Prunes.....	9 @ 12
Grapes.....	85 @ 1 50	Raisins, Cal, bx.....	2 75
Limes, Mex.....	7 00 @ 9 00	do, halves.....	3 00
do, Cal, box.....	1 50 @ 2 00	do, quarters.....	3 25
Oranges, Cal, bx 2 50 @ 3 50		Eggs.....	3 50
Sicily, box.....	9 00 @ 11 00	Zante Currants.....	8 @ 10
DRIED FRUIT.		VEGETABLES.	
Apples, sliced, lb.....	7 @ 75	Artichokes, doz.....	25
do, quartered.....	6 @ 65	Beets, ctn.....	65
Apricots.....	15 @ 16	Beans, Lima, lb.....	5
Blackberries.....	12 @ 14	do, String.....	10
Cherries.....	25 @ 30	Cabbage, 100 lbs.....	75 @ 1 00
dates.....	9 @ 10	Carrots, sk.....	50 @ 60
Figs, pressed.....	4 @ 5	Cauliflower, doz.....	1 00
figs, loose.....	3 @ 5	Cucumbers, doz.....	15
ectarines.....	14 @ 15	Garlic, lb.....	2 @ 3
peaches.....	11 @ 12	Green Peas, lb.....	5
do pared.....	15 @ 17	Gr'n Pepp'rs, bx.....	50
		do, Chile, bx.....	50 @ 75
		Lettuce, doz.....	10 @ 11
		Mushrooms, lb.....	30
		Okra, lb.....	5 @ 8
		Parasips, lb.....	5 @ 8
		Horseradish.....	5 @ 8
		Squash, Marrow.....	10 @ 10 00
		fat, ton.....	25
		Tomatoes.....	25
		Turnips, ctn.....	75

## Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending November 9, 1881.

HIGHEST AND LOWEST BAROMETER.							
Nov. 2	Nov. 3	Nov. 4	Nov. 5	Nov. 6	Nov. 7	Nov. 8	Nov. 9
30.275	30.217	30.052	30.137	30.207	30.210	30.198	30.198
30.151	30.062	29.973	30.007	30.121	30.147	30.121	30.121
MAXIMUM AND MINIMUM THERMOMETER.							
66	66	64	64	61	63	61	61
52	52	53	52	52	51	51	51
MEAN DAILY HUMIDITY.							
63	58	64.3	75.7	70.3	48.7	40	
PREVAILING WIND.							
NW	NW	W	W	W	NW	NW	
WIND—MILES TRAVELED.							
94	166	113	115	226	287	239	
STATE OF WEATHER.							
Clear.	Clear.	Clear.	Clear.	Clear.	Clear.	Clear.	
RAINFALL IN TWENTY-FOUR HOURS.							
Total rain during the season, from July 1, 1881, 0.79 inches.							

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; Co.]

SAN FRANCISCO, November 9, 3 P. M.  
 SILVER, 1/2.  
 GOLD BARS, 890@910. SILVER BARS, 10@18 1/2 cent. discount.  
 EXCHANGE ON New York, 5@10 premium; London, 49@49 1/2; Paris, 520 francs 1/2 dollar; Mexican dollars, 91@92; New York (4 per cent), 11 1/2.

## Commission Merchants.

**MILLER & CO.**  
 J. P. HULME.

**Wool and Grain**  
 Commission Merchants.  
 10 Davis Street, near Market,  
 SAN FRANCISCO.

Liberal advances made on all consignments, and prompt personal attention given to all sales.

**DALTON & GRAY,**  
 Commission Merchants  
 And Wholesale Dealers in all kinds of  
**Country Produce, Fruits, Etc.**

404 and 406 Davis St.,  
 et. Washington and Jackson, SAN FRANCISCO.  
 CONSIGNMENTS SOLICITED.

**PAGE, MOORE & CO.,**  
**WOOL and GRAIN**  
 Commission Merchants,  
 NOS. 211 AND 213 CLAY STREET,  
 SAN FRANCISCO.

**PETER MEYER.** **LOUIS MEYER.**  
**MEYER BROS. & CO.,**  
 —IMPORTERS AND—  
**Wholesale Grocers,**  
 —AND DEALERS IN—  
**TOBACCO AND CIGARS.**  
 412 FRONT STREET,  
 Front Street Block, bet. Clay & Washington, San Francisco  
 Special attention given to country traders.  
 P. O. Box 1940.

**J. H. CONGDON & CO.,**  
**Wool, Grain and**  
**General Commission Merchants,**

6 Steuart St., Cor. Market, S. F.

**Doing Business Exclusively on**  
**Commission.**

Liberal advances made on consignments, at low rate interest  
 Personal attention given all consignments.  
 Special attention given to Wool, Grain, and Country Produce.

**COSTIGAN, COHEN & CO.**  
**COMMISSION**  
**Grain and Wool Brokers.**

OFFICE—28 California St., San Francisco.

REFERENCE—LAZARD FRERES, BANKERS.

**DAVIS & SUTTON,**  
 No. 75 Warren Street, New York

Commission Merchants in Cal. Produce

REFERENCES.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

**HATCH & BARCLAY,**  
**Commission Merchants,**

(Members of San Francisco Produce Exchange)

20 California Street, San Francisco.

Price Reduced to \$1 Per Gallon.

**MOORE'S SULPHUR DIP,**

THE BEST AND CHEAPEST PREPARATION FOR  
 THE CURE OF SCAB.



The General Health and Condition of the  
 Sheep Promoted by its Use.  
 Non-Poisonous.

One Gallon (making 60 gallons of dip) is sufficient to dip 120 to 150 newly shorn sheep. Cost of dipping will not exceed one cent per sheep. Manufactured by

C. E. WILLIAMS &amp; CO., Stockton, Cal.

Sold by all Wool Commission Merchants in San Francisco.

We call attention to following testimonial from J. H. Kirkpatrick, breeder of fine sheep:  
 KNIGHTS FERRY, Cal., Aug. 26, 1881.

C. E. WILLIAMS & Co., Stockton. Gentlemen: I have used Moore's Sulphur Dip in dipping my band of thoroughbred Merinos, which are admitted to be very hard to cure of scab, owing to the density of fleece, and I am free to say that the Sulphur Dip will certainly eradicate the disease when properly applied. Moreover it is the cheapest of the prepared dips of which I have any knowledge, and being a certain cure it deserves to come into general use as the standard remedy.

Yours Truly, J. H. KIRKPATRICK.

**50,000 ACRES**

—OF—

**Fruit and Grape Lands****FOR SALE**

In Santa Cruz County, in quantities to suit.

Call on M. P. OWEN,

At Santa Cruz and he will show them to you.

THE NEW IMPROVED VANELESS  
**ALTHOUSE WINDMILL AGENCY.**

S. H. KILER, of San Rafael, has the Agency for all Counties North of the Bay. Having them in stock orders for any size can be filled at once.

**GUNS**  
 Lowest prices ever known on  
 Breech-Loaders,  
 Rifles, and Revolvers,  
**OUR \$15 SHOT-GUN**  
 at greatly reduced price.  
 Send stamp for our New  
 Illustrated Catalogue (B)  
 P. POWELL & SON 234 Main Street, CINCINNATI, O.

**70 YOUR NAME** in New Type 100

New styles, by best artists: Bouquets, Birds, Gold Chromos, Landscapes, Water Scenes, etc.—no 2 alike.  
 Agent's Complete Sample Book 25c. Great variety Advertising and Book-Edge Cards. Lowest prices to dealers and printers. 100 Sample Money Advertising Cards 50c. Address STEVENS BROS., Box 21, Northford, Ct.

**MERRILL'S PATENT REIN HOLDER.**

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

## THE SAN LEANDRO GANG PLOW.

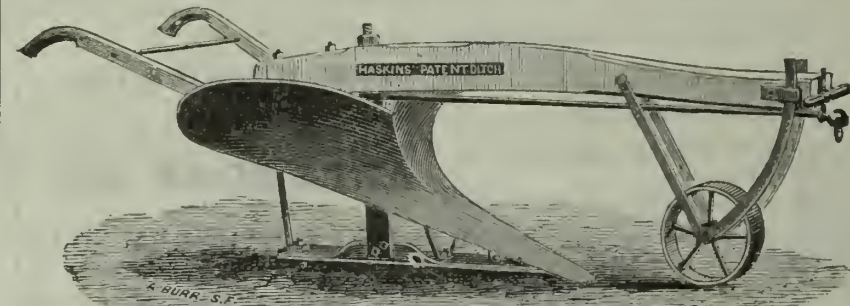


**Price Complete, - - - \$92.50.**  
 Manufactured by the San Leandro Plow Company, San Leandro, Cal.

In this Implement is combined THE VERY BEST GANG PLOW CARRIAGE YET MADE with the three following styles of bottoms any of which stand at the head for the different soils for which they are intended: Style No. 1. Hardened Steel, same shape as the John Deere Moline No. 7 Single Plow. Adapted to a great variety of soils—in fact anything except the worst adobe. Style No. 2. Hardened Steel nearly the shape of the Furst & Bradley pattern, for sticky soils, made at Chicago. This Plow has a most beautiful form, with a long easy sweep to the moldboard, and while working very well in all soils is nearer perfection as an adobe Plow than anything yet tried on the Coast. Style No. 3. Oliver Chilled Bottoms. This is a remarkable Plow, in form, design and quality. Its reputation is almost world wide and its sales reach into the hundreds of thousands. It is made of Chilled Cast Iron, cast in such a way that the grain of the metal stands vertical to the face of the mold and is so hard that all attempts to file or drill it will be found useless. The form of the Plow adapts it for use in almost any soil, and no Plow is superior to it for leaving a clean well turned furrow. The simplicity and neat appearance of OUR NEW GANG PLOW CARRIAGE is evident at a glance and yet it possesses with but a single lever all the advantages claimed by the most complicated implements with their numerous Levers, Spiral Springs, Cog-wheels, Racks, Segments, etc., besides some very important ones that are peculiar to this alone.

1st. It will strike out lands simply by throwing the lever well forward.  
 2nd. It raises very high out of the ground.  
 3rd. One wheel can be raised at any height above the other so as to plow at any depth desired.  
 4th. The tongue can be set two feet to the right or left in a moment.  
 The above are points possessed by many other Gangs, but in none are the results obtained so simply. The following advantages are peculiar to this Gang Carriage:  
 1st. Its Leverage is so perfect that a man can lift it with ease when there are two other men standing on the beams.  
 2nd. The seat is so attached that the weight of the driver assists in raising the Plows instead of preventing it.  
 3rd. The Lever is pulled back to raise the Plows instead of being pushed forward, which enables the driver to exert his strength to much better advantage both in raising and lowering the Plows.  
 4th. The Seat is high and comfortable and is placed on an easy spring.  
 For Proportion, Workmanship, Simplicity, Strength and practical usefulness we challenge comparison with any Gang Plow made in the United States.  
 The above Gangs are for sale at the Factory in San Leandro, and by David N. Hawley, 37 Market St., San Francisco; Bailey, Badgley & Co., Stockton; Holman Stanton & Co., Sacramento; Waite, Cooley & Cutts, Marysville; Smith & Baxter, Gilroy, and at many other points in the interior.

SAN LEANDRO PLOW CO., San Leandro, Cal.



## THE HASKINS PATENT DITCHING &amp; TRENCHING PLOW.

Manufactured and for Sale by the San Leandro Plow Co.

Adapted for cutting Trenches for setting Nut Grape Vines making open ditches for irrigating and for laying Sub Irrigating Pipes. With 3 animals and 3 men, a ditch 28 inches wide at top, 4 to 8 inches at bottom and 20 to 24 inches in depth, with flag sides can be made at the rate of FOUR MILES PER DAY. It furnishes the best method of planting vines known, as by it a cutting 40 inches long can be used (giving greater growing surface) while at the same time it is placed in mellow loosened soil.

This Plow or Ditcher is no longer an experiment. It has been in use in various parts of Yolo and Napa Counties for the past three years, and has shown itself to be capable of making a clean, deep, beveled sided ditch (with the earth thrown well back) from 12 to 24 inches in depth below the general surface of the ground.

The cut shows its construction. It is simple, free from complication, strong and yet so novel in form that a broad patent has been allowed upon it.  
 We shall make them to order only. Price according to size. They are made in three different sizes, cutting trenches from 12 to 24 inches deep, and ranging in price from \$100 to \$200. Some of the larger sizes have carrying wheels. Address

SAN LEANDRO PLOW CO., San Leandro, Cal.

## IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (for Alderneys) and their graders; also ALL THE VARIETIES of breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & SON.

## KIEFFER PEAR.

I have about 1001-year-old KIEFFER HYBRID SEEDLING PEAR trees for sale at Eastern prices. Single trees, 5 to 7 ft., \$2.50; 12 for \$18. Second class—single, \$1.50; 6 for \$7.50; 12 for \$12. Also, a few "Souvereur du Congrès" from \$1 to \$1.50. Will also supply cuttings, or scions of the "Kieffer," "LeConte," and "Souvereur," at the proper season. Have also from 1,000 to 1,500 one and two-year-old vines of the "Muscatello Gordo Bianco." Orders solicited. Address, J. WINCHESTER, Columbia, Cal.

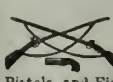
## IMPROVED MACHINES

FOR LAYING

Asbestine Sub-Irrigation Pipe

For sale at Davisville, Yolo County, Cal.

Apply to L. A. GOULD.



**H. H. WILSON & SON,**  
 113 Clay St., S. F.

Importers and Dealers in Guns, Rifles, Pistols, and Fishing Tackle, etc.

50 Lithographed Chromo Cards, no 2 alike 10c. Name in fancy type. Conn. Card Co., Northford, Ct.

## The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL DOMESTIC &amp; MUNICIPAL PURPOSES

Send for Circulars.

**BABCOCK, HOWARD & CO.,**

40 Merchants' Exchange San Francisco, Cal.

**Improved Patent Rotary Force Pump for**  
**Pumping Water by Horse Power.**

This is a Durable and Compact apparatus for pumping, that will force water 100 feet and 2,000 to 4,000 gallons an hour. It can be moved from one well to another for irrigating. For further particulars, address,

R. M. BEEBEE, Gridley, Butte Co., Cal.

**ANELEGANT Present.** A gilt-bound Floral autograph Album only 15c., 47 select quotations, a story paper & elegant sample chromo free with each. G. W. BOCEMSDES, West Haven, Conn.

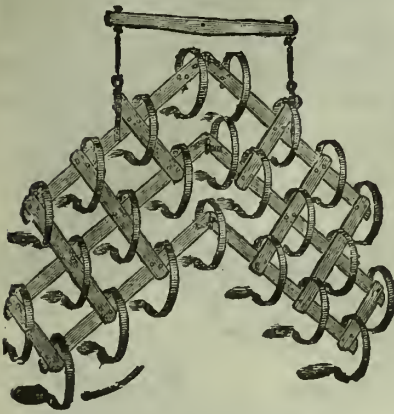
Dewey &amp; Co. { 252 } Patent Ag'ts { Market St. }



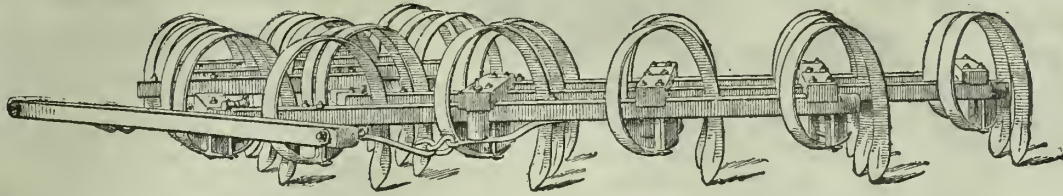
# BATCHELOR, VAN GELDER & CO.,

## Manufacturers of the

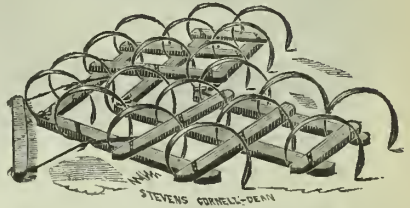
### CALIFORNIA SPRING-TOOTH HARROW AND CULTIVATOR.



Manufactured in Three Sizes  
—for—  
Garden and Vineyard Use.



As Improved for 1881.



Handles and Fenders Attached when  
ordered for Orchard or Heavy  
Vineyard Work.

and at the same time Saves in wear upon the woods, all the extra Cost; and the teeth, resting "IN AN IRON CHAIR, CANNOT WEAR OR MOVE SIDEWAYS." The heavy demand and universal popularity of these implements is our strongest proof of their worth, and the time is near when no Intelligent Farmer will be without them. By permission, we publish the following communication from Dr. H. J. Glenn (the largest farmer in the world):

JACINTO, COLUSA CO., CAL., }  
October 20th, 1881. }

MESSRS. BATCHELOR, VAN GELDER & CO., Sacramento, Cal.—Gentlemen: I am convinced that your Spring-Tooth Harrows and Cultivators, are the most practical, the most efficient and the BEST implement I have ever tried, used either as a Cultivator or a Harrow, for volunteering, for working summer-fallow, or land that has become compact by sun or rain, or for covering seed. I have tested them carefully under all circumstances and now have 13 of the largest sized at work on my ranch, and I think them indispensable. Have recently applied your IMPROVED Fasteners to the entire number, and consider that they fully double their value. Very Respectfully Yours,  
H. J. GLENN.

This from Gen. John Bidwell :

CHICO, CAL., }  
March, 21st, 1881. }

MESSRS. BATCHELOR, VAN GELDER & CO.—Gentlemen: Your Spring-Tooth Harrows are the best I have ever used. Am now trying them in my orchards, and find that they both master the weeds and cultivate the ground. The Cultivators, made on the same principle, are just the thing for vineyards and garden use. The thorough work and comparatively light draft of these implements should commend them to every farmer and orchardist. Very Respectfully Yours,  
JOHN BIDWELL.

This from Chas. Krug :

ST. HELENA, CAL., }  
July 29th, 1881. }

MESSRS. BATCHELOR, VAN GELDER & CO., Sacramento: The Spring-Tooth Cultivator I bought from you last spring gives great satisfaction to me. My neighbors, using the same size of this Cultivator or smaller sizes in their vineyards, are also very well pleased with them. Your Cultivator is a good practical farming implement.  
CHAS. KRUG.

Hundreds more could be given reiterating these opinions. In conclusion we would say we are manufacturing under the original PATENTS owned by D. C. & H. C. Reed & Co., Kalamazoo, Michigan. ALL others are considered infringers, and liable to prosecution, DEALERS and USERS are alike responsible.

Send for our revised Price List and Descriptive Circular. Address,

BATCHELOR, VAN GELDER & CO., 900 and 902 K Street, Sacramento, Cal.

#### Grangers' Business Association of California.

Principal place of business, No. 38 California Street, San Francisco, State of California.  
Notice.—There are delinquent upon the following described stock, on account of an assessment levied on the Twenty-seventh (27) day of June, 1881, the several amounts set opposite the names of the respective shareholders, as follows:

No. of Cert.	Name.	No. of shares.	Amt. of Assess.
1180	Alexander, Chas.	5	\$ 12 50
608	Back, W. H.	1	2 50
274	Black, W. H.	1	2 50
64	Boynton, F. Z.	5	12 50
1019	Bodfish, Orlando.	3	7 50
994	Gartleman, Daniel.	2	5 00
1001	Gartleman, Daniel.	2	5 00
1686	Caldwell, D. A.	1	2 00
1367	Caldwell, D. A.	4	10 50
1149	Caldwell, D. A.	1	2 00
259	Campbell, Basil.	4	10 50
1621	Clock, Sarah D.	4	10 00
1481	Cleghon, I. A.	2	5 00
782	Colburn, B.	2	5 00
1283	Colby, G. W.	40	100 00
750	Corpetein, J. P.	1	2 50
1603	Costigan, J. M.	2	5 00
507	Cox, E. J.	5	12 50
505	Crook, John.	5	12 50
509	Crook, Chris.	2	5 00
174	Downey, Patrick.	1	2 50
412	Ebl, J. H.	1	2 50
189	Faber, G. R.	2	5 00
598	Finley, Miss Mollie.	1	2 50
470	Gallup, E. E.	1	2 50
469	Gallup, Youngs A.	1	2 50
468	Gallup, Mrs. L. J.	4	10 00
1188	Galloway, A. J.	8	20 00
256	Gallup, T. A.	4	10 00
1023	Hamilton, Mrs. Lou.	4	10 00
1025	Hamilton, Emmor.	5	12 50
1598	Harlen, J. H.	5	12 50
1090	Helms, A.	2	5 00
1477	Howard, Chas. E.	1	2 50
749	Hunter, A. B.	4	10 00
6	Helpenstien, L. H.	2	5 00
1671	Helpenstien, L. H.	1	2 50
1684	Jones, R.	1	2 50
1248	Judson, Homer.	5	12 50
1494	Kellogg, G. P.	10	25 00
253	Kimball, G. W.	8	20 00
1681	Kneif, John F.	4	10 00
824	Langlois, Susan.	1	2 50
1057	Lautenschlager, C.	4	10 00
1251	Little, Horace.	8	20 00
783	Linebaugh, A.	20	50 00
784	Linebaugh, John.	2	5 00
177	Lunney, Phillip.	2	5 00
1159	Matterson, F.	1	2 50
51	Menzies, Thos.	1	2 50
1674	Meyer, Jacob.	5	12 50
5	Merrill, Chas. H.	1	2 50
1675	Merrill, Chas. H.	1	2 50
1633	McCampbell, S. S.	5	12 50
452	Nelson, C.	4	10 00
98	Niles, E. C.	2	5 00
642	Prince, N. J.	10	25 00
877	Prince, N. J.	5	12 50
236	Pendegast, M.	2	5 00
1394	Roberts, Chas.	10	25 50
656	Roberts, Chas.	6	15 00
252	Reese, Elizabeth.	1	2 50
250	Reese, David.	2	5 00
397	Sawyer, E. A.	5	12 50
1502	Settle, C. T.	4	10 00
1139	Sherburn, D. N.	4	10 00
1546	Slayton, O. O.	10	25 00
406	Stockton, S. W.	2	5 00

No. of Cert.	Name.	No. of Shares	Amt. of Assess.
445	Stevens, L. D.	4	10 00
461	Stevens, W. A.	2	5 00
855	Stanley, H. Y.	4	10 00
189	Taber, G. R.	2	5 00
191	Torry, Jas.	2	5 00
1438	Voorhes, Geo. W.	4	10 00
1489	Voorhes, Etie A.	4	10 00
1377	Watson, Mrs. Thos.	1	2 50
1669	Warner, Jas.	11	27 50
436	Wilhout, Jessie.	4	10 00
504	Welty, Jacob.	2	5 00
118	Whitrow, C. W.	1	2 50
731	Woodhams, A. R.	2	5 00
805	Woodward, F. J.	4	10 00
1611	Webster, John.	3	7 50
543	Webster, John.	2	5 00
1116	Wilson, James.	2	5 00
793	Judson, Homer W.	2	5 00
213	Stump, C.	1	2 50
460	Stephens, J. M.	2	5 00
818	Witrow, C. W.	1	2 50

And in accordance with law, and an order of the Board of Directors, made on the 9th day of September, 1881, so many shares of each parcel of such stock as may be necessary, will be sold at public auction, at the office of the Company, 38 California St., San Francisco, Cal., on Monday, the 21st day of November, 1881, at the hour of two o'clock, p. m., of said day, to pay Delinquent Assessments thereon, together with costs of advertising and expenses of the sale.  
AMOS ADAMS, Sec'y,  
Grangers' Business Association of California; office, No. 38 California St., S. F.

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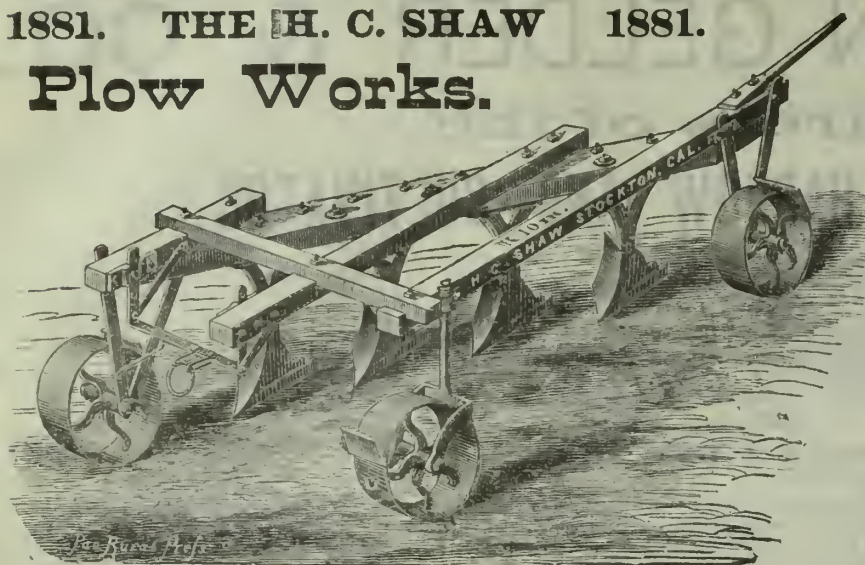
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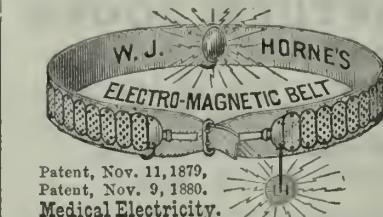
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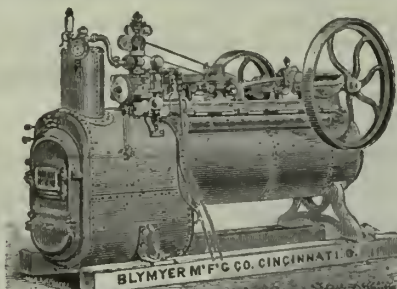
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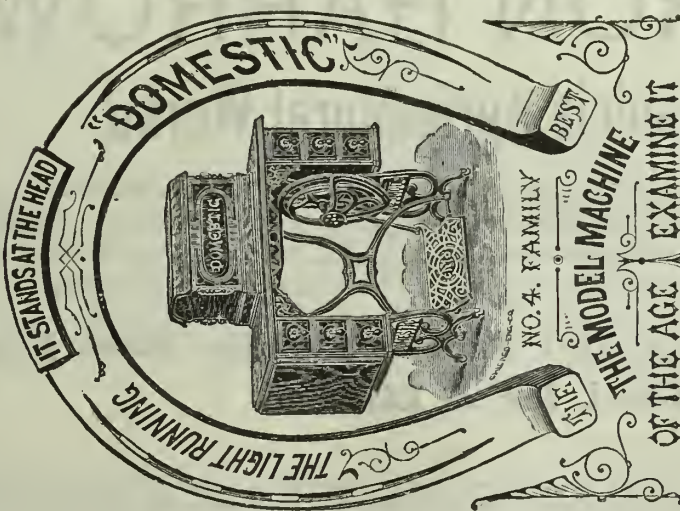
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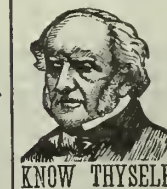
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# GRAIN DRILLS.

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## The Best Force Feed Grain Drill in the World!

DRILLS FROM ONE PECK TO ANY QUANTITY PER ACRE.

Does not Crack the Grain.

The TRIUMPH GRAIN DRILL possesses many features of merit peculiar to it alone, to which we invite the careful attention and consideration of every farmer contemplating the purchase of a Grain Drill.

It has been rightly named the TRIUMPH; for, wherever introduced, it has triumphed over all competitors, and taken the lead as the most regular grain sower, and most reliable Drill in the market; and in those sections where most generally introduced, and the force best known, have its sales most rapidly increased. This increase cannot but continue, for the perfect satisfaction which the TRIUMPH has in all cases given, makes every farmer owning one an advertiser of its merits. We can, with confidence and pride, refer to thousands who are using it, knowing that they who have practically tested it, and are most thoroughly acquainted with it, are its warmest friends and admirers. By comparison, the TRIUMPH will be found to be **inferior in no respects, Equal in all respects, Superior in many respects, to any Drill made.**

In the TRIUMPH we accomplish all that can be done by any other Drill, with all their combinations of gear wheels; and that, too, without any change of gearing whatever. There is no need of changing to pecks or half pecks at a time in the TRIUMPH it can be regulated to quarts or pints, and will sow any kind and any quantity of seed per acre—from one-half bushel of flax seed, to three bushels of oats—and will sow beans and corn in any desired quantity.

Inders are attached to a separate iron bar, that extends through all the seed-cups, and is moved by a screw at the end of the hopper, and can be moved either much or little as desired, thus ensuring a uniformity of quantity sown, whether the ground be hilly or level.

**UNIFORMITY OF SPEED.** Much complaint is justly made against Grain Drills that regulate by change of gearing, on account of their bunching and skipping—a serious fault that manufacturers of that class of Drills have not been able to overcome, although they have resorted to all kinds of devices in their feed-wheels; using zigzag, spiral, and double spiral, etc., and all claiming their particular device as being just the one needed. Yet they have the same old complaint. The cause of their trouble is readily explained, as it is impossible to sow a constant stream with any Drill that varies the quantity sown, by a change in the speed of the feed-wheel. The same principle applies to Grain Drills as to other machinery—a principle well understood by all mechanics—there is always a certain uniformity of speed required to do the work successfully. We have kept this fact in view in the TRIUMPH, and consequently its remarkable success as the most regular grain sower in the market. Examine the TRIUMPH before you buy any of the old foggy cog-wheel Drills, and you will be convinced that it is the Drill to buy.

### HOW REGULATED.

The quantity is regulated by simply turning a screw at the end of the seed hopper, which enlarges or diminishes the feed-wheel. The regulating cylinders being attached to an iron bar extending through all the seed-cups, all the feed-wheels are enlarged or diminished simultaneously; and as the feed-wheel always carries out all the seed the wheel will hold, it will be readily seen by increasing or diminishing the size of the wheel, any desired quantity can be sown.

The gauge-plate on the back of the hopper indicates the quantity to be sown to the acre; it always sows the quantity indicated; there is no guess work, as is the case with many other Drills.

### PRICE, WEIGHT, ETC., OF TRIUMPH DRILLS.

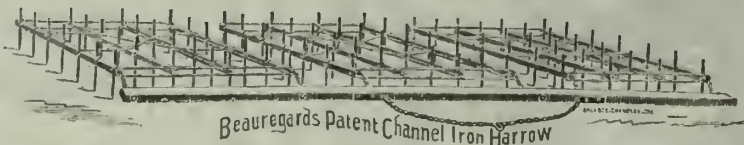
9 Hoe,	8 Inch,	Weight,	625 pounds	\$105 00	13 Hoe,	7 Inch,	Weight,	725 pounds	\$130 00
10 "	6 "	"	650 "	110 00	15 "	7 "	"	800 "	150 00
11 "	6 "	"	670 "	115 00	17 "	7 "	"	900 "	175 00
12 "	6 "	"	675 "	120 00	19 "	7 "	"	1000 "	195 00
			700 "	125 00	21 "	7 "	"	1100 "	205 00

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## BEAURECARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to  
Break off,  
or Nuts to get Loose.



Is the Boss of the Field.  
It combines Strength,  
Lightness of Draft and  
Durability.

**Light, Strong, Durable, Cheap, and Indestructible. Best Iron Harrow made. Good for a Lifetime.**

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality, combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THERE IS NO THREAD CUT ON END OF TEETH—WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

**OUR CLAIMS** have been, and are daily being substantiated by farmers all over the Coast.

Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW**—with Patent Concave Teeth, is the Best, Cheapest and Lightest Draft.

### PRICES:

1 Section, with 24 Teeth	\$14 00	3 Sections, with 72 Teeth and Draft Bar	\$42 00
2 Sections, with 48 Teeth and Draft Bar	28 00	4 Sections, with 96 Teeth and Draft Bar	56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide.

For further particulars, Address

**BENICIA AGRICULTURAL WORKS, Benicia, Cal.,**

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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 19, 1881.

Number 21

## A California Threshing Outfit.

Our readers at the East and abroad ask us frequently for information, which will give them a better idea of our improved California threshing machinery than they can get from the descriptive articles and advertisements which appear in our columns. They get a knowledge of the special features of the new machinery, but they lack a comprehensive idea of its appearance and the relationship of the parts. This we hope to furnish by the engraving on this page which, though it may lack somewhat in the picturesque is a true portrayal of the machinery as set for operation, for it is made from a photograph taken on the spot.

The illustration represents a complete California threshing rig as now used by our best and most enterprising threshers. The engraving was made from a photograph taken of one of G. W. T. Carter's machines while threshing on the farm of Chas. Sperry, near the Tuolumne river, in Stanislaus county. The rig consists of a Gold Medal separator, Rice strawburner engine, Jackson's self-feeder, elevator and low derrick, water wagon, cook house and "trap"

platform at the end of the elevator. The "hoe-downs" pull it down with an implement similar to a potato book; the elevator conveys it to the self-feeder, which carries it to the cylinder. While on its way up the elevator, the grain has to pass under the "spreader," which loosens up all the bunches and perfectly regulates the amount of feed required by the cylinder.

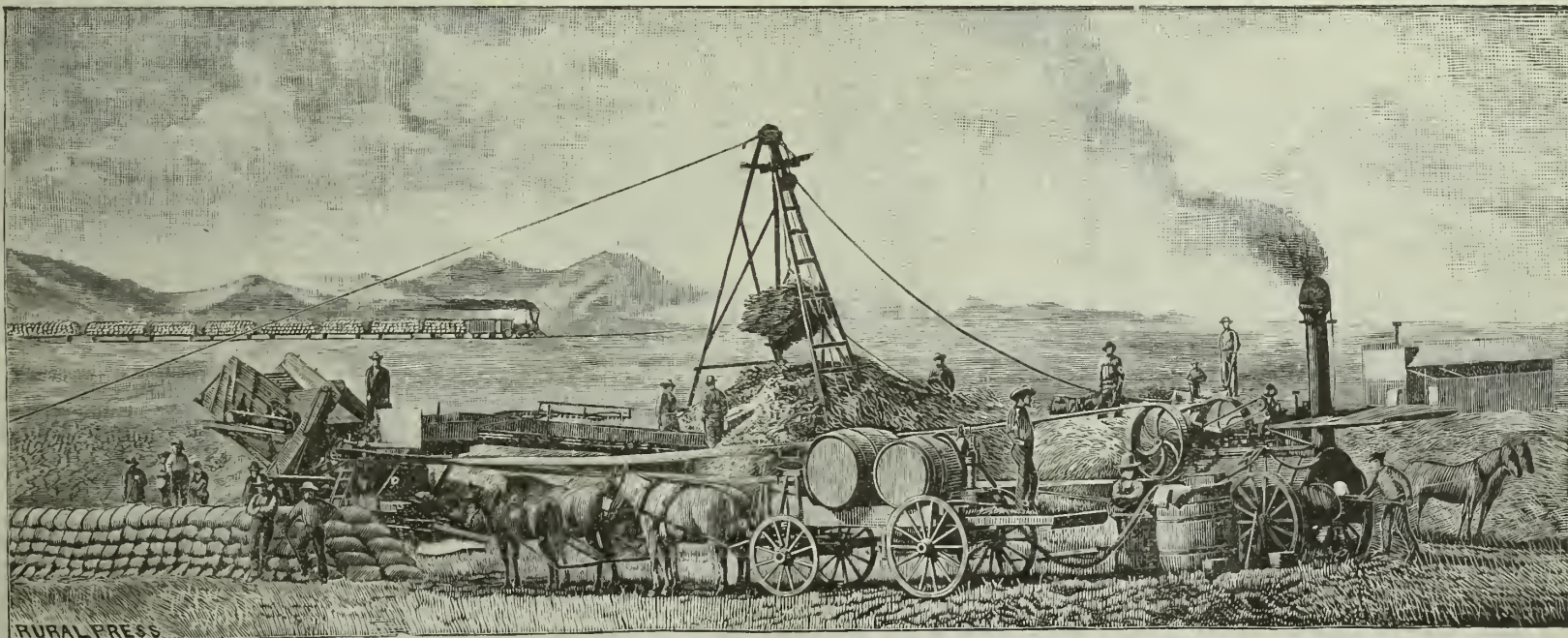
There are employed 3 forkers, 3 drivers, 3 "hoe-downs," 1 sack tender, 1 sack sewer, 1 sack picker or carrier, 2 straw bucks, 2 water bucks, foreman, engineer, fireman, trapman and cook—in all, 20 men, and whose wages aggregate \$50 75 per day. Fourteen horses are used. The trapman looks after the blankets, traps, etc., goes errands and moves the cook's house, which is shown at the extreme right of the picture. At night the men make up their beds around the stack, and in the morning roll up their bedding and throw it in a pile for the trapman to take care of and have on hand wherever their camp may be at night.

The average work of the machine is about 100 sacks per hour; average weight, 135 lbs. per sack. The last 20 days in the field this season, the rig shown in the picture threshed 20,500

## The Cost of Railroad Transportation.

This is a point of the most vital importance to the productive enterprises of the country, for without a knowledge of it, there can be no idea formed of whether the transportation company is getting more than its fair reward for the service rendered or not. There is some data on the subject brought forward, but it only shows how little we really know on the subject. For example, Hon. Joseph Nimmo, Jr., Chief of the Bureau of Statistics, has submitted a valuable report on the railroad problem, which, among other things, shows the reduction in the cost of transportation on the railroads of the country generally by a table embracing interesting data with respect to 13 leading railroads. It appears that the number of tons of freight carried on the 13 roads increased from 45,557,002 tons during 1873 to 78,150,913 tons during 1880, an increase of about 71%. The receipts from freights, however, increased from \$112,004,648 in 1873 to \$143,378,178 in 1880, an increase of only about 28%. This is a small rate of increase. The receipts in proportion to the increase of traffic was due to the fact that the average rate

GOVERNMENT TIMBER.—The Commissioner of the General Land Office, in his annual report, makes the following interesting comments on the subject of the Government timber lands: The existing provisions of law permitting citizens to fell and remove timber on the public lands, for mining and domestic purposes, as found in the act of June 3, 1878, are, in my opinion, very defective. The only lands from which such cutting is authorized are the mineral lands, and these are, to a great extent, undefined, and necessarily must so remain. Large quantities of timber are absolutely necessary for the development of the mines, while the said act authorizes the cutting thereon of timber for other purposes. The purchaser of a mining claim has as much, if not greater need for the timber thereon as the agriculturists, and the transportation of timber to the mines from a distance is very expensive. The law furnishes no relief to such as reside at a distance from such lands. The situation is practically this: The settlers on land devoid of timber need timber for fuel, building, etc. Very frequently they cannot get it except from public lands, if



THE HARVEST FIELD—A PLANT OF CALIFORNIA THRESHING MACHINERY IN POSITION FOR WORK.

wagon. All except the engine and separator are mounted on Schutler iron-axle wagons.

Although there is considerable machinery used to perform the work, it is handled easily in the hands of an experienced thresher. In less than five minutes from the time the belt is thrown off, everything is on the way to the next stack or setting. Upon arriving at the stack, the derrick is driven close in. The foreman steps off the distance from the derrick for the separator, which is driven in immediately.

The elevator is placed in position, extending from the derrick to the self-feeder. The forkers are setting the guy rope and getting their forks upon the stack. The drivers are getting out their ropes, hitch up their horses and begin to fill up the derrick platform.

In the meantime the engineer and fireman have run out the belt from the separator and marked the place for the engine, which is generally driven in so accurately that little shifting is required. As the engine stops, the fireman starts his fire, and as the engine is moved with about 60 or 70 lbs. of pressure has the necessary pressure to start up. The belt is run on; the word comes from the foreman, "all aboard," which is responded to by the engineer starting up his engine, and in five minutes from their arrival upon the ground everything is under headway. Twenty minutes is considered ample time to make an ordinary move and get to work.

The grain is taken from the stack with the horse forks and dumped on the

sacks. In the season of 57 days, it threshed 54,000 sacks. The best day's work was 1,404 sacks. This will give an idea of the capacity of this machinery. The amount of steam carried varies from 90 to 100 lbs. The whistle blows at 4:30 A. M. for breakfast; the machine starts at 5, and runs until sundown, with one hour for dinner. The entire outfit cost \$4,800 in the field ready for work.

POINTS OF A GOOD YEAR.—In an address at a New England fair, Mr. Loring, Commissioner of Agriculture, gave some significant statistics concerning the great year 1880. He said: Besides feeding lavishly 50,000,000 of people, the agriculture of the country has continued to supply a large amount of our exports of domestic merchandise. The exports have increased since 1879, from \$635,042,078 to \$883,915,941, and the proportion of agricultural products, \$724,489,413, or 81.96% of the whole amount entering into that sum is maintained in the vastly increased exports of 1880. Our cattle rose from \$13,000,000 to \$14,000,000; corn, from \$43,000,000 to \$50,700,000; wheat, from \$167,698,000 to \$190,546,000; flour, from \$35,000,000 to \$45,000,000; cotton, from \$209,852,000 to \$245,534,539; beef, from \$7,000,000 to \$12,000,000; lard, from \$28,068,000 to \$35,226,000; cheese, from \$12,000,000 to \$16,380,000; and pork, from \$3,000,000 to \$8,000,000.

per ton charged on these 13 railroads fell from 17 7 cents per ton per mile in 1873 to 10.7 cents per ton per mile in 1880, a decrease of 39.5%. A commission of experts is recommended for the investigation of the subject of railroad transportation. The public would like to know whether the great reduction noted above need be still further "reduced" before the pay is fair returns for the effort and outlay. There should be some data to guide in the consideration of this important subject.

ALLEGED SWINDLE IN TEXAS LANDS.—The San Francisco Examiner is engaged in showing up a swindling scheme that is now going on in this State. A man named Jones is advertising large quantities of Texas lands for sale, or exchange for California property. The Examiner says the land he offers for sale is of a very inferior quality, and that his whole scheme is a swindle. As he might have agents through the interior, it would be well for people who want to buy or trade for land in Texas to be on the alert.

THE RURAL PRESS IN MISSOURI.—A reader of the Rural in St. Joseph, Mo., in a letter renewing his subscription says: "Of all the agricultural publications for which I subscribe, none is looked for and perused with such interest as the Rural Press."

they get it legally. Still, they will take it, and when taken it is solely for the said purposes, and under circumstances which largely mitigate the technical legal offense. While parties who steal the public timber for speculation and profit deserve severe punishment, those who use it solely for some purposes, under the imperative necessities above mentioned, should have their privileges accurately and reasonably defined. I deem the enactment of some law which will accomplish this end to be very desirable and in the public interest.

A SHOWER OF SPIDER WEBS.—A shower of spider webs fell at Green Bay, Wisconsin, the other day, if the local paper there is not deceived. The webs, apparently, came from the upper air, and fell for two hours. They varied from 60 ft. in length to mere specks, and could be seen as far up in the air as the eye could reach. From any standpoint a person could count a dozen of them at one time. At Vesburg, it is said, the webs fell so thick as to seriously annoy horses by getting in their eyes. The webs were snow-white and very strong. It is common for webs to float about in the San Joaquin valley. We have seen them in Fresno and adjacent country for a day or two at a time. They are driven before the wind and become a nuisance to horses and their riders. They often precede rain.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Mr. Sneath's "Levee Building with Slickens."

EDITORS PRESS:—I would call attention to a lengthy article by Mr. R. G. Sneath, which was published in the RURAL PRESS of the 5th inst. In this article he offered a solution of the debris question. It is mainly interesting as showing to what absurdities intelligent men can commit themselves, and what ludicrous mistakes people are apt to make who attempt the solution of a problem of which they are totally ignorant. That Mr. Sneath is most blissfully ignorant of the question on which he writes, must be perceived by every one who reads his article thoughtfully. It is my intention to point out the impracticability of his theory and to correct some misstatements, which he, no doubt inadvertently, owing to his ignorance of the subject, made.

In the second paragraph he says: "Much of the damage, especially that on the low bottom lands, cannot fairly be charged to hydraulic mining, as it happened from 1857 to 1862, which was before the giant was invented, I believe, and when that class of mining was in its infancy." It is a well known fact that not 5% of the sand now in the valleys was deposited before 1862. Mr. S.'s own statement goes to prove this. He says the giant was not invented till after 1862; or, in other words, he said that hydraulic mining was not such a destructive industry until after the giant was invented. Now, therefore, as the giant was not invented until after the year 1862, his own assertion goes to prove that the most of the sand on the valley of the Yuba was not there before the year 1862, as he tried to say that it was.

The sediment deposited previous to 1862 was not so destructive to vegetation as that of later times. It was composed mainly of washing from the surface of the hills, whereas, the slickens now coming down, is taken from the subterranean deposits of sterile earth, sand and clay, and is generally saturated with alkali. Another point does not seem to be understood by Mr. Sneath; hydraulic mining does not date from the invention of the giant, but from the first utilization of vast heads of water, to tear down and move the earth.

Let us look at his second conclusion. The cost of 25 miles of canal for the Yuba, 10 yds. deep and 30 yds. wide, at 10 cts. per cubic yard (the excavations for the dams cost 3 cts. per cubic yard), would be \$1,475,400, and similar canals for the Feather, Bear, American and in time the Sacramento rivers, would take at least three times as much more, in all about \$6,000,000 for canals. Suppose now we had these canals, where could we put our surplus water in flood times? Canals of four times their capacity would not hold our spring freshets. The floods would simply wash back into the canals the piles of sand which had been removed at so much expense, filling up in a day what it cost millions of money to excavate. Add to this \$6,000,000 as much more for stone dams and you will have the least possible cost of such a system of works as proposed by Mr. Sneath, in case the canals were permanent. However, instead of the canals being permanent every year, they would require dredging to keep them at their original capacity.

Of the utilization of the slickens, he suggests that, after having fertilized all the bottom lands and raised the site of Marysville to a level with the river bed, it be "spread over the red, gravelly, poverty-stricken land near the foothills." Mr. Sneath does not seem to realize the fact that these red lands lie back at a distance of from 1 to 50 miles from the rivers, and at an altitude of from 5 to 500 ft. above the river bed. Now, how in the name of common sense is he going to get the slickens spread over these lands otherwise than by hauling it there? Even if the miners will continue to furnish this slickens "free of cost," does Mr. S. think the farmers of California are so simple as to cart this stuff, which will not raise even cockle-burrs, on to their land just because the miners say it does the land good and won't cost them anything?

As to the affirmation that pure slickens will produce a good crop of cereals, or anything else, it is absolutely false, and no credence is given to such statements by anyone who has ever tried the experiment. It is barely possible that there might be isolated cases where slickens has produced something, but these cases are few and far between. If Mr. Sneath thinks he knows more of this subject than people who have tried it, it might pay him to go up to Marysville and lay in a supply of 25,000 or 50,000 acres of this same "fertile" soil, which can be purchased at from 50 cents to \$2 per acre.

The project of dredging is, if possible, more preposterous than the canal scheme. Mr. S.'s estimate for dredging one mile in the Sacramento river is \$2,640; he says this would take one dredger one month. Suppose now that we dredge 50 miles, that would cost \$132,000 and would take ten dredgers for five months; the cost of these ten dredgers would be at least \$500,000, in all \$632,000. Let us double this

for dredging on the other rivers and add this sum to the canal and dam fund of \$2,000,000 and we have over \$13,000,000, representing the least possible outlay required to get the scheme in working order. As to the cost of keeping these works in repair it is needless to say anything, for this absurd suggestion will never get any further than to make a smile of incredulity from all who may hear of it. This dredging scheme virtually amounts to a proposition to not only deposit the sand which is in the rivers at the present time, high and dry up on their banks, but also, all that the miners may feel inclined to dump into them in the future. The only difference between this and what is being done now, is, that whereas nature spreads the slickens over the farmers lands gratuitously, Mr. S. would have the slickens piled up on a part of the same land by means of dredgers, and I suppose the farmers should pay the expense of this dredging too.

Mr. Sneath's conception of a "grand canal on each side of the principal rivers of the State, with elevation sufficient to irrigate the adjoining lands throughout, and furnish motive power sufficient for the purposes of each and every farmer" was no doubt a production of his mind while suffering under a mental delusion. If it was not, I would advise the gentleman to report at once to Baron De Lesseps, of canal fame, for positively no other living engineer—not even Wm. Ham. Hall of brush dam notoriety, could appreciate the capabilities of such an extensive and comprehensive scheme of canalizing. It needs no engineer to pronounce his method of building this "grand canal" as simply impracticable. With the extensive system of levees we have now the rivers cannot be confined to a narrow channel, but spread out from one to five miles in width. Can any one suppose for an instant that the water could be confined in a channel 200 ft. wide by simply, as is suggested by Mr. S., throwing up ridges with a plow? A scheme of building an extensive system of levees for the Mississippi at a cost of \$100,000,000, meets with opposition on the ground that sooner or later the river must break from its channel and fill up the whole country with sediment. This objection would apply equally well to this scheme, for were it possible to build such a water-way as is suggested the river would some day or another break out and completely destroy what the scheme was meant to protect. Mr. Sneath has started out to solve this question without trying to comply with the first needs of the farmers.

Positively we do not want the slickens for any purpose. If the question is going to be settled it must be done by providing for the keeping of the slickens out of the river channels. The sole trouble now is that there is already too much in the valleys, and the rivers will continue to bring it down as long as the miners above put it in. For a man to tell us that it would be to our benefit to take more of it "if the miners will continue to furnish it free of cost," is only a waste of breath on his part. If the miners can improvise and carry out some scheme by which they can keep the debris out of the river channels, they are at perfect liberty to continue hydraulic mining, but there is no need of trying to gain the co-operation of the farmers in the erection of works which are not calculated to cause the water to leave the canyons in a pure state. Some means must be devised for taking care of the debris now in the rivers, and should the farmer get no help, he may possibly do it alone, providing that no more debris is dumped in by the hydraulic miners; but should this class of mining continue as at present conducted, the agriculturists of the Sacramento valley will have no other alternative but to abandon their farms and to seek a country where justice is administered alike to rich and poor.

The thought suggests itself: Why do not the miners devote this money, which they propose to use for stone dams, to changing their process of mining from hydraulic to drift mining, by which means they can remove the gold-bearing strata of earth without deluging the poor farmer below with sand?

Oakland, Nov. 7th.

### The Sixth District Fair at Los Angeles.

EDITORS PRESS:—This is positively the last appearance of your correspondent as the chronicler of horticultural fairs for the year 1881. And I would not ask for space to describe the District fair of Los Angeles, had it not been so deserving, and so little patronized by our citizens. One of the most compact and instructive horticultural displays it has ever been my good fortune to see, it has been very poorly attended, the indefatigable exertions of the managers ought to have met with a warmer response from the people of the district. Even the races failed to excite the usual enthusiasm. The stock show was very meager indeed; the fine Jerseys of Pres. Barretto and Mr. Niles; a very complete and full exhibit of every desirable variety of poultry, by the latter, and also by Mr. Gilson; a good show of Poland China pigs entered by our Pasadena neighbor, S. Washburn, from his farm at Norwalk, were insufficient to enliven the solitude of Agricultural park when the races were not going on.

The horticultural exhibit took place in the Turnverein hall, a very central place, and was admirably arranged by our old friend Garey. There were many praiseworthy exhibits from localities which have not hitherto attracted at-

tention. Mr. Entwistle, of Vernon, had a large table covered with superb apples, pears, oranges and sweet potatoes. His Kentucky redstreaks were unexcelled. Indeed the apples were in the ascendant, and though Mr. Crank, of Fair Oaks, had labelled his table the "Golden Glory of California," his polished green, ruby and yellow apples were not less glorious. Mr. Hinde, of Placentia, near Anaheim, excelled himself this time, and took a score of premiums. To the list shown at the August fair a fine display of Japanese persimmons, olives, pawpaws, watermelons, fine boxes of raisins and other dried fruits just finished, corn, beans and potatoes were added, making the best showing by any single exhibitor. Though Mr. Hinde and his family religiously abstain from cooked food, this extraordinary presentation of edibles gives one a very comfortable assurance that they will not suffer from want of variety.

Mr. L. Parker, of Anaheim, showed superior lemons, limes, oranges, Tokay and Muscat grapes, apples and dried fruits.

H. I. Crow, of Verdugo, exhibited some remarkable piles of Winter Nels, Buere Clargo and Eastern Buere pears; also Sweet Rind and Messina lemons. Mr. Rosenbaum, of Pasadena, showed the above varieties, and also Vicar of Winkfield. The Pasadena table was just a representation of our standard fruits this time, but, as usual, a center of attraction, Mr. Crank taking the blue ribbon for the best six varieties of apples, and making a fine display of orange and lemons.

From the Duarte and Azusa there was excellent products of all kinds, and the Jellies of San Gabriel sent by Mrs. Col. Winston took the premium in that line. Mr. Garey showed pomegranates, remarkable for their size and beauty; and some of the largest, glossiest apples came from John Glen, of Lytle Creek, San Bernardino county. Mr. O. W. Childa exhibited some very beautiful baskets of walnuts, Italian chestnuts and almonds among his fine oranges and deciduous fruits. Mr. Brunk's rustic furniture and vases were utilized in the way of decorations, and were handsomer than ever.

The general lonesomeness of the hall in the daytime was relieved by the peeping of the chickens and goslings in Mr. Niles' section, where the incubator and artificial mother performed their allotted tasks. I believe there were pea chicks and guinea fowls' eggs also in the hatchway, but I did not see them.

There were many beautiful displays of women's work. Miss Lily Ward's paintings and crayons, and Mrs. A. O. Porter's marvelous shellwork deserving especial notice. Mrs. Porter's home is on Catalina Island, where, far from neighbors, she consoles herself with nature studies and real art work in shells, which she collects and polishes herself. Her sea daisies are so simple and delicate that they would make exquisite ornaments, such as brooches and earrings, and her crimson strawberries nestled in green leaves, with their perily blossoms, completely deceive the ordinary observer. The shell pansies and spirals are just as legitimate as painted or embroidered flowers, and yet this use of the shell does not spoil its own separate beauty in the least. Mrs. Porter has shown fine taste and skill in the manufacture of flowers from kelp, also, but her best work is upon abalone and a few other large shells of the coast.

The Los Angeles Woolen Mills made a fine show, and the "Standard Soap Company," of Berkeley, put up the very handsome manufactures recently displayed at the Mechanics' and State fairs. No wine was exhibited, nor any of the products of our canneries.

The most important display of the fair was that of injurious and beneficial insects, by the State Horticultural officer and Mr. Alex. Crow, whose entire collections, with numerous microscopes and magnifiers, were offered for the instruction of visitors. The annual meeting of the teachers of the city and county being in progress, they availed themselves of every opportunity to enlarge their acquaintance with this branch of natural history. Mr. Crow was constantly present to give explanations and answer questions. Prof. Norton and others of the institute instructors have especially urged the teachers of the State to give oral lessons to their pupils upon the habits of insects, and have recommended that Mr. Cooke's exhaustive report upon insect pests and remedies be placed in every district library. JEANNE C. CARR.

Pasadena, Nov. 5, 1881.

## THE VINEYARD.

### Meeting of the Viticultural Commission.

A special meeting of the State Viticultural Commission was held Nov. 11th in this city, President Haraszthy presiding.

The report of the Committee on Phylloxera, vine pests and the diseases of the vine was submitted by I. De Turk, Chairman, and on motion of Mr. Krug was approved and the Chief Executive Viticultural Officer was authorized to declare and enforce quarantine rules and regulations in accordance with the recommendations of the committee. We submit the following extracts from the report:

Our investigations this year have demonstrated the presence of phylloxera in several counties where it was not discovered last year, the questions of combating the pest being thereby made more complicated.

Our researches, aided by the most competent

entomological authorities, tend to show that the extension of the phylloxera pest is due principally to the winged female and the consequent winter egg, which is lodged upon the old wood of the vine, if above ground. There are no well authenticated proofs that this winter egg is ever to be found on the new wood of the growth of the preceding year. The habits of the insect in thus depositing the winter egg are succinctly explained in the Chief Executive Officer's report.

It is apparent that the winged female does not exist in great numbers in our State, or at least that it does not ascend above the surface of the soil in great numbers; hence the slow progress of the disease with us. Our experiments in attempting to entrap them have been futile, and we are safe in asserting this proposition. Moreover, our vineyards, with comparatively few exceptions, are more or less isolated and thereby protected from invasion.

We have, therefore, considered that isolation, comparatively, of vineyards, and the removal of all old wood from cuttings, together with complete disinfection of rooted vines and such precautionary disinfection of cuttings as we suggest, are the best methods we can practically recommend for the prevention of the spread of the disease from infected places to healthy vineyards within our State. This, while not affording absolute protection, because the contagion may possibly be carried in other ways, on the clothes of workmen, by insects, birds, etc., will at least diminish the danger to its minimum.

In Eastern States, whence are being imported cuttings and rooted vines of resistant stocks, the danger of infection is probably greater. Until we can prove the contrary, we shall admit, as is claimed (with some opposition) by the entomologists, that the gall louse, inhabiting the leaves of American vines, is identical with the *phylloxera vastatrix*, or root inhabiting type. It is believed, generally, that the pest was introduced into Europe upon American vines. If this be true, we are in constant danger of new invasions from the same source, in acclimating and experimenting with American resistant stocks from Missouri, Texas, Ohio and New York. The danger of introducing the winter egg upon cuttings is apparently greater with these stocks than with our own on which the winged form appears to be less frequent. We have therefore thought it wise to caution planters to disinfect such imported cuttings carefully. The same is true of imported cuttings from Europe, where the winged form is evidently more numerous than here.

A perfect system of quarantine is impracticable at this late season, on account of the great territory of the State and the necessity of appointing careful inspectors to certify to disinfection in every place whence cuttings are sent to other parts. We do not believe that it is sufficient to designate only the vineyards where the pest has been discovered as dangerous, because it is probable that it exists in other places not yet discovered. Therefore we counsel all planters to consider all vineyards suspected and to disinfect everything, cuttings or roots, that they procure to plant. This possibly extraordinary precaution may be further justified by the almost universal presence of some form of fungoid disease in vineyards, the germs of which on cuttings and rooted plants may be destroyed by the methods precautionary against insect pests.

Therefore, we recommend as the most practical means of preventing unnecessary spread of the phylloxera and fungoid diseases for this coming season of planting the adoption and declaration of

### Quarantine Rules.

As follows:

First.—That the cuttings of grapevines made in this State for plantations outside of vineyards where made, shall be required to be made solely from the new wood of the preceding season's growth, all old wood to be removed in order to prevent spreading contagion by means of the winter egg of the phylloxera, which, according to the best entomologists, is only found on the old wood, the new wood being free from them.

Second.—That all cuttings and rooted vines imported from any region or country outside of the State, shall be required to be disinfected at the place of first consignment within the State before distributed or planted; the method of disinfection to be at the option of those to whom such cuttings or roots are consigned, provided that they be some one of the methods which have been experimented with and proved efficacious by the chief executive officer of the commission, full details of which will be made public.

Third.—That all persons planting new vineyards within the State shall be advised and strongly urged to consider all cuttings and roots suspected, regardless of origin, and to thoroughly disinfect them, thereby accomplishing the destruction of all possible germs of insect pests upon them, as well as also those of fungoid diseases, which are becoming dangerous in all parts of the country.

Fourth.—That for the convenience and protection of all interested parties throughout the State, the chief executive officer shall be requested to appoint resident inspectors, as provided for by law, for each section or region where vine growers desire the same, and upon their application to him for such appointments, applications to be made by practical vine growers, and those intending immediately to plant new vineyards, directly to the chief executive officer, Chas. A. Wetmore, No. 111 Leidesdorff street, San Francisco, and also that he shall appoint such inspectors at other points where their services seem positively to be required.

Fifth.—That blank forms for certificates of disinfection shall be furnished to inspectors and that the fees to be charged by inspectors for such certificates, made out in duplicate, shall not exceed 50 cents in each case, the fees and penalties in case of evasion of rules and seizures, to be the amounts provided for by law.

Sixth.—That the report of this committee be prepared by the chairman for publication without delay.

The methods of disinfection, which the experience of this committee, through the experimental work of the chief executive officer, aided by the constant labors of our secretary, causes us to recommend for general use and for application, anyone of the same, in cases where disinfection is absolutely required by the rules, are as follows:

For cuttings and rooted vines:

1st. Dissolve sulpho-carbonate of potash in cold water; proportions: 10 lbs. of sulpho-



carbonate to 100 gallons of water; immerse cuttings and rooted vines 15 minutes.

2d. Dissolve Little's soluble phenyle by pouring upon it cold water in the proportion of 50 gallons of water to one gallon of the phenyle; immerse cuttings and rooted vines 10 minutes.

3l. Take two parts coal tar; two parts water and one part carbonate of potash, or carbonate of soda; put in a covered vessel and heat gently to boiling point for one hour; replace water lost by evaporation; pour into suitable vessels and agitate violently; dilute with 50 parts of cold water; immerse cuttings and rooted vines 10 minutes.

4th. Dissolve carbolic acid crystals in water, in proportion of one lb. of acid to 20 gallons of water; immerse cuttings and rooted vines 10 minutes.

5th. Dissolve sulphide of potash in the proportion of one lb. to 20 gallons of water; immerse cuttings and rooted vines 20 minutes.

6th. Dilute one part of "liver of lime," in 20 parts of water; immerse cuttings and rooted vines 10 minutes. (N. B. To make "liver of lime" take one lb. quicklime, one lb. sulphur, one gallon water; mix; boil over quick fire to one-half of volume; agitate before using; dilute with 20 parts of water to one part of "liver of lime.")

The foregoing disinfectants are believed to be quite efficient for the purpose and safe in practice. The solutions of sulphate of copper (blue vitriol) and sulphate of iron (green vitriol) may be advantageously used upon cuttings for disinfection against fungoid germs, but our experience indicates that the time of immersion required to destroy the phylloxera is too long to be practically followed. When used, we recommend the sulphate of iron in preference to the sulphate of copper, the former being a good fertilizer or stimulant for the vine. Rooted vines should not be washed or soaked in solution of sulphate of copper or iron. The roots are destroyed easily by this remedy.

Other disinfectants might also be used, but we recommend only those which our experience proves valuable and which may easily be obtained by those requiring them.

#### Sulphide of Carbon and Sulpho-Carbonate of Potassium.

We recognize still, as heretofore, the importance of these insecticides as aids in combatting the progress of the phylloxera, and for the especial protection of vineyards planted with the *Vitis Vinifera* varieties. Instructions as to their use and information concerning the experience had with them in this State and elsewhere, will be contained in the forthcoming report of the Chief Executive Officer. Inasmuch as the use of these insecticides in the soil may not be sufficient in exterminating all the germs of the pests, on account of the presence of the winged female and winter egg above ground, we counsel the careful destruction of all debris of vines, cuttings, leaves, etc., after pruning, and the washing of the vines in winter with a concentrated disinfectant, such as any one of those heretofore prescribed for the disinfection of cuttings, and more especially the treatment of the surface soil around the base of the vines with the sulpho-carbonate of potassium, or Little's soluble phenyle, at the time of treating the deeper soils, and also during the month of May, the time when the products of the winter eggs seek the roots of the vine. This is especially important, inasmuch as the vapors of the sulphide of carbon appear sometimes to be ineffectual in reaching surface roots in summer and also possibly in winter treatments, according to the nature of the soil.

In all cases where only a small part of a vineyard is found infected, we counsel the energetic application of the death treatment of the sulphide of carbon, aided by surface applications of sulpho-carbonates, or phenyle, and careful washing with very concentrated insecticides upon the wood above ground. Whenever vines so treated are killed, it would be advisable to replant with resistant stocks.

In cases where the disease is generally spread throughout a vineyard and the vines are still productive, we counsel the use of the curative, or periodical treatment, aided by energetic fertilizers, such as will be explained in the forthcoming reports, until such time as the treatment shows signs of failure, or the expense makes it unprofitable, in which case, the vines should be planted with resistant stocks.

#### Submersion.

This remedy, according to French experience, is effectual in protecting vineyards from the phylloxera; but it is in most cases impracticable; and when practicable it must be repeated annually. Irrigation should not be confounded with submersion.

#### Plantations in Sand.

It has been found that in extremely sandy soil, the vine appears to be free from disastrous effects of the phylloxera. Such soils are, however, not to be found in our vine-growing regions. Sand dunes, with a small percentage of matter other than silica, appears to be the only places where this remedy applies.

#### American Vines.

The resistance of American vines, or of most of their varieties thus far tested, appears to be incontestably proved. This resistance is, however, often one of degree only, and there still remains much to be learned. Practically speaking, however, there are many known varieties of several species which are phylloxera proof. In this State not much is yet known as to the adaptability of the various species and varieties to different climates and

soils; and it yet remains to be proved beyond question whether the *vitis Californica* and *vitis Arizonica* are to be classed among the resistant vines. Enough, however, has been learned to render it extremely probable that these species will yet be ranked among the most valuable resistant grafting stocks. Planted side by side with the *Riparia*, they show greater vigor of growth and greater adaptability to our climate and soils.

It is important that all planters should cultivate at least a few specimens of each of the more prominent species or varieties, to test their vigor and adaptability, and as a means of obtaining cheaply hereafter grafting stocks for replanting.

Whenever it becomes necessary to plant resistant stocks at once, present experience indicates that for grafting stocks the wild *Riparia* should be preferred, and for direct production the Lenoir, or Jacquez, and the Herhemont. The latter two are of Aestivalis species and planters should know that they are very difficult to propagate from cuttings. It is impracticable to plant them directly in the vineyard; they must first be rooted in nursery—in a warm soil, well irrigated. Rooted layers from old vines will be the surest means of reproduction. The *Riparias* root easily from cuttings.

The *Rupestis* are also to be recommended as a grafting stock for very dry lands; they root from cuttings very well but not as easily as the *Riparias*.

In propagating seedlings for grafting stocks, only pure wild varieties should be used. Most of the cultivated varieties germinate with difficulty and show evidences of hybridization.

#### French Experience.

The committee also presented translations of the reports of results arrived at by the session of the Phylloxera Congress in Bordeaux last month. We may give these at another time.

#### Conclusions.

The conclusions of this committee are, viz.: 1st. The phylloxera is not as much dreaded in California as in France, because it does not spread as rapidly, and because the isolation of most of our vineyards affords the greatest protection against contagion. To increase this protection we have vast areas yet unplanted, where there is no disease.

2d. The comparatively small area of our vineyards as compared with probable future plantations, in which the experience of this and other countries will be of service to us, also renders the dangers to the industry insignificant.

3d. Being warned in time, excepting in a few places, where the disease has been permitted to progress unmolested, our vine growers have little serious trouble to fear. With the death treatment of insecticides to infected spots as soon as discovered, the reconstitution of vineyards upon resistant stocks may be practiced gradually and without seriously impairing the productive profits of the industry.

4th. Isolation and vigilance in the disinfection of cuttings and rooted vines will probably preserve most vineyards until the time when replanting with resistant stocks will cease to be considered a burdensome expense, or until practical, cheap and absolute methods of defense may be discovered and proved.

5th. Grafting upon resistant stocks should not be considered as grievous and burdensome expense. It will probably be discovered, that independently of its value as a protection against phylloxera, the profits of the industry will be increased by grafting, inasmuch as the evidence tends to show that the grafted vines bear earlier and more abundantly than the old vines on their own roots.

6th. There is no immediate danger of destruction of any vineyard not now seriously diseased. The possible necessity of reconstituting a vineyard that may be attacked will entail so little temporary loss of parts of the vineyard that the evil need not be considered of great importance.

7th. In view of the great individual losses already suffered in certain places where the disease has been suffered to progress without hindrance, and in view of the reluctance of some wine growers to confess the presence of disease by making efforts to arrest it, it is of the greatest importance that all discoveries of infested spots should be made public as speedily as possible, thus putting an end to all motives for concealment, and setting in motion efforts to arrest the evil. This principle has actuated this committee, and we believe it to be of the greatest importance to all concerned.

8th. With the aid of insecticides and American vines, we consider that the phylloxera question has been solved practically and economically. The great losses that have been suffered in France are due to the fact that the evil was spreading before the remedies were discovered and approved. We are indebted to French efforts for the information we now possess, enabling us understandingly to grapple with the difficulty as it appears.

9th. This Commission, or some other public body, should be more amply endowed by the State, with means to determine and demonstrate propositions of general interest to the public. We are dependent now more upon the work of other countries than upon our own. If it were not for the information we receive from France, our vineyards would have been doomed to destruction. Our work is so contracted for lack of sufficient support, that we have very little of value to communicate of our own original research in exchange for what we receive. Our present efforts are mainly directed

ed toward obtaining and collating for our people what the public spirit of other countries offers us gratis, and in demonstrating the truth of their assumed discoveries we have little left for original research.—I. De Turk, George West, Charles Krug, R. B. Blowers, Charles A. Wetmore, committee.

#### Horticultural Report, Etc.

Mr. Matthew Cooke, the Chief Executive Horticultural officer, presented a report concerning the rules and regulations agreed to by the Horticultural Commission, which was approved, and this officer was, on motion of Mr. Wetmore, authorized to declare and enforce quarantine rules in accordance therewith.

On motion of Mr. West a resolution was adopted returning the thanks of the Commission to the Secretary of State and the officers of the Consular Service of the United States for their earnest and successful efforts in procuring information for the use of the Commission.

A resolution by Mr. De Turk, requesting the President, Mr. Haraszthy, to send a written statement to the Commissioner of Agriculture at Washington, to be read at the Convention to be held at the National Capital in January next, relating to the wants of the viticultural industries of this State, was adopted and the Commission adjourned.

## IRRIGATION.

### Decision on Water Rights.

A decision was rendered Nov. 3d, by Judge Brundage of the Superior Court of Kern county, in the great water suit of Miller & Lux et als. vs. the Calloway Canal Co., in favor of the defendants. In its relation to the agricultural interests of the southern part of the State, the case is of supreme importance. The plaintiffs are the owners of certain swamp lands lying between Buena Vista and Tulare lakes; Kern river is an affluent of Buena Vista lake. In times of high water, this lake sometimes overflows these lands or fills some ill-defined channels that meander through them. Upon this circumstance they claimed the waters of Kern river as riparian owners, and brought an action for an injunction to prevent the diversion of water through the Calloway canal. The defendants claimed the water as prior appropriators to irrigate public lands along said canal. Similar suits were commenced against all the other irrigating companies diverting water from Kern river. Had the plaintiffs been successful, the irrigating system of Kern valley would have been at their mercy, as they would virtually have owned the waters of the river.

The decision of Judge Brundage has apparently been prepared with great care, and after long study of the subject and search for authorities. It involves the vital point of riparian ownership in water, as defined by the present English law against the prior appropriation rights, which were recognized in the older English law, and are in force in all countries where irrigation is practised. The decision of Judge Brundage is published in full, in a supplement to the *Kern County Californian*, of Bakersfield, where all who desire the opinion in extent may obtain it. It will serve the purpose of the majority of our readers to have the leading points involved and the decision thereupon, and these we present in the form of an abstract of the decision, made by the Bakersfield *Record*, as follows:

The plaintiffs claiming as riparian owners, contend that the common law of England is in force in this State, and that by its provisions, a riparian owner of a stream not navigable takes the land to the center of the stream, and that the right of the use of the water flowing over the land is an incident to his estate, and he has a right to have the water flow, as it was wont naturally to flow, without diminution or alteration. The claim for damages was abandoned, and the suit is now one in equity for an injunction alone.

The defendant claims that plaintiffs are not riparian owners, and even if they were, the doctrine of riparian rights for which plaintiffs contend, has no application to California on account of the physical condition—that the law in this case is the law of appropriation to beneficial uses, and not the modern English doctrine of riparian law.

The Court says: "The plaintiff's lands consist of two parcels lying in Buena Vista swamp: one parcel, lying near Tulare lake, some 50 miles below the head of the Calloway canal, through which the defendant directed the water of Kern river, and the other parcel, higher up in the swamp, about 20 miles below the head of the Calloway.

"The defendant claims the right to divert the water for irrigating public lands along the Calloway canal, as a prior appropriation, having made the appropriation before the plaintiffs acquired title to their lands.

"The plaintiffs derived their titles to their lands as swamp and overflowed land from the State of California, under the reclamation law of the State by patents hearing date subsequent to the appropriation for the Calloway canal."

One of the principal points in the decision is that "riparian rights are subordinate to rights of appropriation," and in support of his views on this subject, the Court quotes numerous authorities to show where the rights of appro-

priation have attained a precedence over the riparian law. He holds that the common law of England, adopted by the Legislature of California in April, 1850, was adopted only so far as it conformed and was consistent with our institutions and forms of government, and was applicable to our conditions. The Court says:

"The doctrine of riparian law, which had been found applicable and suitable in England, and possibly to the abundantly watered States east of the Rocky mountains, if enforced in the State of California would condemn to perpetual barrenness nearly the whole of the great interior valleys.

"The courts of New York had decided that although the Legislature of that State had adopted the common law of England, and that law declared that no stream was navigable beyond the ebb and flow of the tide, did not apply to this country, where the physical conditions are different—that it could have no application to a continent full of great navigable rivers and fresh water lakes, where the tide does not ebb and flow, but which are really navigable waters."

The court holds that the law of appropriation is strengthened by custom and the acquiescence of both the State and Federal governments, the same foundation upon which rests the whole superstructure of the common law of England.

"The common law of England," says Blackstone, "is a law built up from custom, and it is one of the characteristic marks of English liberty that the common law depends upon custom, which carries internal evidence of freedom along with it, that it was probably introduced by the voluntary consent of the people."

"It is generally held throughout the Pacific States and Territories, that the right to water by prior appropriation for any beneficial purpose, is entitled to protection. \* \* If the water had been diverted before plaintiffs bought their land, they purchased it with a knowledge of the policy of the government and the grant gave them no rights to the water. If, when they purchased the land, the water was still flowing in the stream and unappropriated, and they needed it for their farm, they had nothing to do but appropriate it and apply it to their own uses."

"Even upon the strict doctrine of riparian rights, as declared in the decisions of States where irrigation is not a necessity, the defendant is entitled to the same privilege with reference to the water of Kern river as a 'supra' riparian proprietor. This gives it the right to make a reasonable use of the waters to supply all natural wants, of which, upon these desert lands, irrigation is one, and the defendant's appropriation of the water here does not exceed such reasonable use. \* \* The defendants might, if necessary, have taken for this and other natural wants all the water in the river, but the proof here is that only a reasonable portion of it, in fact, was taken."

"I am inclined to the opinion, from the hurried review that I have been able to make of the apparently conflicting authorities on the subject, that the true rule in a case of this kind is that a court of equity will not take jurisdiction on a bill for an injunction when the title is disputed, without first requiring the complaining party to establish his title of law, and this the plaintiffs have not done.

"I am also of the opinion that the plaintiffs, although the full period of the statute of limitations has not run, have been guilty of such laches that a court of equity ought not to entertain a bill for an injunction. Some of the titles under which the plaintiffs claim and on which they rely, were obtained January, 1876, and the others at different times down to August, 1878. If these plaintiffs had any right of action at the time they commenced this suit, they had an equally valid one more than three years before. They stood by and saw the defendant expending vast sums of money in constructing its irrigating canal without objection or protest—without seeking in any manner the interposition of a court of equity, and it does not seem equitable to give the extraordinary remedy of an injunction which will necessarily render valueless this expenditure, destroy the canal and condemn the whole country along its course, now converted by the money and enterprise of the defendant from a desert into a garden. This view seems to be abundantly supported by authority.

AN ELECTRIC LETTER CARRIER.—Dr. Brunner, of Wattenwell, Austria, has invented an electric letter carrier, in the form of an underground railroad moved by electricity. The invention is at present before the Austrian Society of Engineers for inspection. The locomotive can be guided and controlled from a stationary point, because the battery or motive power is not on the locomotive; it does not need any accompanying attendance. The locomotive and train can be constructed of any diminutive size, and both will perform the same service for any length of distance which the pneumatic tube will perform for short distances.

A BEECH railroad tie, it is said, if effectually preserved from rotting, is better than white oak. Elm, black and white ash, if effectually preserved, will hold a spike about two-thirds as well as beech or oak, and one-third better than chestnut. Soft maple and sycamore hold a spike about four-fifths as well as chestnut, about two-fifths as well as oak or beech, and about one-half better than hemlock. Seasoned white oak is about one-third less effective than green timber in holding a spike.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Temescal Grange.

Temescal Grange will have a special meeting on Saturday evening, Nov. 19th, to confer the first and second degrees on candidates. At the last meeting, the Grange endorsed Judge Jeremiah Black's memorial to Congress for proper legislation for the regulation of railway management, which was sent by the National Grange to all subordinate Granges in the United States, and published in last week's *PRESS*. The action of National Master J. J. Woodman in sending out the petitions for the proposed new law, etc., was endorsed by vote of the Grange, and the petitions for the same signed by all present.

The first degree was conferred on Mr. D. E. Collins. Master Bage, chairman of this committee, was requested to present the petitions signed for a free market in Oakland to the City Council for action upon the same. Bro. Renwick, of Walnut Creek Grange, has moved to the vicinity of San Leandro, and, like a good, true Granger, attended the meeting with his wife and sister-in-law, Miss Yeakum.

### To the Memory of the Late President.

At the late session of the California State Grange the following resolutions were presented and unanimously adopted:

WHEREAS, James A. Garfield, President of the United States, has been struck down in the prime of life and in the midst of his usefulness, by the hand of an assassin, depriving the people of the benefit of his tried patriotism and exalted ability, and bereaving his family of a noble father and husband, therefore be it

*Resolved*, By the State Grange of P. of H. of California, in session assembled, that the act of the assassin meets with the utmost abhorrence and detestation of virtuous humanity, and we invoke the speedy vindication of the outraged law. Further,

*Resolved*, That we tender to the aged mother, the widow and children of our murdered President, our heartfelt condolences on the great loss, and pray that God may have them in His Holy keeping.

*Resolved*, That the worthy Master of the State Grange P. of H., forward a copy of these resolutions to Mrs. Garfield, the widow of our lamented President. And further

*Resolved*, That these resolutions be spread upon the minutes of the Grange, and also a copy be published in the *California Patron* and *Rural Press*. THOS. E. KETCHUM, L. C. STEELE, S. T. COULTER, D. A. OSTROM, Mrs. W. D. ASHLEY, Committee.

### Resolutions of Respect.

STOCKTON GRANGE has adopted resolutions of tribute to the memory of James Crozier a pioneer resident of San Joaquin county, in whose death the Grange has lost one of its most honorable members, and the community one of its most reliable and worthy citizens—a man full of love and sympathy, who stood firm as his native Scottish hills for what he believed right. [Committee not named.]

PLANS OF THE NEW W. M.—Georgs Rich, in a letter to the *Patron* and describing a very satisfactory meeting of the Sacramento Grange, makes the following allusion to Bro. Flint's plans and sentiments as he described them in an address to the Grange: He expressed thanks to the members of the late State Grange for the honor they had conferred on him, and said he felt doubly fortified for the performance of the duties assigned him, with a willing heart to perform them well. He referred to various resolutions touching the action of the State Grange, which might be amended for the benefit of the Order on our coast. He expected to be absent two months, and on his return intended to take a tour over the work under his charge. His determination is to enter with renewed zeal and earnestness into the work of advancing so noble a cause, for the good of the members and those engaged in agricultural pursuits. While he expects to expand and build up the Order to a higher standard on our coast, it is not to be anticipated that he can accomplish it without the faithful co-operation of its members in words and deeds, and an effort to make the work of the Order cheerful and pleasant in all its bearings. He was glad to be a Granger, and had an abiding faith in all the intents and purposes of the Order, and had endeavored to do his duty—to keep a watchful care over the work, and otherwise interest himself for the benefit of the Order on our coast. Appropriate remarks were also made by Bros. Greenlaw, Johnston, Hancock, Wilson and Hull.

POTTER VALLEY GRANGE.—Bro. Wm. Eddie, Master of Potter Valley Grange, in a letter to the *Patron*, says: "Potter Valley Grange is on the up grade. We have at present 54 members in good standing. The membership has increased 15 within the last year. We are talking of starting a store of our own; the capital is \$10,000, of which amount \$3,000 is already subscribed."

GOING TO LOS ANGELES.—C. P. Teague and Theodore Staley, both of whom have been prominently identified with Sonoma county for the past 25 years, have recently removed to Los Angeles. Bro. Staley was Master of the Santa Rosa Grange. We wish them all prosperity in the new home.

RETURNING TO CALIFORNIA.—We are glad to see in the correspondence of the *Oakland Tribune* the following concerning the first Master of Elen Grange: "Thos. Heller, wife and two daughters, from Kansas, have returned to Haywards. Mr. Heller has been absent from California for nearly eight years. Three of his sons, Ed., Will and Sam., after a short stay in Kansas, found their way back to Haywards. One of his daughters is married and settled in San Lorenzo, and another married daughter lives in San Francisco. The yearning for his former home finally overcame him, and he sold out, and with the rest of his family will spend the remainder of his days on his old place in the hills east of Haywards." Brother and Sister Heller are improved in health and will no doubt have a warm welcome back to the Grangs which they so earnestly supported in days long ago.

GRANGE ELECTIONS.—Let every subordinate Grange in California attend to this election of its officers for the ensuing year in due form. This is the best time to revive dormant or lukewarm Granges. Start up and elect a set of good officers, who will work heartily and patiently for the good of the Order. Refer to State Grange Constitution for full instructions regarding elections, and work accordingly. We invite all Masters and Secretaries to see that a list of officers elected be sent to us for publication, with the date of meeting for installation. We hope to hear from all along the line.

CO-OPERATION.—A meeting to be composed of two delegates from each co-operative association in the United States is called in New York, on some date yet to be fixed. Each society is to have but one vote, and is requested to send the names and full address of its delegates as soon as chosen, to Allen R. Foote (President of N. Y. Co-operative Association), No. 17 Clinton Place, N. Y., and date of meeting, who will forward date of meeting and other information.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

HORTICULTURAL BOARD.—Alameda county has organized a local Horticultural Board. A. D. Pryal, G. P. Crane and Martin Mendenhall are the Commissioners. This makes 15 counties now organized under the law for the protection of the fruit interests.

#### KERN.

The Messrs. Howell & Sons, farmers, who live about 15 miles in a southwesterly direction from town, among other crops planted this year, have grown 10 or 12 acres of cotton. It is an upland variety known as the "prolific," and our informant, who is a former resident of Florida and familiar with the growth, cultivation and preparation of the great staple for market, both in that State and in Georgia, assures us that he has rarely seen a better crop. The bolls are unusually large and numerous, and the staple long and peculiarly soft and fine. It does not stain as where he has been accustomed to see it grow, and has a peculiarly bright, snowy appearance. He estimates the yield at about 500 lbs. of lint to the acre. The soil is of a better quality than that upon which the crop of Messrs. Haggin & Carr is planted at the Bellevue farm, and the yield is corresponding. It has been irrigated but once. They commenced picking about the first of September, and the process has been continuous ever since. They do not expect to stop before Christmas, and feel assured that they will derive more clear profit from it than they have from 200 acres of grain. They expect to go into the business more extensively next year, being well satisfied that it is more profitable than wheat growing. Such cotton as they have produced ought to bring the highest price in the market. The experiment of Messrs. Haggin & Carr is resulting better than last year, and a few more trials like these ought to convince the most skeptical that this is a cotton region equal to any in the world.

#### LOS ANGELES.

RAISINS.—*Mirror*: At Orange raisin growing has so taken hold of the people that they are rapidly going into that branch of horticulture, some even digging out their orange trees and planting the land to vines. This, however, has only occurred where they were harrassed by the red scale and other insect pests.

WIND STORM.—*Commercial*, Nov. 12: The freaks of the wind as it leaped over the Sierra Madres and flew down a dozen canyons into the San Gabriel valley on Wednesday, were very peculiar. When it passed out of the Arroyo Seco canyon, it roared like a distant hailstorm. When it arrived at Pasadena, the trouble began. The hay barn of Col. J. Baubury was demoralized, and some of his orange trees broken. A large amount of fruit was also beaten off. At the east of Pasadena, the barn of Mr. Skillen was also blown down, while the barn of his neighbor, Mr. Case, was blown from its foundations about 14 ft., and turned around. The outbuildings of Messrs. Giddings, Hollingsworth and Townsend, were also demolished—that of Mr. Townsend having a team inside at the time of the wreck. Mr. George W. Dyer's barn was also wrecked. Another detachment of the storm came tearing down Precipico canyon and struck the splendid fruit ranch of Hon.

J. F. Crank with tremendous fury. Some buildings were demolished while a large portion of his orange crop was blown from the trees and ruined. At Sierra Madre Villa, the orange crop was also seriously damaged and some of the trees broken. At the ranch of Abbot Kinney, the cyclone stripped a portion of the lime trees entirely free from leaves, and filled his concrete water ditch with gravel. This is the first storm of the kind which has occurred in that valley since April, 1874.

#### SANTA CLARA.

ORCHARD LAND.—*Herald*: The rush for land suitable for orchards has increased rather than abated, and prices have advanced in proportion. Land that might have been purchased last spring for \$100 an acre, is now held at twice that amount, with the tendency still upwards. One man, who owned 68 acres three miles west of the city, sold 28 acres of it in September at \$100 an acre; was offered \$7,000 for the balance last week and refused it. He was asked whether \$8,000 would buy it, but would not even then give a positive answer. And this is the way it goes in all that region. People are beginning to understand that the land for apricots and other choice fruits lies west and southwest of the city, and are willing to give any reasonable price for it. It would not be at all surprising to find such land held at \$500 an acre in less than two years. The profits of fruit growing in that region have been so great for the last season or two—a thousand dollars an acre in some cases—that people can afford to pay a high price for the land that is capable of making such returns. We, therefore, advise all who are thinking of going into the fruit business, on a large or small scale, to buy at once, as they will certainly buy cheaper now than in the spring, or at any future time. SHASTA.

EDITORS' PRESS.—We learn from a correspondent that one John Howard in Tehama planted sorghum which yielded him on an average 50 gallons per acre. We think we can make a better showing than that. I have planted this season 30 acres to sorghum. Three kinds, viz.: Imphee, Early Amber and Honduras. The latter is the most productive, and yielded 223 gallons per acre. Weather is clear and cold with heavy morning frosts. Plowing has commenced, and farm interests moving on smoothly generally. The flouring mill at Anderson is in fine working order, and the continual hum of machinery during the day gives an air of enterprise to the place. The schools are in a flourishing condition under the able auspices of Mesdames Yuder and King. We have a pleasant outlook for the coming winter.—EDWARD FRISBEE, Anderson, Nov. 10, 1881.

#### SOLANO.

ORCHARDS AND VINEYARDS.—*Dixon Tribune*, Nov. 12: Heretofore cereals have been considered the staple production of this county, and farmers have cultivated them almost exclusively. It is of quite recent date, that the people of this county became aware of the possibilities of fruit culture. When actual experience demonstrated the fact that an acre of vines could be made to pay from \$20 to \$50, or the yield of a single apricot tree realized from \$10 to \$20 per annum, the prevalent theory that nothing but wheat and barley could be produced with profit from the soil of Solano county, was somewhat shaken. And now that fruit culture promises to be so lucrative for many years to come, the attention of many agriculturists has been called to it, and so far, with the most gratifying results. It is perhaps well to remember, that not many years ago, many of the farmers actually dug up their vines, to make more room for wheat, which was then considered the most profitable. We have from time to time in these columns, dwelt upon the possibilities and capabilities of the fruit belt around Vacaville. We are confident, from the observation and attention that we have been able to give the subject, that vineyards can be successfully and profitably cultivated in Solano county, not only along the foothills, but also in that section of country stretching from Putah creek through the townships of Tremont, Silveyville, Maize Prairie, Elmira and Suisun. The soil is well adapted, and the climate is exceedingly favorable. The vineyard and orchard of Mr. Briggs, just over the line on the north, is one of the most extensive and profitable in the State. There are thousands of acres in Solano county, just as well adapted to the culture of grapes, similarly situated in point of topography, and subject to the same climatic influences as is Mr. Briggs' vineyard. One great advantage possessed by Solano county vineyardists, that should not be overlooked, is the fact, that owing to peculiarity of our climate, we are in a great measure free from the ravages of phylloxera and other pests and insects. Another thing should be remembered. Mildew, which is often so injurious to the vineyards of Sonoma valley, never reaches this county.

#### NEVADA.

A CARSON VALLEY RANCH.—*Bodie Free Press*: Fred Dauberg is the largest grain raiser in Carson valley. He has cut over 2,100 tons of barley this season. He has one field of 600 acres. On his ranch are over 40 miles of irrigating ditches. The barley and oats raised by him are fine products. The oats weigh 40 lbs. to the bushel, instead of the scant 32 lbs. as in the Eastern States, and his barley about 50 lbs. as against 48. This is true of the cereals in the valley generally. There is an abundant market for Fred's crop—barley selling at \$2.85 per 100 lbs., and oats at \$2.75 per 100 lbs.

### The Debris Committee.

The committee to whom the important duty of visiting and inspecting the districts affected by the great debris question and of making a report thereon, with such suggestions as to a possible remedy or a compromise among the parties in interest, completed their labors and submitted their report, a copy of which is as follows:

The committee appointed by the citizens of San Francisco to investigate the subject of the injury done to agricultural lands by the debris from hydraulic mining, beg leave to report: That their investigation was made at the request of the Anti-Debris Association of the Sacramento valley. Their attention was called by that association specially to the condition of things existing on the Yuba, Bear and Feather rivers and the adjacent country, and their examination, therefore, has been confined entirely to that section of the State. They began their work at Marysville. There they inspected the Yuba and Feather rivers and the extensive levees intended for the protection of this city from the inundation of those rivers. Its condition is critical in the extreme. The bed of Yuba river along the front of the city has been filled up with mining debris to such depth that it is now above the general level of its streets. Formerly there was sufficient depth of water along its front to float steamers of considerable draft. This whole river to the opposite bank has been filled with white sand, and the only protection this city now has from annual inundation is by levees about 15 ft. in height, constructed and maintained at an average annual rate of taxation for the last 10 years of five per cent. If the debris be allowed to flow into the river as in the past, it is certain that these levees will cease to afford further protection, and the ruin of the city will be inevitable. At no point of their examination did the committee witness a more striking illustration of the danger of an unchecked flow of the debris into the river channels. This debris consists of fine muddy particles held in suspension, which is known as "slickens," and coarse sand and gravel which rolls along the bottom of the rivers.

#### West Bank of Feather River.

The adjacent country along the west bank of the Feather river, in Sutter county, was next examined as far down as the town of Nicolars. Along this line of 17 miles, levees of immense dimensions have been constructed, some of which have a width of 100 ft. at the base and 20 ft. at the top, and 15 ft. in height, for the purpose of protecting that part of the country from inundation of the Feather river. The country in Sutter county lying to the west of the levee referred to, is a rich alluvial plain, much of which is under cultivation and covered with fine residences, barns and other improvements. Over this extended plain, on every hand, were the evidences of recent inundation of considerable depth. The committee was informed that this overflow was caused by the breaks in the Feather river levees during the winter floods of 1880-81.

#### East Bank of the Feather.

They next examined the east side of the Feather river in Yuba county, as far down as Bear river, and also the adjacent country. The evidences of inundation were on every side, and to a depth even greater than on the west side of the Feather river. At a point on the main road from Marysville to the Bear river bridge, the water marks on a barn standing on what is termed high land, showed a depth of about five ft. of water during the winter of 1880-81. Along the lowlands on this bank of the Feather there was a deposit of white sand many feet in depth, totally destroying them. This was especially the case with a large part of the Miller ranch and the Mesick ranch, which, but a few years since, were under full cultivation in alfalfa, orchards and grain. These fine lands are now but sandy wastes. In much the same condition were the Lozier and the Plumas ranches. The houses on these latter ranches, although standing on high ground and at some distances from the river, showed evidence of an inundation last winter of from 5 to 10 ft. The whole condition of the country on this bank of the Feather river below the junction of the Yuba, was that of desolation.

#### South Side of Bear River.

The committee then crossed Bear river about a mile above its junction with Feather river, and followed up the southern side to within one mile of the town of Wheatland, at which point it is crossed by the California & Oregon railroad. Here again was seen even more deplorable evidences, not only of inundation, but of total destruction of lowlands by heavy deposits of white sand and debris. No language can convey an adequate idea of the scene presented at the Keyes and Brewer ranches. They were represented to have been among the finest lands of the State, under full cultivation, a few years since, and now they are sandy deserts. The residences have been raised from time to time some 10 ft. above their original base, to avoid the debris avalanche, but finally they have been entirely abandoned, as too unsafe for human habitation. At the railroad bridge across Bear river, near Wheatland, the story is repeated. The flood caused by the filling of the river bed has compelled the raising of the track not less than three times, amounting in the aggregate to 18 ft.

#### Vicinity of Oroville.

The committee next visited the Feather river at Oroville, and found a portion of its site sub-



ject to overflow chiefly from the discharge of debris from the hydraulic mines in the immediate vicinity. Here cause and effect were brought into close relation, and this point was examined rather as illustrating the general problem than as entering into that under their present consideration.

#### North Side of the Yuba.

The next line examined was the north side of the Yuba river, from Marysville to the point where the foothills begin, and where the Drainage Commissioners proposed to erect a retaining dam, but afterward the plan of the brush dam, some miles below, was substituted. From Marysville to this point the Yuba river has been leveed almost the whole distance at great cost, and numerous ranches along this bank have been totally buried in sand, among them the famous orchards of Briggs and Teegarden. Instead of a narrow and deep channel with bluff banks, as in former days, the river bed now is a wide, shallow sand plain, varying in width, from Marysville to this point, from one to two miles, entirely covered in the flood season by a swift current laden with further supplies of debris to be deposited at lower points of its own stream and in the Feather river, and on such lands as are low enough to receive them.

#### The Debris Deposit.

We learn from State Engineer Hall that the Feather river, at its junction with the Yuba, opposite the city of Marysville, has been filled from bank to bank, from 20 to 30 ft.; from 40 to 50 ft. at the site of the dam, eight miles above; from 100 to 120 ft. at Smartsville dumps, 13 miles above; and from 30 to 40 ft. at the forks of the river 8 1/2 miles farther up; between these extreme points, he states that 100,000,000 cubic yards of heavy debris now rest above Marysville. It appears from the same authority that the aggregate amount of agricultural lands destroyed by debris in this section up to the year 1880, was 43,546 acres, to which may be added the damage caused during the winter of 1880-81.

#### The Brush Dam.

In their route up the Yuba, the committee examined the brush dam, which although built upon correct engineering plans was constructed in too great haste on account of the near approach of the rainy season, and was not completed in accordance with the plans, the northern 400 ft. being constructed of earth which was first to give way when the storms began. The dam was about 10,000 ft. in length, of which about 1,400 ft. was washed out by the floods, the remaining portion withstood the storms and retained a large amount of debris. The committee are of the opinion that the repair of this dam is necessary for the safety of the country below it, and the cost is estimated by competent engineers at from \$25,000 to \$30,000.

#### Responsibility of the Hydraulic Mines.

The committee next entered on the examination of the cause of all the deplorable results they had witnessed on the plains below, the special point being the responsibility of the hydraulic mines therefor, and for that purpose examined the Yuba river, between Smartsville and North Bloomfield, and the principal mines which discharge their debris into it. These are characteristic of all the rest as to mode of work and discharge of debris.

The present system of hydraulic mining dates from the invention, in 1870, of the "Chief," a cannon-shaped machine, which rests on the ground and receives the terminal end of the pipe through which flows, within any given time, 50% more water than that furnished for the entire supply of the city of San Francisco. By aid of friction rollers, it can readily be turned in any direction and can be managed by a boy; it projects an 8 or 9-inch stream of water a distance of 300 to 400 ft., and with such enormous power as to readily move rocks weighing several tons. The machines are called Monitors and Little Giants, and several are used at times in a single mine, and in addition to running all day, are operated at night by aid of the electric light.

#### Extent of the Mining Industry

The auriferous deposits, from 100 to 300 ft. in depth, are washed down to the bedrock, and the whole mass of slum, sand and smaller rock is discharged through sluices in greater or less quantity, directly or indirectly, into the channel of the Yuba river. The reservoirs from which this water is drawn are situated at the foot of the Sierra, and the ditches conducting it to the mines are in some instances 40 to 70 miles in length. Channels for the discharge of the debris have been excavated for miles in length through the bedrock. These works have cost very large sums of money, amounting to millions of dollars. The officers of the North Bloomfield, Milton, Eureka, Lake, American, Excelsior and South Yuba companies informed the committee that about \$12,000,000 has been expended by them alone. The total capital invested in hydraulic mines is estimated to be \$80,000,000, and it is represented that the amount of gold produced annually from the mines in this State is about one-eighth of the present aggregate product of the world.

#### Thrift in the Mining Regions.

The committee passed through many mining villages and towns, all showing evidences of thrift and prosperity. Comfortable school-houses were seen in every village, and the orchards and gardens surrounding the houses of the miners betokened a degree of comfort unusual for any laboring class. It was apparent that a considerable population, directly and in-

directly, derives its support from the working of these mines; and their stoppage, even temporarily, would entail much hardship.

#### Where the Debris Comes From.

A careful examination of the hydraulic mines on this ridge satisfied the committee that the filling in of the Yuba river and the consequent inundation of the adjacent lands, is wholly due to the debris discharged by those mines into its upper channels; yet they saw enough to satisfy them that the hydraulic mines now being operated, are not entirely responsible for the damage done to the agricultural lands. Large quantities of debris were seen stored in the ravines at various places where no mining work has been done for many years past, and are swept down more or less by the heavy mountain rains of each year, helping to swell the sand tide upon the plains below.

#### Practicability of Dams.

The committee carefully examined a point on the Yuba river below the junction of all its forks and Deer creek, where, it was represented to them, a series of rock dams might be constructed, which would impound the debris of the hydraulic mines situated on those forks for many years to come. The problem is an engineering one, and they have the authority of Col. Mendell, of the United States Engineer Corps, and of Mr. Hall, the State Engineer, in saying that such dams are practicable, and will retain a very large proportion of the debris of those mines, and improve the condition of the river below.

In the report of Col. Mendell to the Engineer Department, under date of Feb. 20, 1880, he estimated the cost of a sufficient number of dams to impound 35,000,000 cubic yards of debris to be \$222,025.

In the report of Engineer Hall, made in 1880, it is estimated that "there are 22,326,500 cubic yards of material washed annually into the canyons of the Yuba and its tributaries by the hydraulic mines; about 10% of this, or 2,332,650 cubic yards are believed to rest in the canyons above, by reason of the material being exceedingly large and heavy rocks; about 30% or 6,697,950 cubic yards are believed to be of such fine material that it will be carried out in suspension, and not be stopped by action of the dam, thus leaving 60% of the whole, or 13,395,900 cubic yards annually, of a character (sand and gravel) which will be deposited in the reservoir."

#### The Tule Lands as a Receptacle.

The committee are aware that it has been suggested that the tule lands south of Bear river and west of Feather river can be used as receptacles for the debris of the Bear and Yuba rivers. This would most probably help the Sacramento river, but falls short of solving the question in hand, for the safety of Marysville and the adjacent country requires that the mining debris be retained by proper dams as near the location of the hydraulic mines as practicable, so that the danger be met nearer its source.

The thousands of people engaged in agricultural pursuits and business occupations, whose property is in jeopardy, are demanding, in no uncertain tone, security against further damage. The construction and maintenance of their levees, unsafe barriers at best, would ere this have exhausted their means, but for the extreme fertility of their lands. They can stand but little more, and they must have relief or abandon their homes.

#### Mining and Agriculture.

Mining and agriculture are the two main arteries of our body politic, and neither can cease to pulsate without impairing its vitality. The whole State is to some extent a party to this contest. It cannot see without apprehension thousands of its citizens arrayed in two parties, each believing that the claims asserted by the other are wholly destructive of their respective rights and interests. Every effort must be made to end this dispute, and the committee appeals to good citizens of either side, to divest themselves of all extreme views and lend their influence to a fair settlement of this vexed and dangerous question. What is necessary, then, is for duly accredited representatives of the mining and agricultural interests to come together in a spirit of conciliation, and with a desire to adopt some plan by which a safe and speedy conclusion may be reached to protect the property and pursuits of both parties for all time to come. The committee recommends that security against further damage, and that speedily, must be given by the miner and accepted by the farmer, as the condition of his withdrawing further opposition to work on the mines.

How that security is to be guaranteed, whether by a stoppage of their work, and for what period such stoppage is to continue, are questions which can be adjusted only by a free conference such as alluded to. The committee sincerely trust that by such means a result satisfactory to both parties may be reached.

#### Magnitude of the Questions at Issue.

The committee would respectfully and earnestly represent that they have been deeply impressed with the magnitude and importance of the questions at issue, and the diversity of interests and the imperative necessity of an immediate concert of intelligent and scientific action of the parties interested. The well-being and prosperity not only of the parties more directly interested, but of the State itself, requires their speedy solution on some basis which will allow the prosecution, without conflict, of the mining and agricultural interests.

#### General Conclusions.

The committee therefore having that in view, would respectfully report as their conclusions: First—That all property and property rights ought to be respected and protected.

Second—That the true interests of the State require the promotion of both the agricultural and mining interests.

Third—That the discharge of debris from the hydraulic and other mines into the river channels has been very destructive in its effect upon the agricultural lands and to the rivers and streams, and, if continued as at present conducted and operated, will be disastrous to the agricultural lands, and like a lava stream will hasten and render sterile and barren that entire section of the country, blotting out its towns and cities, and rendering it a perfect "Sahara."

Fourth—That the hydraulic mining interests in which so much capital is invested, and which supports a very large, thrifty and intelligent class of our citizens, are of great importance and magnitude, and its encouragement is not alone desirable, but a duty, for its wants would tend to benefit and develop the very land which it will now destroy for want of concerted, scientific and judicious action being taken in the impounding of its debris.

Fifth—That dams be immediately constructed on the Yuba river, below the junction of Deer creek and at Degare Point; also, that the break in the brush dam on the Yuba river be at once repaired.

Sixth—That the entire cost of the construction, maintenance and repair of proper dams for the retention and storage of debris, should be borne by the mining interest.

Seventh—That the Federal Government should be urged to appropriate sufficient means to dredge and otherwise improve the navigation of the Sacramento and Feather rivers in the interest of commerce.

Eighth—That all litigation be suspended between the parties interested, as a further prosecution of vexatious and expensive proceedings cannot afford a remedy; but rather tend to exhaust the means and antagonize those whose best interests should cause them to co-operate intelligently and dispassionately, to obtain a remedy to protect the interests involved.

Ninth—That security against further damage is imperative, but whether that shall involve the stoppage of the mines during the construction of the dams is not our province, but that of the convention to decide.

Tenth—That in order to bring about a co-operation of the heretofore conflicting interests; to secure a fair, honorable and equitable adjustment of this matter; to adopt and carry out a speedy plan and remedy; to enlist the sympathy and support of the people of the State and its representatives, a convention be called in San Francisco, to convene on Thursday, the 17th day of November, 1881.

#### A Joint Conference Proposed.

That the Anti-Debris Association of Sacramento valley and the Miners Association each appoint 15 delegates to form said convention, duly authorized to act on this and all other subjects connected with their interests on the debris question, and if in their judgment they deem it advisable, select ten disinterested citizens of San Francisco, Oakland, or vicinity, as members thereof.

This convention will afford the farming and mining interests an opportunity to meet together and agree upon the details of a plan upon the basis proposed by the committee. If these interests desire a speedy and amicable adjustment of this question, they can by mutual concessions settle their differences in a prompt and efficient manner.

These views, the committee are aware, can have no further force than as the result of an impartial examination, and they are impressed with a belief that a contest in Court will be tedious, expensive, and fail to settle the question in time to give relief. In years later, if that course is relied upon, the parties interested will, on taking a retrospective view of the situation, and considering the amount expended with the damage which could have been prevented, conclude that the suggestion of the committee offered at this time would have been less expensive and more satisfactory in its results.

In conclusion, the committee desire to state that many facts connected with this subject and submitted, have not been referred to, it being the principal aim and desire of the committee to conduct the examination and to report thereon, with the view of harmonizing, as far as practicable, the feeling naturally engendered on both sides, and endeavor to bring about a concert of action for mutual protection in the future. The committee were impressed with the opinion that an intelligent consideration of this subject by representatives of the parties interested, who possess an intimate knowledge of the evils and the imperative necessity for a remedy, would tend to a practical, peaceful and beneficial solution, alike creditable to them and to the people whom they represent.

WALTER N. HAWLEY, Chairman,  
JAMES E. GORDON, Secretary,  
WILLIAM BLANDING,  
JULES CERR,  
P. B. CORNWALL,  
MOSES HELLER,  
JAMES B. STETSON,  
C. L. TAYLOR.

Having been with the committee during their investigation, I concur in their report and conclusions.

W. S. ROSECRANS.

#### News in Brief.

Bodie has not over 3,000 inhabitants at present.

It is reported on good authority that the relations between Mexico and Guatemala are very critical.

DURING the last fiscal year there were 10,871,943 acres of Montana land sold and granted to railroads.

Two passenger coaches of the Colorado Central train were Saturday blown from the track, near Colorado.

The United States steamer *Alliance* has arrived at New York after five months' fruitless search for the *Jeannette*.

THE narrow-gauge railroad from Bodie to Mono lake is completed. It is 30 miles in length.

GOULD'S Southwestern system will within a few days have connection with the Southern Pacific by the New Orleans branch through Shreveport, La.

DIPHTHERIA, scarlet fever and small-pox are devastating the center and south of Russia. The severity of the diseases exceeds anything heretofore known.

SMALLPOX still rages in Dayton, W. T. Schools are closed, and business in a measure suspended. Stringent measures have been taken to prevent its spread.

THERE was a much larger crowd at the Walker River fair than was anticipated. The exhibit of stock and country produce also exceeded the expectations of the managers.

THE Wood River towns have only a small stock of provisions on hand, potatoes and other vegetables being especially scarce, and it is expected that prices will rule high this winter.

THERE has been another storm at Mazatlan. Seven vessels, anchored in the harbor, were driven out to sea, two schooners beached, and two rafts with petroleum destroyed. No lives were lost.

A LETTER received at Seattle, W. T., from D. Hanshaw Ward, largely interested in the Oederdonk contract on the Canadian-Pacific railroad, states that he is going to China for the purpose of contracting for 1,000 or more Chinamen, to be brought to British Columbia for work on the railroad. He states that great difficulty has been experienced in getting white men to work on the road, and they are compelled to employ Chinamen in order to push the work to completion.

INSURANCE.—The principal office of the Pacific Mutual Life Insurance Company is now well established in its new location, 418 California street, S. E. It was moved here from Sacramento, in accordance with the action of the Board of Directors at the last meeting. Of the general standing of the society, it may be said that the following claims may be made for it: Since its organization, A. D., 1868, it has paid 395 death losses, on policies amounting in the aggregate to \$1,008,297. It has paid to policy holders, for matured endowments, dividends, and surrender values, in round numbers, \$1,000,000. It has repeatedly been examined by sworn experts, and most thorough and searching investigations made of its condition and business, and in every case its solvency and trustworthiness have been demonstrated. Its stockholders and directors are widely known as among the most capable business men and ablest financiers of the State of California, and the integrity of their management is unquestioned. The laws of the State, including the constitutional provisions affecting corporations, are of the most rigid character, such as to make the company one of the safest institutions of its kind.

MOUNTAIN VIEW NURSERY.—J. P. Keller & Co., of the Mountain View nursery, near the cemetery in Oakland, have issued a neat little descriptive price list for the coming planting season. Their stock consists of a choice selection of shade and ornamental trees and plants. Roses are a specialty. Within the last year Keller & Co. have opened a seed and plant depot on Seventh street, Oakland, near the Broadway station of the Oakland local trains.

#### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

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IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

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### The Irish Lament.

[By the bursting of a boiler at the Iron Works, Garogad Road, Glasgow, on the 5th, of March, 1880, three persons were killed and twenty-three others died of their injuries within a few days. One of those killed on the spot was Michael M'Elenny, a native of Ireland, about twenty years of age, who had commenced work for the first time that same night. He had seemingly left home against the wishes of his parents, for in one of his pockets a letter was found entreating him to return, his father offering to send him money to pay his passage. On receipt of the telegram with news of his death, his father and mother came all the way from Donegal, and took home his body to be buried beside his kindred.]

Michael, my darlin', oh! why did you leave us,  
Goin' away from us over the sea?  
Didn't you know that your goin' would grieve us,  
Had you no thought for your mother and me?

Sure if you'd known how our old hearts were clingin'  
Tender and lovingly round you, my son,  
And the sore sorrow to both it was bringin'—  
Michael, my darlin', you'd never have gone.

Ochone, alanna! now low you are sleepin',  
Silent and still, an' as cold as the clay,  
Taken' up heed of our wailin' an' weepin',  
Hearin' no sound of a word we can say.

Short seems the time since I watched you wid gladness,  
Gatherin' the wild-flowers an' clasin' the bee,  
Little bethinkin' of sorrow and sadness,  
Michael, ma bouchaleen, cushla machree.

Darlin', the sweet summer days are a-comin',  
But they'll not be like the days that are gone;  
The flowers will be bloomin', the bees will be hummin',  
Low you'll be lyin', alanna, ochone!

Och! if you'd come when we sent you the letter,  
Why did you stay from us, Michael, my son?  
Surely you never could hope to be better  
Than in Old Ireland at home wid your own.

But don't I know that the world is enticin',  
Willin' the hearts of the children away;  
An' don't I know that youth's hard of advisin'  
Wasn't I young myself once on a day?

So we don't blame, but think tenderly of you,  
Follies an' failin's rememb'rin' no more;  
Only rememb'rin' darlin', we love you,  
Ay, even more than we loved you before.

Didn't we love you? Och, sure, 'spite o' quarrellin',  
I could have died for you, Michael aroon;  
And to your old mother's eyes you were, darlin',  
Fair as the flower of the Drinan Dhun.

Och! if you'd know the fond hearts you were spurnin',  
You'd have come back to us over the sea;  
Ochone, alanna! too late you're returnin',  
Michael mavourneen, cushla machree.

Michael aroon, I've no thought of upbraidin',  
'Dade you might say 'twas myself was to blame;  
Och, then, my heart wid your soul would be plaidin',  
Darlin' forgive your old father that same.

Ochone, mavrone! cruel fate has bereft us,  
And the dear life we can never recall;  
Gently we'll lay the poor clay that is left us,  
Near your own people in old Donegal.

Lightly the sweet daisied sod we'll spread o'er ye,  
And when at last we lie down by your side,  
Och, may our souls wid your soul up in glo' ye,  
Happy together, my darlin', abide.

—John Taylor.

Note.—Ochone, alanna! interjectional expressions of grief. Ma bouchaleen, diminutive of ma bouchal, my boy. Cushla machree, pulse or vein of my heart. Aroon, dear. Drinan Dhun, the sloe tree. Mavourneen, my loved one. Mavrone, my grief.

### The Mistake About Hamp See.

"Hamp See a dunce! Well, maybe so; but arter what I seed, it 'ud take a smarter school-master than you to make me think so."

It was old Riley Vaughn who spoke, and although old Riley had no education, his hard sense and sound judgment were respected by all the men who sat there in the village postoffice waiting for the mail. He had grown prosperous by dint of hard work and good judgment, and his neighbors were accustomed to ask for and respect his opinions.

"I did not say precisely that, Mr. Vaughn," replied Mr. Penruddock, the schoolmaster. "I only said that my best efforts to educate the boy were rendered futile and nugatory by reason of his inexplicable inability to grasp and retain so simple a thing as the accidence of the Latin verb."

"That means in plain English that he ain't got no grip on what you teach him, don't it?" asked Riley.

"Yes, that is what I mean," replied the schoolmaster, with something like a shudder at old Riley's English. "But I will make an honorable exception in the matter of mathematics. He seems instinctively to grasp arithmetical principles."

"Yes," drawled old Riley, "one o' your boys told me Hamp could figger out how long it 'ud take for a cistern to get full of there were three pipes o' different sizes a-runnin' into it, an' two others o' still different sizes a-runnin' out."

"Yes, he is an expert in the practical applications of arithmetic; and yet even in arithmetic his standing is not good, because he seems incapable of mastering the exact terms of the formulæ and rules."

"Well, now, look here," said old Riley, rising and striking the counter with his big fist; "it's jest come to this here; the boy ain't got no grip on your words an' things, but he's got a good grip on the ideas an' principles, an' it's my belief that's the inside o' sense. I don't want

to be unnecessarily offensive, but you and all schoolmasters like you ought to teach parrots. They don't want ideas; they just want the words, an' that's your notion o' learnin'. That's the trouble o' this here country down here; men learn words an' kin make speeches, but they can't do nothin'. Now I have seed that boy Hamp See do what nary a man in this country could do. I bought the fust reapin' machine as was ever seed in these parts, an' when it come it was all to pieces, an' packed in boxes. I sent one arter another for all the blacksmiths an' wheelwrights an' carpenters hereabouts to set the thing up, an' I'm blest ef one o' 'em could make out which end o' the thing was foremost. Not one o' 'em could put any two pieces together. That 'ere boy hung around all the time, with his forehead creased up like, an' finally he says to me, says he, 'Mr. Vaughn, let me try.' 'Well, try,' says I; 'an' ef you gether together I've got a five-dollar bill fer you.' Maybe you won't believe it, but fore noon that very day, that there reaper was a-reapin' wheat like a dozen hands. The boy just seed right into the thing. Now I say ef he's a dunce, the sooner most people in these parts loses their senses an' gets to be dunces, the better 'twill be fer all concerned." And with that old Riley stalked indignantly out of the postoffice.

Notwithstanding all that old Riley could say, however, public opinion was against Hamp See. It was certain that he was dull in his lessons. He could not keep up with Mr. Penruddock's classes, and instead of studying his Latin verbs, he was perpetually interrupting the school by asking Mr. Penruddock to explain things like thunder and lightning, and the presence of shells in the rocks on the mountain, and the curious way plants have of taking care of themselves—things which had no relation to the work of the school. It was agreed that Riley Vaughn could not know anything about education, because he was not himself educated. It was even said—and this came to Riley's ears—that he was prejudiced against education. Even Hamp's mother was discouraged. Hamp was always "pottering," she said, instead of attending to his books.

"Why," she said, "he's been fooling with a spring on the hill back of the house the whole season through. He's laid pipes to bring the water down here, and now he's turned the whole house into a mill." Then she would show her visitor what Hamp had done. He had constructed an ingenious water-wheel with which to make the most of the power afforded by the spring, and had set it at a variety of tasks. A stretch of line shafting passed under the floor of the house, and bands passed through the floor to the churn, and the sewing machine, and even the sausage chopper could be attached at will. "I don't deny that it's handy, and saves work," said his mother. "And now he's made a sort of fan in the dining-room, and has set that going, too, so that it keeps the flies off the table. If we had a baby in the house, I believe he'd make the water rock the cradle. But it's discouraging about his studies. Mr. Penruddock is in despair, and says he don't know what is to be made of the boy."

The summer proved to be a very dry one, and the gardens especially suffered for water. When the people began to complain Hamp had an idea. He always had an idea when an emergency arose. He went into his mother's garden and worked all the day, digging a trench down the middle, and making little trenches at right angles to the main one, so that each bed was surrounded by them, and the larger beds crossed as well. He was very careful to keep all these trenches on one level. When he had finished, he laid a drain from his water wheel to the main trench, so that the waste water, after turning the wheel, was carried into the garden and emptied into the trench. Little by little the main trench filled; then the water trickled into the smaller trenches, and as the spring from which it came was a never-failing one, the garden was well supplied with water throughout the dry, hot summer, and such a garden nobody in that region had seen that season.

People said that Hamp See certainly was a handy sort of boy; but they were sure to add, "It's a pity he is so dull."

One day old Riley Vaughn was offering extravagant prices for horse, mule or ox teams to haul stone. He had taken a contract to supply from his quarry the stone for the railroad bridge over Bushy Run, and now the time for delivery was near at hand, and no teams could be had. All the horses were at work on the crops, and it began to appear that old Riley must either lose money on the contract by hiring horses and mules and teamsters at ruinous prices, or forfeit the contract itself. He tried in every direction to get mules and wagons, offering twice the usual wages, but still he could get very few. He was in real trouble, with a loss of several thousands of dollars threatening him.

One day, Hamp, who knew what trouble Riley was in, went down to the creek, and cutting several twigs began setting them up at a distance from each other, and sighting from one to the other. The few teamsters who were at work watched him curiously, but could not make out what he was doing. He went up the creek with his sticks, moving one of them at a time, and always sighting from one to another, or rather, from one over another to a third. In this way he worked up to the quarry, which was immediately on the creek, nearly a mile above the point where the bridge was to be built. When he had done he walked back, examining the banks as he went. Then he presented himself before Riley Vaughn.

"Mr. Vaughn," he said, "I've sn idea that will help you out of your difficulty."

"Will it hire teams to haul stone?" asked Riley.

"No; but it will enable you to haul stone without teams."

"If it will—Well, let me hear what it is," said Riley, changing his purpose while speaking.

"Raft the stones down," said Hamp.

Now, look a here, Hamp See," said old Riley, "I've stood up for you, said you wasn't no dunce when everybody else said you was; but this here looks as ef they was right an' I was wrong. How in natur kin I raft down a creek that ain't got more'n six inches o' water in it, a-babblin' around the stones of the bottom?"

"Well, you see," said Hamp, "I've leveled up from here to the quarry, and there's only two ft. fall or a little less, and the banks are nowhere less than five ft. high; and so, as there is a good deal more water running down in a day than anybody would think, it's my notion to build a temporary dam just below the bridge—you've enough timber and plank here to do it with two hours' work of your men, building it, say six ft. high, there where the banks are closest together. Before noon to-morrow, the water will rise to the top of the dam, and run over. When it does you'll have six ft. of water here and four ft. at the quarry, and your men can push rafts down as fast as they can load them."

"How do you know there's only two foot fall?" asked old Riley, eagerly.

"I've leveled it," said Hamp.

"That is, you figgured it out with them sticks?"

"Yes."

"Are you sure you've got the right answer?" asked the old man, with esgerness.

"Perfectly sure. You see it's simple. I plant my sticks—"

"Never mind about how you do it; I can't understand that ef you explain it; but look me in the eyes, boy. This thing means thousands of dollars to Riley Vaughn ef you've got your answer right. I kin understand that much; an' ef you've worked out this big sum right for me; I'll choke the next man who says you're a dunce jest kase you don't take kindly to old Penruddock's chatterin' sort o' learnin'. I'll do it or my name ain't Riley Vaughn, an' that's what I've been called nigh onto fifty-five year now."

Old Riley was visibly excited. He called all his men to the place selected, and set them at work building the dam, while Hamp looked on, and occasionally made a suggestion for simplifying the work. The dam was finished at 3 o'clock in the afternoon, and at 6 o'clock the water had risen two ft six inches, while the back water had passed the quarry.

"There!" said Hamp, "that proves my work. The water is level, of course, as far up as back water shows itself, and we have six inches of back water at the quarry, and two ft. six inches at the dam; so the fall is two ft."

"It looks so," said Riley, who was watching the rise of the water. The workmen had gone home, all of them convinced that this attempt to back the water a mile up the creek was the wildest foolishness; but old Riley and Hamp waited and watched.

"It doesn't rise so fast now," said Riley.

"That's because it has a larger surface; but it still rises, and the surface won't increase much more now, as there's a steep place just above the quarry, and it can't back any further up."

The two waited and watched. Midnight came, and the measurement showed three ft. six inches depth at the dam. Still they waited and watched. At 6 o'clock in the morning the depth was four ft. two inches. Then Riley sent a negro boy to his house with orders to bring "a big breakfast for two." At 7 o'clock the breakfast arrived, and the measurement showed 4 ft. 3 1/2 inches.

"It's risin' faster again," said Riley.

"Yes; the level is climbing up the bluff banks now, and not spreading out as it rises," said Hamp.

At nine o'clock the depth was four ft. eight and a half inches, and the men at the quarry had a raft ready and were beginning to load it. Ten o'clock brought four ft. 11 inches of water and at noon there were five ft. four inches.

"I've missed it a little," said Hamp. "I said the water would run over the dam by noon, and it has still eight inches to rise before doing that."

"Well, that sort of a miss don't count," said Riley. "You've worked the sum out right, anyhow, an' the water is deep enough for raftin' an' still a-risin'. It'll go over the dam in two or three hours more, an' I'll do what I said; I'll choke any man what says John Hampden See's a dunce or anything like it. An' that ain't all," said the old man, rising and striking his fist in the palm of his hand. "They've been sayin' that ole Riley Vaughn didn't valley education; now I'll show 'em. I'm goin' to make this dam a permanent institution. I'm goin' to build Vsugu & See's foundry an' agricultural implement factory right down the creek there, an' put a big lot of improved machinery in it; an' I'm a-goin' to send my pardner, John Hampden See, off next week, to get the rest o' his education, where they sell the sort o' education as is good for him—not a lot o' words, but principles an' facts. You tell your mother you're a-goin' to New York right away, boy, an' 'at ole Riley Vaughn's a-goin' to foot all the bills outen your interest in the comin' factory. You'll study all sorts o' figgerin' work an' machine principles in the big school in New York what's called the school o' mines, an' then you'll go to all the big factories an' things."

This scheme was carried out. Hamp spent three years in study, and returned an accomplished mechanical engineer. He went into the factory as old Riley's pardner, and his work has been to improve machinery and processes. The firm own many patents now on things of his invention, and the factory is the center of a prosperous region, in which Hampden See is an especially respected citizen.—George Cary Eggleston.

### Rural Life.

[Written for the RURAL PRESS, by L. D. JENKIN.]

"The farmer is the man that feeds us all,"  
"I envy not the princely man,  
In city or in town,  
Who wonders whether pumpkin vines  
Turn up the hill or down.  
I care not for his marble halls,  
Nor yet his heaps of gold,  
I would not own his sordid heart  
For all his wealth twice told."

Every person cannot be a farmer and live in sweet contentment in his rural home. Neither would it be well for farmers to forsake their homes and rush to the already overcrowded towns and cities. There is, however, a certain class of people who rush for the city as though it were the only place where they can scratch out a living. For instance, we will take an immigrant just landed in San Francisco, perhaps he has a wife and four or five children. He remains in the city, working by days work, trying to support his family by what he earns. Well, how does he make it? Rather tough, I predict. I've been there myself, (with the exceptions of wife and family.)

Rent is high, wood is high, men are plentiful, and wages are not as high as they used to be. Consequently, it's all the poor fellows can do to live, and fare hardly. Now, right alongside of this man, we will consider another with the same amount of capital in coin, on landing in the city; but instead of remaining in town, he takes the shortest road to the country. Perhaps he is lucky enough to find a homestead (for there are still lots of them to be had in California). For less than \$20 he becomes the undisputed owner of 160 acres of Government land, (i. e.) by living on it five years, at the end of which time he probably has a small orchard and vineyard, and suitable buildings in which he may enjoy country life equally as well as his neighbor living in yonder mansion. His herds are increasing, and his wife and family smile at their prosperity, and this is what they sing:

"We are the favored ones of earth,  
We breathe pure air each morn;  
We sow, we reap the golden grain,  
We gather in the corn.  
We toil, we live on what we earn,  
And more than this we do—  
We hear of starving millions round  
And gladly feed them too."

Willow Dell, Olimpo, Colusa Co.

### Hurried Dinners.

It is a mistake to eat quickly. Mastication performed in haste must be imperfect even with the best of teeth, and due admixture of the salivary secretion with the food cannot take place. When a crude mass of inadequately crushed muscular fiber, or undivided solid material of any description, is thrown into the stomach, it acts as a mechanical irritant, and sets up a condition in the mucous membrane lining, that organ which greatly impedes, if it does not prevent, the process of digestion. When the practice of eating quickly and filling the stomach with unprepared food is habitual, the digestive organ is rendered incapable of performing its proper functions. Either a much larger quantity of food than would be necessary under natural conditions is required, or the system suffers from lack of nourishment. Those animals which were intended to feed hurriedly were either gifted with the power of rumination or provided with gizzards. Man is not so furnished, and it is fair to assume that he was intended to eat slowly. We must apologize for reminding our readers of facts so familiar; but we do this in the hope that any who may chance to have influence with the managers of large hotels where dinners a la table d'hôte are in vogue will take measures to bring about a much needed reform in the manner in which these entertainments are conducted.

At the best and most frequented establishments in places of fashionable resort, where multitudes of health-seekers are wont to congregate, the hurried dinners are not only causes of annoyance, but actually go far to prevent the benefit which should be derived from a change. No sooner is one course served than another is introduced, without giving the guest time to digest or even to swallow the first. The eagerness to secure good dividends takes a particularly mischievous form when it piles food on the plate of a customer, and compels him to consume it breathlessly. The matter may seem a small one, but it is not so. Just as a man may go on for years with defective teeth, imperfectly masticating his food, and wondering why he suffers from indigestion, so a man may habitually live under an infliction of hurried dinners, and endure the consequent loss of health, without knowing why he is not well, or how easily the cause of his illness might be remedied.—Lancet.



## Chaff.

Two neighbors were arguing. "How would it strike you if I called a policeman?" "To the old boy with yer policeman! If I threw a brick at ye bow would that strike ye?" "Faith it wouldn't strike me. I'd dodge!"

A QUESTION OF MILEAGE.—Jones held an execution against a farmer, and when he called for a settlement the agriculturist took him out into a big pasture, and pointed out a wild steer as the particular piece of property that should be levied upon. Jones chased the steer around for a while, and then sat down, and taking out his book began to write.

"What are you doing there?" asked the granger.

"Charging mileage," replied the constable, without looking up.

"Do I have it all to pay?" gasped the rancher.

"You bet."

"Then take this tame beifer here, I can't stand any such game as that."

SOME papers are not of much account as to appearance, but I never took one that did not pay me, in some way, more than I paid for it. One time and old friend started a little paper away down in southwestern Georgia and sent it to me, and I subscribed just to encourage him, and after a while it published a notice that an administrator had an order to sell several lots at public outcry, and one of the lots was in my county. So I inquired about the lot, and wrote to my friend to attend the sale and run it up to \$50. He did so, and bid me off the lot for \$30, and I sold it, in a month, to a man it joined for \$100, and so I made \$65 clear by taking that paper. My father told me that when he was a young man he saw a notice in a paper that a school teacher was wanted away of in a distant county, and he went there and got the situation, and a little girl was sent to him, and after a while she grew up mighty sweet and pretty, and he fell in love with her and married her—now, if he hadn't taken that paper, what do you reckon would have become of me? Wouldn't I have been some other fellow, or may be not at all?—*Lowell Courier.*

## Girls as Gardeners.

A correspondent of the London *Garden* writes the following: It has often struck me as a real waste of physical power to see a six-foot man sitting on a bench sponging plants, or pricking out seedlings, or putting in cuttings, or doing, in fact, many things that girls or women could do quite as well, and in some cases better. For instance, in handling small seedlings their generally taper fingers could manipulate them much better than the often unwieldy paws of the stronger sex, and most assuredly where plant-cleaning is in question, their touch would be gentler and progress quite as rapid. This is no new theory, but one which has been practiced here for a long time. I use a large amount of female labor here; in fact, everything that can be is performed by them. I have one girl who for six or seven years has had sole charge of a house 100 ft. long. In this house the bulk of the indoor propagating is done. She puts in all and makes most of the cuttings, and she pots off all, having a little boy to help her. Not only does she pot off small plants with rapidity and in good style, but pots on to specimen size, mixes her own soil, waters, and does all the work of the house of every kind. I have no one here who can surpass her at rapid potting, nor do I see any difference between the general style and appearance of the plants in this house and in those under more muscular supervision, unless, indeed, that it is rather the best of all.

WHAT IS LINOLEUM?—A cotemporary answers as follows: We have been informed by what we regard as good authority that it is made by covering strong jute cloth (burlap) with a mixture of linseed oil and cork powder, to which some mineral color has been added, to form a ground on which the pattern is subsequently printed. The general process of manufacture is doubtless identical with that of oil-cloth. With respect to the wearing qualities of linoleum, we can speak from personal knowledge in terms of the highest praise. The material is elastic, accommodating itself readily to the irregularities of the floor on which it is laid, and is not liable to crack when laid down on a rough or uneven floor. In this respect it is greatly superior to oil-cloth, which is notoriously troublesome in this particular. This same quality—due, no doubt, to the elastic nature of the cork it contains—gives it excellent wearing qualities, in which respect also it is decidedly superior to oil-cloth. It will bear the roughest usage, and almost completely deadens the noise of footsteps. The material is, without doubt, excellently adapted for its intended use, and has come to be very generally introduced as a substitute for oil-cloth.

PULLMAN CARS IN EUROPE.—There are now 47 Pullman cars in use on English and Continental railways, and 10 more in course of construction to be sent abroad. The first Pullman sleeper introduced in England commenced running on the Midland railway in 1874. The English railway officials and the people generally, predicted that the cars were too long to get around the sharp curves of that road, but after a trial had satisfied them that there was no ground for apprehension on this score, the English companies commenced to build larger carriages than they had ever built before.

## Young Folks' Column.

## Printing Press Troubles.

EDITORS PRESS:—I have read the story about the printing press, by "M. L. H. A.," and your comments thereon. I wish to make a few criticisms, not to discourage the writer, but as I have the same desires as herself, I hope all will join and help one another in the art of composition. I may add that I am a boy 14 years of age, reside in Santa Cruz, and am learning the printer's trade.

In the first place I don't see how "Ned" could have been a good boy if he had such "bal faults" as to be very disobedient and so decidedly stubborn.

If "Ned" knew that his uncle's words were meant to rule, he would not have had the audacity to take a thing which did not belong to him, something which he knew was costly, to trade off for something as trifling as a boy's printing press in comparison with a costly rifle. A boy 14 years old would have had better sense.

Adding this and the lie he told to Frank Riddle about the ownership of the rifle to the "two bad faults" mentioned above, he certainly was a very bad boy.

Ned's uncle must have been a very weak-minded man, for seeing Ned have a printing press, which he positively forbid him having, and still let him keep it, and though he knew where he got it, could not make him tell what he gave for it. And when he found his rifle was gone, he would surely have had an interview with this "promising" young lad on the spot, and if necessary, compelled him by force to admit or deny having any knowledge of its whereabouts before having Frank Riddle arrested for burglary on simply seeing Frank have it. If he had asked Frank where he got it, he would have told him, and that would have been the last of it, so far as burglary was concerned.

It looks decidedly improbable that "there was a lawsuit commenced against Ned's uncle, all on account of the printing press," by the injured "gentleman." Under the circumstances, he hardly could have been a "gentleman." It was no fault of Ned's uncle that he was hurt.

If it was Ned's first lesson in disobedience and in taking things, he must have been of the kind that do their best at first, for it was a deep laid plan to secure a printing press by some means or other, and to keep it at all hazards. And I do not think he knew his uncle's words were meant to rule.

Well I think I have said enough this time, and will give M. L. H. A. and others a chance. Santa Cruz, Cal. TYRO.

[This is a very good criticism on the printing press story. What else is there to be said?—EDITORS PRESS.]

## Alice.

EDITORS PRESS:—I send you a short story, of my own writing. I am a girl only 13 years old, and this is my first attempt. I hope you will think it worth a place in your valuable paper.—A. D. BRATRICK, Nebraska.

## ALICE.

Alice was a little girl with blue eyes and light hair, who lived in Atlanta. Now, Alice was not always a good girl, and when she was naughty, it used to grieve her mamma very much. I will tell you how she used to do when she was naughty. Once she put her little baby sister's white kid slippers in the stove because her mamma did not get her some.

Alice was not naughty all the time, and when she was good she would kiss her mamma and tell her how she loved her; but her mamma would say if you love me don't be so naughty, and Alice would say I won't; but the next time anything provoked her, she would be naughty again.

One day when Alice was playing her father said, "Allie, won't you go and get my slippers?" "No," said Alice, "I don't want to."

"Alice," he said sternly, "Go and get them," and I bade to write it, he had to whip her before she would mind him.

But while playing one day she had an accident which made poor Alice blind. Then when her mamma did so much for her, she thought how naughty she had been. She was sorry that she had been so, and one day she asked mamma: "Why are you so good to me when I have been so naughty and given you so much trouble?"

"Because I love you," said mamma, "and God loves you too, and if you will ask Him He will help you to be good, and my dear, I will pray for you."

"I will, mamma," said Alice. Not long after that her mother said to her: "Alice, Dr. Nelson is in town and is coming to examine your eyes." Alice trembled, but said, bravely: "I am glad, though I expect it will be pretty severe;" and then she went and asked God to help her.

And now I will close my short story, leaving Alice with good eyesight, and not the quick-tempered little girl we first met.

PRECIOUS METALS IN THE ARTS.—During the last fiscal year over \$12,000,000 worth of gold and silver were used in the arts and manufactures in the United States. If gold were to be demonetized by the whole world it would still command nearly its present value for use in the arts.

## Domestic Economy.

## Thanksgiving Dinner.

## Bill of Fare.

Giblet soup.  
Roast turkey; chestnut stuffing.  
Sweet potatoes. Stewed Celery.  
Oyster plant fritters.  
Oyster patties. Chicken salad.  
Cheese.  
Squash pie. Pineapple tart.  
Fruits.  
Coffee.

## Giblet Soup.

Use the giblets of the turkey and two chickens for this soup, also any bones or scraps of lean meat that may be on hand. Put them into cold water enough to cook, and boil, closely covered, until the giblets are tender, when they must be set away in a little of the broth. Slice a small carrot and onion and fry them brown in a tablespoonful of butter; be careful not to burn. Take out the vegetable and put in a large tablespoonful of browned flour; mash and stir until smooth and well colored, then add the strained liquor in which the giblets were boiled, stirring it in slowly to keep the mixture smooth, after which put in the strained broth in which the chickens for salad have been cooked. Simmer together for a few minutes, season with pepper, salt and a little lemon juice and some Worcestershire sauce, and strain the soup over the giblets in an earthen vessel. Make it the day before it is needed, and remove the fat from the surface before reheating. Take out the giblets, mash the turkey liver, chop the balance fine, and return all to the soup which must be warmed, and poured into the tureen, where there should be the yolks of as many hard-boiled eggs as there are guests at the table.

## Roast Turkey.

Pick carefully, singe over burning alcohol, and remove everything that is inside, fat and all. Open at the back of the neck, thus leaving the skin over the breast whole. Stuff, not too full, sew up the openings, and truss securely, otherwise the legs and wings will point every way when cooked and the bird look ready to fly or walk from the table. Stuff the turkey, and keep it in a cool place over night; try out the fat, pour over the top, lay some slices of salt pork across the breast, and put half a teacup of water in the pan when you put it in to cook. Keep a steady fire, baste frequently, and when nearly done season with pepper and salt, dredge with flour and baste with melted butter. Five minutes before serving repeat the dredging and basting to crisp and brown the skin. Allow two hours and a half for a 7 lb. turkey. Cover with white paper, if necessary, to prevent burning. Serve cranberry, currant or wild plum jelly with roast turkey.

## Chestnut Stuffing.

Put the chestnuts in a spider over the fire until the shells burst, then boil in salted water until done. Drain, remove the shells and skins, mash the chestnuts and mix them with the crumbs of very light, stale bread that have been wet with cold water and squeezed dry. Season with melted butter, pepper, salt and a slice of salt pork chopped fine. Add some of the boiled chestnuts to the gravy.

## Sweet Potatoes.

Boil or steam them until done. Set away to cool, then peel and cut in halves, lengthwise. When the turkey is taken from the pan, lay in the slices of potato and fry to a bright brown on both sides. Take them up and pour nearly all the drippings from the pan before making the gravy.

## Stewed Celery.

Cut the white stalks of celery into equal lengths; put into just enough boiling water to cover, and add a pinch of salt; boil until tender, when there should be only a little water left. If there is more than two tablespoonsful, drain it off, and put in sweet cream or rich milk enough for sauce; let this come to a boil, add a generous teaspoonful of butter rolled in flour, season with salt and serve hot.

## Oyster Plant Fritters.

Scrape the roots and boil them in salted water until tender; drain and mash smooth; add a teaspoon of flour and two eggs to a pint; season with salt and pepper; make into cakes the size of small oysters, and fry to a light brown in butter. Parsnip fritters may be substituted for oyster plant and prepared in the same way.

## Oyster Patties.

Make puff paste. After the fourth turn, cut the paste in two, and lay one-half on the other; then roll it out evenly to the thickness of a third of an inch; cut out the cakes with a large sized biscuit cutter; then take a second cutter, a little smaller than the first, and press it half way through the crust; brush the tops with beaten egg, but not the sides. Lay the cakes in the baking pan, and prick each one with the point of a small knife. Put in a moderate oven, and in five minutes increase the heat so that the paste will bake quickly, watching that it does not burn. Be sure that the patties are done when taken from the oven, otherwise they will fall. Take out the marked center, fill, and replace the little piece as a cover. Make these shells when convenient. Set them away and reheat when needed. Fill them just before serving. Prepare the oysters in the following manner: Put a quart of them over the fire to beat in their own liquor; as soon as they come to a boil turn into a colander. Melt a tablespoonful of butter

in a saucpan; when it bubbles stir in a tablespoonful of sifted flour. When well mixed and smooth add the oyster liquor, stirring it in briskly, then take from the fire and mix in the yolks of two eggs, salt and cayenne pepper to taste and a little lemon juice; a grating of nutmeg may be added if liked. Return to the fire to beat and cook the eggs; not to boil or they will curdle. Last of all put in the oysters, fill the shells with the mixture as before directed and serve immediately.

## Chicken Salad.

Boil two fowls in salted water until tender. Put a few green stalks of the celery in the kettle with the chickens, and save the broth and giblets for the soup as directed. When cold, cut the white meat from the bones, removing the skin and gristle, mince it, not too fine, and mix with an equal quantity of blanched celery cut into bits. Cut the celery with a sharp knife; chopping will make it watery. Set the mixture away in a cool place, and cover it closely with a damp napkin.

## Salad Dressing.

Beat the yolks of four raw eggs with four teaspoonfuls of mixed mustard. Stir in salad oil, a teaspoonful at a time, until the mixture thickens like jelly. It will take at least eight teaspoonfuls, and as much more as you please. Add four even teaspoonfuls of salt and four heaping full of powdered sugar. Mash the yolks of four hard-boiled eggs to a paste with a little of this dressing, then add the whole, also the juice of two lemons and wineglass full of strong cider vinegar. Pour this mixture over the chopped chicken and celery, toss it up lightly, garnish with sliced lemon, curled parsley, or fine celery tops, and the whites of the hard-boiled eggs cut into rings.

## Squash Pie.

For one quart of squash, steamed and strained, put a cup and a half of sugar, two teaspoonfuls of ginger, two of cinnamon, one of mace, and a pinch of allspice; add three eggs, whites and yolks beaten separately, three pints of rich milk and salt to taste. Line the plates with plain pie crust, brush the outer rim with water and lay on an inch wide rim of puff paste. Brush the entire surface with beaten egg, fill with the mixture, and bake until firm in the center and well done at the bottom.

## Pineapple Tart.

Cream together a cupful of sugar and half as much butter; add the yolks of three eggs, a cupful of rich milk, a pint of grated pineapple (canned) and lastly the whites of the eggs beaten to a stiff froth. Line the plates with plain paste, fill with the mixture, brush the margin with water, fit strips of puff paste diamond-wise over the top and finish the edge with a rim of puff paste. Glaze the top with beaten eggs, and bake until well done on the bottom.

## GOOD HEALTH.

## To Avoid Epidemics.

In a state of health there is a certain degree of excitement in the system. This is, the pulse beats a certain number of times every minute, averaging about 68. If, during the cholera or any other ordinary epidemic, the pulse does not go below that, and the general system is in good working order, the disease does not attack the person, nor will it as long as he remains in that condition. Nor will he be likely to suffer from the epidemic if he keeps the system steadily above the natural excitement. But the very moment the pulse is below par in rapidity and vigor, that moment is the individual more liable to disease in proportion to the deficiency. A person in good bodily condition, then, is at par, and is not likely to be attacked by any ordinary epidemic disease; and if in that condition he take a glass of brandy, he is less liable still, until the exciting effects of the liquor have subsided, when he falls below the natural standard, just as far as he was a while ago above it, and is in proportion more liable to the disease than if he had taken no brandy at all. Therefore, having commenced taking brandy, he must keep it up day and night, never letting the system go below par, or he is a lost man. Hence it was that men who were always full of liquor escaped cholera in numerous instances, and the report went forth that brandy prevented cholera; thus multitudes were introduced into the wretched habit, and perished in a drunkard's grave.—*Journal of Health.*

VACCINATION.—It is strange that so many persons declare their want of faith in the virtues of vaccination, when volumes of proof might be produced to prove its efficacy in preventing the attacks of small-pox. The greatest mortality from this disease has always been found in localities where vaccination was refused or neglected. In Chicago it is stated that 40 % of 359 cases since January 1st have proved fatal, and a large proportion of the fatal cases have occurred among the populations who resist vaccination with violence. Eighty-one out of 108 deaths from small-pox in September were in a ward where there are 40,000 persons who have not been vaccinated. This is but the repetition of a story that has often been told with much more melancholy details. Vaccination costs little or nothing, but as it is well established that it is, in a large majority of cases, an effectual preventive of small-pox, those are to blame who refuse to try it.





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W. B. EWER.

G. H. STROMG

SAN FRANCISCO:

Saturday, November 19, 1881

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## Business Announcements.

Choice Trees for Sale.—Hixson, Justi & Co., S. F. Squirrel Poison.—C. E. Williams & Co., Stockton. Turkey Feathers.—The Morris Duster Co., S. F. 1,000,000 Trees.—Geo. R. Bailey, Berkeley, Cal. Pensons.—J. A. Fitzgerald, Washington, D. C. Asthma Cured.—H. P. Peck & Co., N. Y. Make Hens Lay.—I. S. Johnson & Co., Boston, Mass. Agricultural Implements.—Geo. Bull & Co., S. F. Sign Painters.—F. Mansell & Co., S. F. Cards.—Wise & Co., Clintonville, Conn. Cards.—Clinton & Co., North Haven, Conn.

## The Week.

The rains have apparently come in good earnest this week, and the country is fully ready for them. Already in this city the storm has precipitated about two inches of water, and there is evidently more to come as we write, on Wednesday afternoon. The telegraph announces a downpour at widely separated points, and the dispensation is no doubt general. The result will be the starting of the teams and all available men into field work, either for the sowing of cereals or in preparation for orchard and vineyard planting, which will be very large this year. There has probably never been a more buoyant spirit awaiting the opening of the planting and growing season, and the alacrity with which chosen plans are pushed forward will be charming to contemplate. The State was never in so good shape to go forward. All legitimate trades and industries are alert, expectant and confident. The season has been a good one in trade even during the period when dullness usually prevails, and now that the spell of idleness is broken, the quickening will be general. It is a good year for a good Thanksgiving, and we trust none will lack the materials and the heart for holiday joys. We hope all old homes will be resonant with reunions, and that the hosts of new homes in the new land where there are, as yet, but budding families, will find solace for the present loneliness in the joys which are to come with coming years, when labor brings its reward in prosperity, and the voice of the grandchild proclaims the new home an old home.

COUNT ANDRASSY, in his remarks to the Hungarian delegation at Vienna, said that during the whole of his ministerial career he had been convinced that the union of Italy and Austria was a great and important factor in the preservation of the European equilibrium.

## Electrical Horticulture.

We gave an account not long since of some very interesting experiments made in England with growing different useful plants under the illumination of electric lights. The same line of experimentation seems to have been pursued in France, and some very interesting experiments are now being conducted by the well-known agricultural chemist, M. Deherain. M. Deherain wished to determine, at the outset, what action, if any, the electric light exerts upon plant life, and further that, if plants, after being exposed as usual to the light of day, were regularly illuminated by the electric light during the hours of darkness, the advantage thus gained would be sufficient to justify the power in employing the light.

In Mr. Deherain's experiments, one of the compartments of the greenhouse had its panes of glass blackened, so that the plants in this compartment were entirely withdrawn from the influence of daylight, and received only the electric light. Five series of experiments were commenced, the conditions differing in each case, and the several results being therefore available for comparison. The series were the following: 1. Plants placed under blackened glass, and subjected continuously, through day and night, to the electric light. 2. Plants receiving by day the pale light of the Paris de l'Industrie, and at night the electric light. 3. Plants receiving the same light by day as the second series, but remaining in darkness all night. 4. Plants exposed all day in the flowerbeds of the Champs Elysees, and placed under the electric light at night. 5. Plants grown normally in the open air.

Undoubtedly, the most important question which these experiments are likely to determine, is that regarding the value of continuous illumination. It is known that in countries where the sun, during the summer, remains almost constantly above the horizon, the vegetation develops with surprising rapidity, as, for example, in a country of so high a latitude as Norway. This may, at first, appear strange, but it must be remembered that during the Norwegian summer the sun is visible for 13 to 21 hours out of the 24, during which time the temperature will range between, say, 55° to 65°. Now if the temperature be multiplied into the number of hours during which the sun is visible, we get for a high latitude like Norway a product practically equal to that similarly obtained for the much lower latitude of Paris, where the sun is visible for only about 14 hours per day.

Admitting that the electric light has, like the sun, an accelerating effect upon vegetation, M. Deherain holds that illumination of plants during night should advance growth, and in this case the employer of the electric light might bring his plants to maturity a month or six weeks earlier than otherwise. It is in the market for fruits and vegetables that the advantage would be most manifest; as early scarcity is always accompanied by good prices. For this reason, the fourth series of experimental plants, is watched with the greatest interest, as the natural illumination by day and the electric light at night at once suggests itself as the most appropriate way in which to make use of artificial light.

If the experiments at the Palais de l'Industrie give favorable results, it is probable that the employment of the electric light for the nocturnal illumination of greenhouses will rapidly develop, and the utilization of streams of water, waterfalls, etc., as sources of power will at once come within the region of practical application. Though it may be a very long time before even the most advanced farmers take to working an electric light on their own account, yet it is not unlikely that seed-growers may speedily find it advisable to subject their best plants to nocturnal illumination, for present plants which are habituated to nature early transmit this precocity through their seeds.

NEW TREATMENT FOR SPAVIN.—A new operation for spavin has been introduced by Prof. Lafosse, of the Toulouse Veterinary School. The treatment consists of section of the internal division of the tendon of the flexor metatarsi muscle. This tendon passes directly over the bones of the hock implicated in bone-spavin, and must therefore directly compress the diseased parts every time the joint is flexed. It is this depression which causes prolonged lameness. If the ossific deposit were not interfered with by the tendon, nature would soon consolidate it, and lameness would cease. It is the same case with splints; so long as they are not interfered with by the tendons and ligaments, lameness does not ensue, or is of short duration. But when splints are interfered with by passing tendons they render the horse lame and unsound. To show his confidence in the system he has adopted for curing bone-spavin, he is willing to make no charge for any operation performed by him which is not followed by satisfactory results within a period of five weeks at the most. Lameness, in one case treated by him, ceased in five days, and Lafosse states that sometimes the lameness disappears 24 or 48 hours after the operation. The following advantages are claimed for the operation over any other course of treatment: It is more quickly performed; it causes less pain; its results are more certain; it requires about one-fourth the usual loss of time; it leaves hardly any blemish, and its effects are lasting.

## QUERIES AND REPLIES.

## Irrigation by Machinery.

EDITORS PRESS:—In reading over the PRESS of Oct. 1st, page 213, I find that Mr. R. B. Blowers and G. G. Briggs, of Yolo, irrigate their farms by machinery. Can you do me the favor to let me know what kind of machinery they use for this purpose? As I am irrigating 60 acres by steam myself, I am interested in everything pertaining to this way of farming.—JUAN N. ROBINSON, JR., Laurus, Guaymas, Mexico.

EDITORS PRESS:—Yours of the 7th inst., asking for a description of our irrigating machinery to hand. We use a 30-horse power Hoadley engine and Heald & Sisco pump. We use about one-half the power of the engine, and raise 2,600 gallons of water 20 ft. high per minute. Size of pump, No. 6. Perhaps there is no other kind of pump in the world that will equal it in economy. We first placed our pump on the bank of Putch creek in April, 1880, and built a reservoir 100x50 ft. in two equal parts, 50 ft. square and 5 ft. deep. In the summer of 1880 we pumped the water from the creek into it, and watered from it by means of concrete pipes, placed about 20 inches under ground, and so arranged that we can water any given section of our grounds at will. We have in our vineyard and orchard about 10 miles of mains (pipe) and 200 miles of distributing pipes.

This season we were obliged to move our pump two miles away, on account of the creek having cut a new channel. We made a new reservoir on the bank of the new creek, and connected it with the old one with a 12 inch concrete pipe about two miles long.

The distributing pipes are placed between every other row of vines, 20 inches below the surface of the ground, equally distant from the rows, and an opening is made at a central point between four vines whereby the vines are watered. The hole is capped with a concrete earth guard to prevent roots from entering and filling up the pipe.

It was so late in the summer of 1880 when we got ready to water that we did not receive much benefit. This year, 1881, we feel glad that we have gone to the expense of sub-irrigating. We have made some tolerably good raisins—so Messrs. A. Lusk & Co. say. If we get a few more days of dry weather we shall be able to take up the remainder of our second crop of raisins—about two-fifths of the whole crop. We call the second crop second class, which sells for about two cents per lb. less than the first crop.

We expect to make about 50,000 boxes of raisins of 20 lbs. each this season. They will not pay for our ordinary and extraordinary expenses, but we feel assured that we shall in the future, by industry and economy. We have only 300 acres sub-irrigated, but expect to put the pipes into 140 acres more the coming winter.

## The Raisin Industry.

The raisin business is good enough if one does not try to do too much too fast. I commenced making raisins about nine years ago; and have not learned very much yet about the business; but enough to know that we shall supply the United States and much of Europe and Asia with raisins within the next ten years.

I am sorry there has been such exaggerated reports circulated through the newspapers of my raisin enterprise. When the report was going the rounds of the papers that I had sold 1,000 tons of grapes for \$55 a ton, and had made and sold 250,000 20lb boxes of raisins at \$2 per box I had not sold a pound of grapes nor made a box of raisins. I went to the editor of one of the papers in which it appeared and asked him to correct the matter as it was likely to mislead people. It may have been corrected, but I have seen no correction.

I believe one who is adapted to raisin making and has made a good location for growing the raisin grape and drying it, can do well, if he or she does not have to depend too much on hired help. In order to succeed one should have as much as he or she is able to see to and have it well done. It is too late now to make poor raisins. They won't sell for enough to pay hired help for making them. And those who make poor selections of soil and climate will be sure to lose what capital they invest in it.

I commenced on a small scale, and have been adding a little from time to time, till I now have a little less than 1,000 acres planted, less than 400 of which are bearing, more or less.

## Notes on Transportation.

I bought about 560 acres of land near Fresno, with the intention of planting it to raisin grapevines, but the railroad company would not offer me sufficient inducements to plant it. It would require me to pass over the railroad nearly once a week, as I should have to oversee my vineyards here as well as there, and the expense of traveling over the railroad so often would cost too much before the vineyard would come into bearing. I feel confident I could give the railroad company 100 carloads of raisins to take to Liverpool via their railroad and steamer yearly after five years, and pay them \$500 per carload, which would amount to \$50,000 freight per year. There would be much more in the enterprise for the railroad than for me. But I was unable to make them see it in the light I do; therefore I shall content myself with what vines I have in this section of California.—G. G. BRIGGS, Davisville, Cal.

The information which Mr. Briggs gives of his sub-irrigation arrangements is very interesting and his notes on the raisin industry are worth careful consideration. We are very sorry that he has abandoned the proposed Fresno

vineyard. The facts which he states could not be made any more significant by extended comment. We have also invited Mr. Blowers to give his experience and arrangements for irrigating by machinery, and we hope are long to hear from him. Now will not our esteemed reader in Mexico oblige California experimenters with his own experience in the work under consideration?

## Strawberries at the East and in California.

We found floating in our Eastern exchanges the following notes on large strawberry farms:

The leading strawberry grower and shipper in the United States is a Mr. Young, of Norfolk, Va., who is credited with 225 acres. Situated on the coast, he has a cheap route to the great markets in the East. Next to Mr. Young is Mr. John D. Hammond, of Baltimore, Md., who has 140 acres bearing this season, a few miles from that city. Berry growing near the city of Baltimore has grown to gigantic proportions, the various canning establishments consuming the bulk of the crop every year. Next on the list is Dr. H. E. McKay, of Madison station, Miss., who has 120 acres. The Doctor has proved a successful cultivator, beginning in an humble way in 1873 with one acre, from which he netted \$1,200. Dr. J. H. McKay, brother of H. E., at same place, will take next place, coming to the front with 50 acres, which he manages very successfully, besides attending to a lucrative practice of medicine. The McKays ship the bulk of their berries to the Chicago market, reaching there early enough in the season to secure good prices. Parker Earle, of Cobden, Ill., must, we believe, be awarded the next place, as he is credited with 50 to 60 acres, located at Cobden and Anna, Ill. No man has given more careful attention and study to the business the past 20 years than Mr. Earle. He is regarded a very successful fruit grower, and his crop is sold in Chicago, Milwaukee and Canada every year.

Thinking it might be of interest to draw out some comparative notes concerning strawberry growing at the East and in California, we sent the above extract to I. A. Wilcox, of Santa Clara, asking him to give us such comments as it might suggest to him. He replied with the following interesting remarks:

We cannot surpass the list of strawberry growers mentioned, so far at least as the maximum acres to the individual is concerned. At the same time, much might be said to the credit of our young State, considering that the present demand for this delicious fruit is limited; and considering, also, that we furnish quite a large surplus in canned form to our Eastern friends, as well as other markets of the world.

Reference might be made to the length of our fruit seasons, the natural richness and productiveness of our soil, aided by a favorable climate. Without a cent paid for fertilizers, and without needing them, I have myself raised crops of strawberries 12 years in succession from the same plantation, during which time I have picked berries for market a large share of the year. And this soil is 300 to 400 ft. deep, as is shown from the borings taken out of the artesian wells, this dirt proving to be good garden soil. And only think of it! While our Eastern friends regard six weeks a good cropping season, during one-half of this time the bulk of the crop being marketed, we find no special limit to our seasons until long after we have rendered up our annual thanksgivings. I speak for others as well as myself when I say there has not been a week's cessation since the season opened—early in April; so that, although we do not spread our plantations over as large an extent of territory, it is not a conundrum to us why we do not do so.

The bare host of a number of acres cropped reminds me of a very prolific animal that, in the fable, outdid another animal in the extent of her litters, to which the nobler animal replied: "Only one at a time, but it is a lion!"

## Thanksgiving Day.

## The Governor's Proclamation.

STATE OF CALIFORNIA, EXECUTIVE DEPARTMENT.

In accordance with the proclamation of the President of the United States, and in accord with the time-honored custom, now grown into a national observance, I, George C. Perkins, Governor of California, by the authority in me vested, do proclaim Thursday, the 24th day of November, as a day of thanksgiving and request that it be set apart as a day of prayer to Almighty God in acknowledgment for the manifold blessings he has bestowed upon us as a nation. Following the example of our ancestors, let it also be a day for interchange of friendly greetings, family reunions and social recreations.

The past year has been overshadowed by a great national sorrow. The hand of the assassin has deprived us of our Chief Executive, our hearts have been overcharged with grief, mourning has draped our land in gloom, the nations of the earth, living under governments adverse to the principles which are the strength and support of our beloved land, have paid a tribute to the departed President unequalled in the annals of history. Fearfully has his chair been filled. No commotion, no violence no discontent marks the change. The permanency and stability of our political institutions are established beyond a doubt, and the nation has proven itself composed of a conservative law-abiding people. While partaking of some pleasures and participating in family enjoyments, forget not those who are denied the privilege of both home and family. Extend the helping hand; yield to the stranger and wanderer the sympathy of your hearts; let kindness, and mercy and good-will to one another be the marked characteristics of Thanksgiving Day.

I would especially invoke the aid of the people of this State in behalf of the Veteran's Home Association of California—this day having been set apart by the Executive Committee of said association for such free-will offerings as our people may deem proper to donate. To the extent of your ability contribute to this worthy cause. Remember that the blessings which are ours this day came through their perilous life and limb to keep this nation one and indivisible. It is not charity they ask, but justice. We owe it to them—it is an obligation, the fulfillment of which has been already too long delayed. I know this appeal will not be in vain—for the liberality and patriotism of Californians are never lacking when it is demonstrated that the exercise of those virtues are necessary for the aiding of a worthy and noble purpose.

In testimony whereof, I have hereunto set my hand and caused the Great Seal of the State to be affixed at Sacramento, California, this fourteenth day of November, A. D. eighteen hundred and eighty-one.

GEO. C. PERKINS, Governor.

By the Governor: D. M. BERRY, Secretary of State.



## Regulations about Vine Cuttings, etc.

The legal machinery to arrest the spread of phylloxera and to prevent the introduction of the pest to new parts of the State, is now under motion. The Chief Executive Viticultural Officer has issued the quarantine rules and regulations, and we set them forth in full form in this issue of the PRESS that all vine planters may be informed concerning their provisions:

To all whom it may concern: Be it known, that I, Chas. A. Wetmore, Chief Executive Viticultural and Health Officer of the Board of State Viticultural Commissioners, being duly authorized and instructed by said board, do declare the following quarantine rules and regulations for the protection of the viticultural industries of this State, and due notice is hereby given, as provided for by law, 30 days of publication in two daily newspapers of general circulation, not of the same city, or county in this State. All parties concerned therein are required to conform thereto, subject to penalties provided for by law, for any infraction, or evasion of said rules and regulations:

## Quarantine Rules and Regulations.

Rule 1. All cuttings of grapevines made in this State for sale, gift, or distribution outside the vineyard, or vineyards, where the same were grown, and intended for new plantations, shall be made solely of the wood of the preceding year's growth; all older wood to be carefully and thoroughly removed before leaving the vineyard where made, and to be immediately destroyed by fire, if removed from such cuttings wherever seized by any duly authorized inspector for any evasion or infraction of this rule. The reason of this rule is that the winter egg of this *phylloxera vastatrix* is, according to the best authorities, found only on the old wood.

Rule 2d. All cuttings of grapevines, and rooted grapevines, imported from any region, or country, outside this State, intended for sale, gift, or distribution for plantation in this State, shall be disinfected at the place of first consignment within this State before being further distributed or planted; the method of disinfection to be at the option of the owner, or agent in charge of the said cuttings or vines, according to any one of the following methods, viz.:

[These methods are given at the bottom of the fourth column, page 330, of this issue of the PRESS.]

Any other efficacious method may be used, provided due notice is given to this office and the same be approved.

## Inspectors.

For the convenience and protection of all interested parties throughout the State, there will be appointed local resident inspectors, as provided for by law, for each section, or region, where vine growers desire the same and upon the application of any three such neighboring growers, or parties intending during the coming season to plant vines, such application to be addressed to this office, and to be accompanied, whenever practicable, with nominations of suitable persons for the office of inspector. The other inspectors required by law will be appointed by this office.

## Recommendations for the Further Protection of Vineyards.

All persons planting new vineyards within the State are advised and strongly urged to consider all roots and cuttings suspected, regardless of origin, and to thoroughly disinfect them, thereby accomplishing the destruction of all possible germs of insect pests upon them, as well as also those of fungoid disease, which are becoming dangerous in all parts of the country.

## Certificates.

For the further convenience of vine growers, certificates shall be issued by any inspector residing near the vineyard of the applicant, or the person in charge of cuttings or rooted vines, setting forth that the provisions of Rule 2 have been complied with and shall be entitled to charge in each case, not exceeding 50 cents for such certificates made out in duplicate; one certificate being sufficient to cover any quantity of cuttings or rooted vines in the possession of the applicant that may be satisfactorily shown to the said inspector to have been disinfected. Certificates of disinfection shall likewise be given any applicant who desires the same, and who shall satisfactorily show to the inspector that cuttings and rooted vines, other than such as are required to be disinfected by Rule 2, have been properly disinfected in accordance with the recommendations of this office.

## Infected Wrappings, Etc.

Rule 3. All packages and the packing materials coming into this State with imported cuttings and vines (referred to in Rule 2) shall be disinfected at the time of disinfecting the contents thereof by immersing in, or washing with any one of the solutions named in Rule 2, provided that the strength of the same, in case of mere washing, shall be increased by the reduction of the water in the same to one-fourth the relative proportions named; if not disinfected, such packages and packing materials shall be destroyed by fire.

## Penalties.

All infractions or evasions of these rules will be punishable according to law.

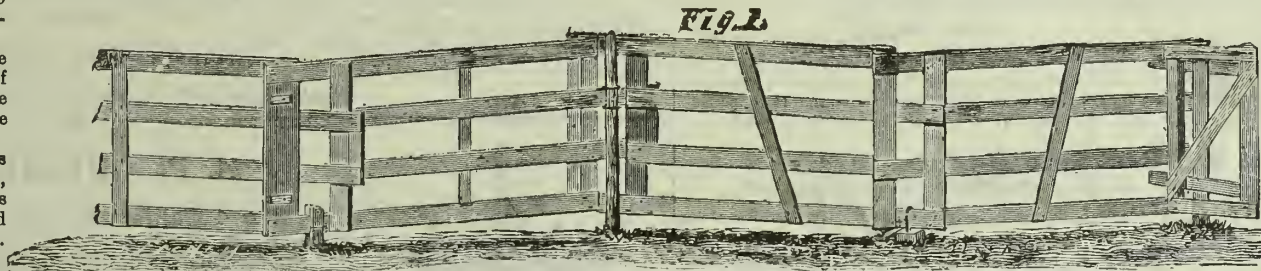
CHAS. A. WETMORE,

Chief Executive Viticultural and Health Officer.  
S. F., Nov. 16, 1881

## A New Patent Fence.

To show what is being done in this field of fence inventing, we give an illustration of a farm fence recently patented by D. T. Hazen, of East Milan, Michigan. The invention consists in constructing a fence of horizontal boards, secured to triangular uprights, sawed from rectangular bars, with the opposite ends of said boards projecting, alternately; anchor posts, to support the panels and secure the fences against wind; and a fastening for securing the posts to the panels. The V at opening supports the fence and the gates are hung to it, either slide or swing. The portables are formed by the top and bottom boards at one end projecting far enough beyond the uprights to nail a bar to the ends, which, when interlocked, passes behind the uprights in connecting panel, and is secured by buttons; the middle boards, the other way, and secured same, a stake in each corner, fastened to fence. The uprights and boards like stakes and rails, each holds the other in place, and when interlocked, nails in permanent, and buttons in portable, do the finishing.

This arrangement is claimed to use one-fourth less lumber than post and board of same dimensions, will outlast four or five sets of common posts, lumber from two sets of which will more than build it with 1x4 inch lumber, five boards high. It can be made tight or open, will adjust to any ground, is independent of posts, the supports used being replaced as easily as blocks under rail fence. We are told that two ordinary men built from lumber, and finished in fence (except the posts), a panel in each five minutes for five hours (54 rods of fence). They will make of the portable, ready for setting, a panel in each three minutes. The builder can use three boards in panel, by having boards project both ways, and fill in with barbed wire,



NEW STYLE OF PORTABLE OR PERMANENT FENCE, INVENTED BY D. T. HAZEN, OF MICHIGAN.

if desired. As each projecting board is nailed to both uprights in each corner, in permanent, it makes the corner the strongest part. Four to six panels will lift in a body from the ends.

The engraving shows side elevation of fence, built in different ways, and either stationary or portable; permanent at one end and portable at the other, posts, wood, stone, or stake in corners; V to support opening for gate; fastening posts to lower boards; one end of frame for building.

AMERICAN NEWSPAPER ANNUAL.—We have received a copy of Ayer's Newspaper Annual, published by N. W. Ayer & Son, Philadelphia. It will be found of value to all doing business with the newspapers of the country. It contains a carefully prepared list of all newspapers and periodicals in the United States and Canada, arranged by States in geographical sections, and by towns in alphabetical order. It also contains information concerning each paper and the section in which it is published; also, lists of various class journals, agricultural, religious and the like. The book also has valuable features as a gazetteer. It has a carefully prepared description of every county in the United States, as well as of each State and Territory as a whole, and of each of the Canadian provinces, giving valuable information concerning their mineral deposits, chief agricultural products, principal manufactures, nature of the surface and soil, area, location, etc. The book will be found valuable for reference on all the many topics it treats of.

CALIFORNIA SILK CULTURE ASSOCIATION.—Hon. Irving M. Scott will deliver a lecture on India at the Mercantile Library hall on Saturday evening, Nov. 19, for the benefit of the California Silk Culture Association. The ability of the lecturer is widely recognized, and the object for which he will speak is in every way worthy of generous encouragement. As most of our readers well know already, the California Silk Culture Association is composed of a group of public spirited ladies who are laboring to promote the silk industry in California, and they have already attained most satisfactory results. We trust they will be aided onward by a full house at Mr. Scott's lecture.

HORTICULTURAL LAWS.—M. Cooke, Horticultural Officer, has issued his quarantine rules and regulations to prevent the dissemination of orchard pests. We shall publish them next week for general information.

## TUNIS AS A WHEAT REGION.—The Pall Mall

Gazette tells American wheat growers to beware of Tunis, in North Africa, as it may rob us of our profitable wheat trade with Great Britain. We are told in a half exulting way, that "Land can be bought in Tunis, it is said, for half the price it costs in the Western States of the American Union, and it is so fertile that it will yield two crops in the year. The quality of the grain, moreover, is equal to that of the much-prized Hungarian wheat. Excellent horses, though of a lighter breed, can be bought for a fraction of the cost of horses in the United States, and draft oxen, far less than one-half the American price. Finally, while the American product has to be carried hundreds of miles by rail to the coast, and has then to undertake a long sea voyage, the most remote Tunisian farms will be comparatively near the coast; and the port of La Goletta is only 60 hours distant from Marseilles, rather less from Genoa, and only 24 hours further from Trieste and Fiume." We consider ourselves duly warned, and the Gazette has therefore lifted a load from its conscience. The trouble is, that in Algiers there is no one to grow wheat, and perhaps by the time people enough go there to grow much wheat, we shall have found something better to cultivate.

SMALLPOX INSPECTION.—The Secretary of the State Board of Health has temporarily appointed Dr. E. C. Rhoads, of Sacramento, as inspector for the Central Pacific railroad, and had given him instructions to establish, himself near the State line and make a thorough inspection of all express and immigration trains; also to quarantine any cars in which persons were found to be affected with smallpox, and revaccinate all passengers in such cars. The Board received notes from Dr. J. P. Widney, of Los Angeles, to the effect that an inspection of all cars entering that city had already been instituted.

TEXAS LANDS.—J. M. Thompson, late of Napa and now of Frio Town, Texas, has sent us some valuable documents concerning the progress of the great Lone Star State, published by the Southwestern Immigration Co., of Austin.

## Orchard Grass.

EDITORS PRESS:—Your notes on the drought-resisting qualities of orchard grass (*Dactylis glomerata*), as shown at Jersey farm, are interesting, but the case is not without parallel. The past few years have been remarkable for long continued terms of heat and drouth in New England and the Middle States, severely testing the mixed herbage of the pastures and mowing lands. There, also, orchard grass gained greatly in reputation among those who had considered it fit for use in a half shade only. It has been sent to us by a correspondent in the foothills of the Sierras, who said that it came to his place accidentally, in red clover seed, and promised to become exceedingly valuable. In the University garden it has to be fought as a most persistent weed in the plots of other grasses which are near to it. This does not prove it adapted to all soils and climates in our State, but is at least suggestive to those who wish to improve their forage resources. I believe that in many cases the carrying capacity of our pastures could be increased by from 25% to 200% or 300% at a very moderate outlay. The first trial of a grass need not cost over \$1, or even less.—C. H. DWINELE, College of Agriculture, Berkeley.

It will be well to keep this grass prominently before the minds of our pasture makers just now, for it has certainly shown itself worth farther test under California conditions. It has pre-eminently the rooting and lasting qualities so desirable in this country where the annuals are the rule and the pastures quickly denuded by feeding so closely that little seed is formed.

Testimony in favor of orchard grass seems universally favorable. We have just received a new handbook entitled "The Farmers' Book of Grasses," by Prof. D. L. Phares of the Agricultural College of Mississippi (published by the author at Starkville, Miss.) This book of 150 pages contains much general information upon the subject of forage plants, and is especially rich in experience in the Southern States where some conditions resemble ours more closely than elsewhere in the United States. It will be found of much interest and value to our stockgrowers and dairymen. We find in Dr. Phares book a very interesting page about orchard grass, which it will be pertinent to reproduce in this connection, as it will show the high reputation of the grass in general, and emphasizes several special adaptations in it which commend it to California experiment.

Of all grasses, orchard grass is one of the most widely diffused, growing in Africa, Asia, every country of Europe and all our States. It is more highly esteemed and commended than any other grass, by a larger number of farmers in most countries—a most decided proof of its great value and wonderful adaptations to many soils, climates and treatments. Yet, strange to say, though growing in England for many centuries, it was not appreciated in that country till carried there from Virginia in 1764. But, as in the case of timothy, soon after its introduction from America, it came into high favor among farmers, and still retains its hold on their estimation as a grazing and hay crop.

Nor is this strange when its many advantages and points of excellence are considered. It will grow well on any soil containing sufficient clay and not holding too much water. If the land be too tenacious, draining will remedy the soil; if worn out, a top dressing of stable manure will give a good seed off, and it will furnish several good mowings the first year. It grows well between 29° and 45° latitude. It may be mowed from two to four times a year, according to latitude, season and treatment, yielding from one to three tons of excellent hay per acre on poor to medium land. In grazing, and as hay, most animals select it in preference among mixtures with other grasses. In lower latitudes it furnishes good winter grazing, as well as for spring, summer and fall. After grazing or mowing, few grasses grow so rapidly (three or six inches per week), and are so soon ready again for tooth or blade. It is easily cured and handled. It is readily seeded, and catches with certainty. Its long, deeply penetrating, fibrous roots enable it to sustain itself and grow vigorously during drouths, that dry up other grasses, except tall oat grass, which has similar roots and characters. It grows well in open lands and in forests of large trees, the underbrush being all cleared off. I have had it grow luxuriantly even in beech woods where the roots are superficial, in the crotches of roots and close to the trunks of trees. The hay is of high quality, and the young grass contains a larger per cent. of nutritive digestible matter than any other grass. It thrives well without renewal on the same ground for 35, nay 40 years. How much longer, I am not able to say. It is easily exterminated when the land is desired for other crops. Is there any other grass for which so much can be said?

THE New York Tribune's intimation of a growing disposition in Canada for annexation excites but languid interest and little surprise in London.



## SECURE PATENTS



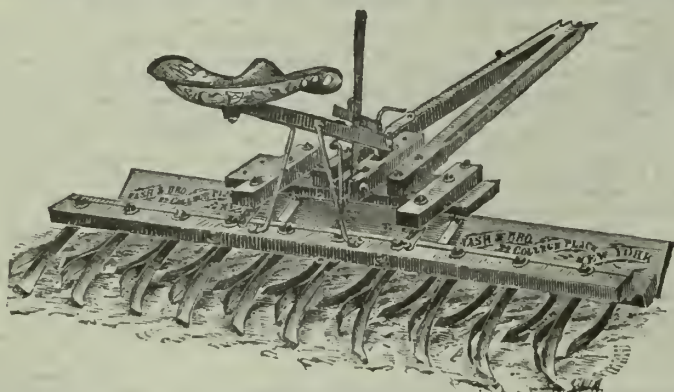
Through Scientific Press Patent Agency.  
Dewey & Co.'s

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## "ACME"

## PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

For the Orchard, Vineyard, Nursery and Grain Field.

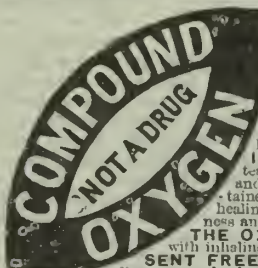


Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers.  
22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia.



**A NEW TREATMENT for Consumption, Asthma, Bronchitis, Catarrh, Dyspepsia, Headache, Debility, Neuralgia, Rheumatism, and all Chronic and Nervous Disorders.**  
**ACTS DIRECTLY** upon the great nervous and organic centres, and cures by a natural process of revitalization.  
**HAS EFFECTED REMARKABLE CURES**, which are attracting wide attention.  
**HAS BEEN USED** by Rt. Rev. John J. Keane, Bishop of Richmond, Va., Hon. Wm. D. Kelley, T. S. Arthur, and others, who have been largely benefited, and to whom we refer by permission.  
**IS STRONGLY ENDORSED** by "We have the most unequivocal testimony to its curative power from many persons of high character and intelligence."—*Lutheran Observer*. "The cures which have been obtained by this new treatment seem more like miracles than cases of natural healing."—*Arthur's Home Magazine*. "There is no doubt as to the genuineness and positive results of this treatment."—*Boston Journal of Commerce*.  
**THE OXYGEN HOME TREATMENT** contains two months' supply, with inhaling apparatus and full directions for use.  
**SENT FREE:** a Treatise on Compound Oxygen, giving the history of this new discovery and a large record of most remarkable cures. Write for it, Address  
**Drs. STARKEY & PALEN,**  
**ADMINISTERED BY INHALATION.** 1109 and 1111 Girard St., Philadelphia, Pa.

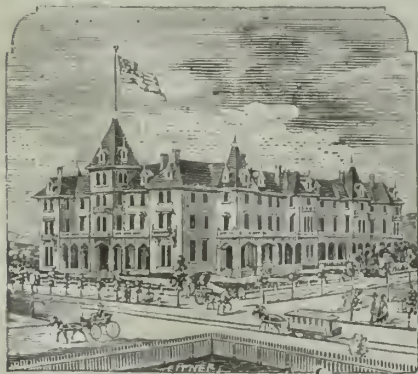
Depository on Pacific Coast.

WE HAVE ESTABLISHED A DEPOSITORY OF OUR COMPOUND OXYGEN HOME TREATMENT at San Francisco, Cal. This will enable patients on the Pacific Coast to obtain it without the heavy express charges which accrue on packages sent from Eastern States.

All orders directed to H. E. MATTHEWS, 606 Montgomery Street, San Francisco, Cal., will be filled on the same terms on which we fill orders sent directly to our office in Philadelphia.

Patients ordering from our depository in San Francisco, should, at the same time, write to us, and give a statement of their case, in order that we may send such advice and direction in the use of the Treatment as their special disease may seem to require.

DRS. STARKEY & PALEN, Nos. 1109 and 1111 Girard Street, Philadelphia, Pa.



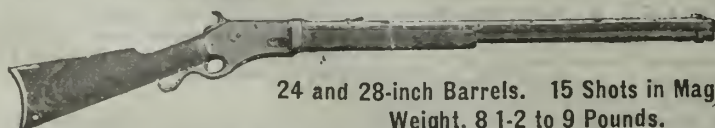
## TUBBS HOTEL,

East Oakland,

Having been Thoroughly Refitted and Refurnished, Painted and Frescoed, is now Open for the Reception of Guests. Rooms can now be secured at the Hotel.

S. I. KELLOGG, PROPRIETOR.

## THE KENNEDY REPEATING RIFLE.



24 and 28-inch Barrels. 15 Shots in Magazine.  
Weight, 8 1/2 to 9 Pounds.

USES THE WINCHESTER MODEL 1873 CARTRIDGE, 44 CALIBRE, 40 GRAINS, CENTER FIRE. Out of 500 Glass Balls thrown from a trap, 479 were broken with this Rifle. Prices Low. Circulars on application to

F. T. ALLEN, Pacific Coast Agent,

416 Market St., San Francisco.

## THE SAN LEANDRO GANG PLOW.



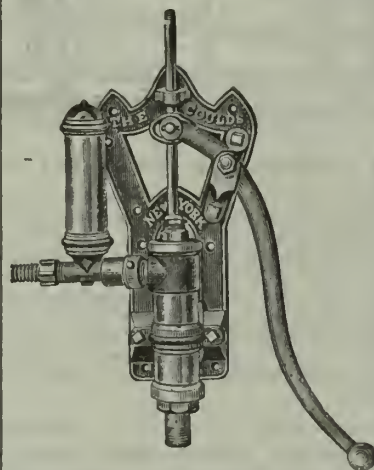
Price Complete, - - - \$92.50.  
Manufactured by the San Leandro Plow Company, San Leandro, Cal.

In this Implement is combined THE VERY BEST GANG PLOW CARRIAGE YET MADE with the three following styles of bottoms any of which stand at the head for the different soils for which they are intended: Style No. 1. Hardened Steel, same shape as the John Deere Moline No. 7 Single Plow. Adapted to a great variety of soils—in fact anything except the worst adobe. Style No. 2. Hardened Steel nearly the shape of the Furst & Bradley pattern, for sticky soils, made at Chicago. This Plow has a most beautiful form, with a long easy sweep to the moldboard, and while working very well in all soils is nearer perfection as an adobe Plow than anything yet tried on the Coast. Style No. 3. Oliver Chilled Bottoms. This is a remarkable Plow, in form, design and quality. Its reputation is almost world wide and its sales reach into the hundreds of thousands. It is made of Chilled Cast Iron, cast in such a way that the grain of the metal stands vertical to the face of the mold and is so hard that all attempts to file or drill it will be found useless. The form of the Plow adapts it for use in almost any soil, and no Plow is superior to it for leaving a clean well turned furrow. The simplicity and neat appearance of OUR NEW GANG PLOW CARRIAGE is evident at a glance and yet it possesses with but a single lever all the advantages claimed by the most complicated implements with their numerous Levers, Spiral Springs, Cog-wheels, Racks, Segments, etc., besides some very important ones that are peculiar to this alone.

1st. It will strike out lands simply by throwing the lever well forward.  
2nd. It raises very high out of the ground.  
3rd. One wheel can be raised at any height above the other so as to plow at any depth desired.  
4th. The tongue can be set two feet to the right or left in a moment.  
The above are points possessed by many other Gangs, but in none are the results obtained so simply. The following advantages are peculiar to this Gang Carriage:  
1st. Its Leverage is so perfect that a man can lift it with ease when there are two other men standing on the beams.  
2nd. The seat is so attached that the weight of the driver assists in raising the Plows instead of preventing it.  
3rd. The Lever is pulled back to raise the Plows instead of being pushed forward, which enables the driver to exert his strength to much better advantage both in raising and lowering the Plows.  
4th. The Seat is high and comfortable and is placed on an easy spring.  
For Proportion, Workmanship, Simplicity, Strength and practical usefulness we challenge comparison with any Gang Plow made in the United States.

The above Gangs are for sale at the Factory in San Leandro, and by David N. Hawley, 37 Market St., San Francisco; Bailey, Badgley & Co., Stockton; Holman Stanton & Co., Sacramento; White, Cooley & Cutts, Marysville; Smith & Baxter, Gilroy, and at many other points in the Interior.

SAN LEANDRO PLOW CO., San Leandro, Cal.



H. P. GREGORY & CO.,

2 & 4 California Street, San Francisco.

Sole Agents for the Pacific Coast for

## GOULD'S SPRAYING PUMP.

Used by Orchardists for Spraying Fruit Trees with

INSECT EXTERMINATING LIQUIDS.

This Pump has been gotten up expressly for the purpose noted. The working parts are constructed entirely of Brass and are not affected by the corrosive solutions used in them. The sale of over 100 of these Pumps last year—principally in the Santa Clara valley—is strong testimony as to their merit. Further information can be obtained by addressing the Agents,

H. P. GREGORY & CO.,

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## SEED MERCHANTS.

Every description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. Can be obtained at our Establishment Fresh, Pure and Genuine, at the Lowest Rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. (Seed and Tree Catalogue sent by Mail free on Application.)

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Special attention will be given and prompt returns rendered for Consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates.

Our constantly increasing line of customers attest to the fairness of our prices and quality of our goods.

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## MUSICAL BOXES.

Of Standard Reputation. The largest and finest assortment in the city. Musical Boxes with changeable cylinders always on hand at low figures. The latest style patented, "THE INTERCHANGEABLE," patented February 11, 1879.

Repairing Musical Boxes and Furnishing Material a Specialty.

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Rugs, Mats, Linoleum, Oilcloths, Upholstery Goods, Etc.

Lace Curtains, Window Shades and Draperies,

649 and 651 Market St., Opposite Kearny, S. F.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

COL. C. YOUNGER, Forest Home Herd, San Jose, Cal. Breeder of Short-Horn Durhams, and pure bred Cotswold Sheep. Young Bulls and Bucks always for sale. Herd took Gold Medal, 1881.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

HENRY PIERCE, 723 Montgomery Street, S. F. Jersey Cattle, bred from Importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted butter strains on the Island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound butter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded Thoroughbred Short Horn cattle and Berkshire hogs. A choice lot of young stock for sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Short-Horn Durhams and Norman-Percheron horses.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

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## HORSES.

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P. J. SHAFER, Olema, Marin Co., Cal. Breeder of choice Jerseys, bred from better strains. Hambletonian horses by the Silver Gray Stallion, "Rustic," remarkable for size, speed, and kind disposition.

J. R. ROSE, Lakeville, Sonoma Co., Cal. Breeder of Thoroughbred Devons, roadster horses and Percheron draft horses.

E. A. SACKRIDER, 325 Eleventh St., Oakland, Cal. Importer of Norman-Percheron horses. Horses on hand and for sale at reasonable terms.

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J. W. BRYAN, Santa Clara, Cal. Breeder of Norman-Percherons from the celebrated Hercules Stock.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

F. BULLARD, Woodland, Yolo Co., Cal. Breeder of Thoroughbred Spanish Merino Sheep.

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MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rock, Pekin Ducks.

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ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. WAITE, Brighton, Sacramento Co. Breeder of Thoroughbred Berkshire Hogs and choice Imported Poultry. Took Premium State Fair, 1880 and 1881 of Leghorns (brown and white), Speckled Hamburgs, Plymouth Rocks and Pekin Ducks.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

ELIAS GALLUP, Hanford, Cal., Breeder of Poland China Swine. Stock recorded in American Poland China Record. Are descendants of the celebrated McCary-Bismarck, bred by D. M. Magie, Oxford, Ohio. Took five First Premiums at State Fair in 1880.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by L. Stanford.

## BEES.

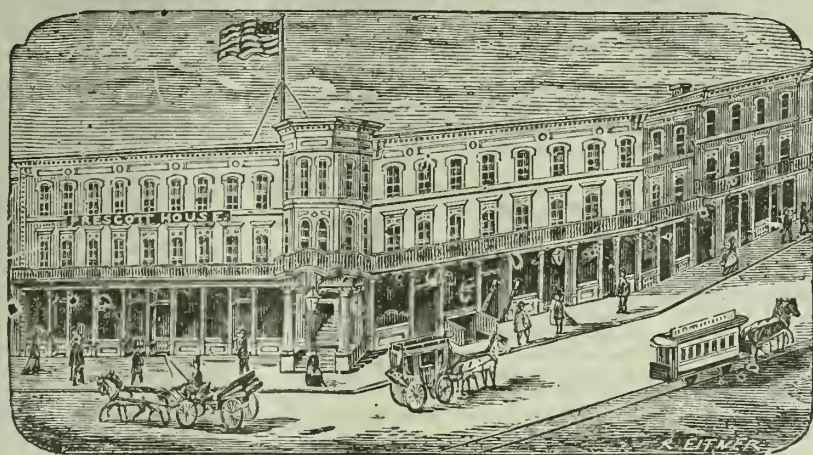
J. D. ENAS, Sunnyside, Napa, Cal. Breeds Pure Italian Queen Bees. Comb Foundation.

## The Fresno Colony,

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PETER SAXE & HOMER P. SAXE.

PETER SAXE & SON.

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## Larroe's Fertilizer.

It is manufactured solely of Bones and residues of Meats dried and pulverized in such manner that all the Calcium, Phosphates, Carbonates, Nitrates and Potassium, which are the main assimilable plants, are entirely preserved in the Fertilizer and render it most valuable to the cultivators of the soil.

Stable manures require frequent irrigation in order to develop its properties; it is expensive, voluminous, and requires great labor to spread and subsoil it; it propagates weeds, worms, snails and destructive animalcules, the pests of the farmer. On the other hand, Bone Powder can be easily handled, transported at low rates of freight, in bags. It checks the propagation of insects and luxuriates the growth of hops, vines, fruit trees, etc.; can easily be spread around the plants and is most efficacious as an impediment to the rapid and terrible encroachment of the PHYLOXERA. The Fertilizer should be sown by hand on the ground when it is moist like seed, and then harrowed. About 400 pounds is the quantity to plants, at \$40 per ton. For further information apply or address to,

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W. L. Leadbetter, Ex-Member of the Legislature, says: We use Abietene for Coughs, Colds, Sore Throat, Hoarseness; also as a Liniment for Rheumatism, Sprains, Bruises, etc. It is also my wife's specific for Croup. We are never without it.

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Those to whom its value and mode of application are known are never without it, at home or traveling. Is a Sure Cure for Poison Oak, Headache, Skin Diseases, Etc.

None Genuine without the name of WM. M. HICKMAN, Druggist, Stockton, Cal., on the Label. For Sale by DRUGGISTS AND DEALERS GENERALLY.

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Iron or Wood self-opening and shutting. No stock can unlatch. This gate always opens from you. Iron, \$40; Iron and Wood, \$30; Wood, \$20. Send for circulars to A. P. CAMPTON, Rohnerville, Humboldt Co. Farm, County and State rights for sale. Took First Premium State Fair, 1881. Illustrated in RURAL Nov. 5, '81.

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Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Axes from \$3.50 to \$5.50; Mould Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

## Colonies of Pure Italian Bees,

In movable (10) frame hives prepared for shipping, \$12.50 each. J. D. ENAS, Sunnyside, Napa P. O., Cal.

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Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000, In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

Reserve Fund and Paid up Stock, 25,760.

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JOHN LEWELLING.....Vice-President  
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FRANK McMULLEN.....Secretary

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

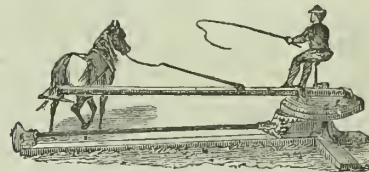
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This machine is an improvement on the celebrated "Humboldt." For Families or Hotels it will pay for itself in less than six months. Lace curtains and other delicate fabrics can be washed without injury. Price \$15. Manufacture, 431 Fourth St., S. F. Local or traveling Agents wanted. G. M. PURSELL, Patentee.

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A Box Churn with dashers, or can be used without dashers. Can be run with reverse motion with one man or two. A trial will convince that this is the best Churn in use. For Churns and Agencies, apply to

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## STILES' GRAIN MILL.

This Mill grinds by corrugated friction rollers. It will grind eight tons to one-horse power per day, and one-half-horse power will run it and do work in proportion. It can be run by a common windmill. Any orders received by W. C. STILES, Nevada City, will be filled at once.

## GOLDEN GATE WASHING MACHINES.

The principle used attacks every spot and place in the fabric with force, and will cleanse the most delicate fabrics without injury. The rocking motion used takes but small power, so that a youth can do a washing. Strong, Durable and Ornamental. Agents Wanted on Liberal Terms. Address JOHN D. WINTERS, Davisville, Cal.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



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ALL KINDS OF CARRIAGES AND WAGONS FOR SALE.

Cor. Main & American Sts., Stockton, Cal.

Makes to order all kinds of Carriage and Buggy Work, Express and Thoroughbred Wagons and Stage Work. Painting and Trimming done to order.

Jobbing done with Neatness and Dispatch.

## Agricultural Articles.

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GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to MATTESON & WILLIAMSON, Stockton, Cal.

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GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

530 California St., SAN FRANCISCO.



## Removal of Patent Agency and Newspaper Offices.

October 29th the patent agency and newspaper offices of Dewey & Co., were removed to the northeast corner of Front and Market Sts., occupying a large space on the upper floor, where we have spacious and pleasant rooms for the accommodation of our increasing business. Our apartments will have two entrances as shown in the following engraving: Our stairway, No. 252 Market St., and our elevator, No. 12 Front St.



Take the Elevator at No. 12 Front St.

Visitors will find it better to step around the corner from Market St. to the elevator rather than ascend the stairs. Old and new friends are cordially invited to give us an early call in our new quarters.

### "Blow Ye Winds."

We take pleasure in announcing to our friends and the public that at the great St. Louis Fair, of 1881, The Enterprise Windmill was again awarded First Premium over all others as being the best windmill. In thus being placed at the head, the Enterprise mill simply assumes the position which its merits have entitled it to, and which place has been conceded it wherever it has been known and used. The mills are made in the East, of the best Eastern material and sold for the Pacific coast only, through Horton & Kennedy, general office and supplies, Livermore, Alameda Co., Cal. San Francisco Agency, Linforth, Rice & Co., 323 and 325 Market St., S. F.

### Cylinder Printing Press for Sale.

A large cylinder Hoe printing press, for country newspaper work, can be bought cheap by addressing Press, Box 2361, S. F.

BOOKSELLERS, STATIONERS, ETC.—Messrs. Payot, Upham & Co., No. 204 Sansome Street, are one of the oldest, most enterprising and reliable firms in the book and stationery trade in San Francisco. Scientific, industrial and foreign publications are a specialty with them. They are also noted for their first quality of blank book and fine stationery line of goods.

LIVERY STABLE IN OAKLAND.—We call the attention of farmers visiting Oakland, and others to hire teams or stable teams in Oakland, to the Hay, Sale, Boarding and Livery Stable of T. A. Cunningham, 1368 Broadway, Oakland. Mr. Cunningham (recently from Hayward where he still owns a ranch) has purchased a homestead in Oakland, and will do his best to give satisfaction to his new customers and old friends who may call.

ANNUAL STATISTICIAN OF 1881.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 816 California St. Price, \$4.

## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which this paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Nov. 16, 1881.

The produce trade is generally quiet and firm. Sales are generally small and few, the situation being in wheat especially one of expectancy. The latest from abroad is as follows:

LIVERPOOL, Nov. 15.—Wheat: California spot lots, 1's 1d 11 1/2d, and firmer; cargo lots are steady and rather firm, at 52 1/2@53s.

#### Freights and Charters.

The shipholders are firm in their views, and it is said that in some cases they have gained a point or two better than last week. The following charters are reported: Ship *Benjamin Seely*, 1,114 tons, Wheat to Cork, U. K., £3 10; Cork, U. K., Havre or Antwerp, £3 11 3/4; Conifer except above ports £3 15; British ship *British Envy*, 1,265 tons Wheat to Cork, U. K.; £3 12 6d; British ship *City of Delhi*, 1,191 tons. Wheat to Cork, U. K.; £3 12 6d; German bark *Anna*, 876 tons. Wheat to Cork, U. K., or Havre £3 24 6d—prior to arrival.

#### The Foreign Review.

LONDON, Nov. 15th.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Autumn Wheat sowing is nearly finished. The mild weather has caused the early sowings to appear above ground. Native wheats are arriving slowly and are generally of inferior quality. In London and some provincial markets, the week's supply is very small. Prices throughout the country for flour are gradually increasing. The trade during the week in foreign wheat has been very quiet. In London rates did not improve, although all descriptions were more firmly held because of the relative scarcity. Australian, New Zealand and first East Indian sorts are becoming scarce. Foreign flour arrives slowly, the bulk in London consisting of European, the American supply being small. Maize certainly is higher in value. The market is fairly well supplied with wheat. At the close of the week buyers were offering 52s 6d for Red Winter and 51s 3d for American Spring. Sales of English Wheat during the week were over 130 quarters at 46s 3d per quarter, against 43,771 quarters at 43s 5d per quarter, during the corresponding week of last year.

#### Eastern Wool Markets.

Boston, Nov. 15th.—The Wool market is firm, with a steady demand, especially for fine and choice medium

grades. Sales of Ohio and Pennsylvania fleeces have been made at 45¢ (50¢ for XXX, XX and above); Michigan and Wisconsin X fleeces at 42¢@43¢; medium and No. 1 Ohio and Michigan fleeces have been sold at 45¢@46¢; unwashed fleeces continue to range at previous prices. The supply of fine unwashed fleeces has been closely bought up. Combing and delaine fleeces continue steady and firm. Sales of fine delaine and No. 1 combing have been made at 45¢@50¢, and unwashed combing at 30¢@32¢. California Wool is firmer and in fair demand. Choice grades of both Spring and Fall are the most sought for. Low, defective Wool is neglected. Pulled Wools are in steady demand and prices range at 35¢@43¢ for common and good super. Foreign Wool is firm, but quiet. Cape is more enquired for both for export and consumption.

#### Eastern Grain and Provision Markets.

CHICAGO, Nov. 15th.—Wheat is active but lower; \$1.29 cash asked; \$1.29 1/2 December. Corn is weak and lower; 59 1/2¢ cash, 59 1/2¢ December. Pork is heavy; \$16.40 cash, \$17.10 January. Lard is heavy and lower; \$11.15@11.20 cash, \$11 1/2@11.40 January.

#### BAGS—Bags are quiet and unchanged.

BARLEY—Barley is firm and the export trade continues. A shipment of 25,000 cts. Chevalier to England has been made this week. There has been a sale of 1,400 sks Feed at \$1.47 1/2.

BEANS—The high prices have brought in many Beans, and the result is a slight falling off as noted in our price list.

CORN—Corn is nominally considerably higher, but there is little trade, as holders view are not yet reached. A bid of \$1.42 1/2 per ctn for Yellow has been refused.

DAIRY PRODUCE—Butter is fairly on the back track, and receipts are large. Choice Fresh Roll is selling but a little above the rate for Eastern Firkin, the best large lots bringing but 37 1/2¢ per lb. Cheese is unchanged.

EGGS—California Eggs still have their own way, and have been sold up to 52 1/2¢ per doz. for the best selections. FEED—Hay is firm but rates have not yet changed; the best Wheat ruling at \$15 per ton. Cornmeal is higher, and Oatmeal has been advanced to \$25 per ton.

FRUIT—Oranges are doing better this week. Lemons and Limes are lower owing to abundant supplies from abroad. A few grapes are still selling. Strawberries are hardly worth as much as last week.

FRESH MEAT—The market is quiet and well supplied. Pork has sold a fraction higher than last week, but there has come quite a drop in cured Pork both California and imported.

HOPS—The market is about the same here. The latest by mail from New York is Emmet Well's circular of Nov. 4, as follows:

A week of lowery, rainy weather has considerably interfered with the movement in hops. The demand from brewers has been small, and exporters have taken a thousand bales less than last week; there is also a marked falling off in the receipts which indicates a quieter tone in the interior; prices however, seem well sustained, dealers showing little or no disposition to yield, but rather viewing the dullness as temporary. The growers' demand for 39 cts. has also taken the wind out of the sails of the operators, and until there is something more to warrant paying this price their purchases will continue restricted. The shipments to Europe have been mostly of Hops purchased at and under 25c, and there has not been sufficient advance in the price in London to warrant paying more than that now; besides, it must be remembered, the demand from England is for choice Hops only, and this makes it the more difficult to execute their orders. Considerable quantity of old Hops and Yearlings have changed hands within the last three weeks at from 6c to 22c, the latter for choice 50s; the market is now nearly clear of all descriptions, and Ale brewers who are in the habit of using them will find them very scarce.

Quotations: New York, crop 1881, choice, 23 to 30c; New York, crop 1881, medium, 25 to 27c; New York, crop, 1881, low to fair, 22 to 21c; Eastern, crop 1881, 22 to 27c; Wisconsin, crop of 1881, 22 to 27c; Yearlings, crop of 1880, 12 to 22c; Olds, all growth, 5 to 15c; Pacific Coast, new, 25 to 30c; Bavarians, 40 to 45c; Bohemians, 45 to 50c.

OATS—But few Oats are selling, as offers do not suit holders. The choicest are perhaps quotable a little higher than last week.

ONIONS—Onions are lower, Silver Skins ranging from 55 to 70c per ctn. There are few Reds.

POTATOES—There has been a drop all around from last week's advance, but the present rain will restrict supplies, and the market may rally quickly.

PROVISIONS—There has been a reduction of one-quarter cent per lb. on Bacon and a full cent on Eastern Hams. The market is reported weak to-day.

POULTRY & GAME—Everything is lower except fens, which have advanced 50c per doz. The Turkey market is weak and rates very low. The Morris Duster Co., 106 Davis street, S. F., advertise to pay 10 to 20c per lb., for selected tail and wing Turkey feathers. No body feathers are wanted.

VEGETABLES—Carrots and Garlic are lower. Marrow-fat Squash is taking on winter figures. Tomatoes are about out for the season.

WHEAT—The best No. 1 shipping is now quotable at \$1.70 1/2—a shade lower than last week. There is exceedingly little being done to-day although considerable has been sold since our last report and ships are being constantly loaded and cleared.

WOOL—There is nothing new in the situation here.

### Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., November 16, 1881.

FRUIT MARKET.		VEGETABLES.	
Apples, bx.....	50 @ 1 25	Pears, sliced.....	9 @ 8
Bananas, bnch.....	2 50 @ 4 00	do whole.....	7 @ 8
Cocoanuts, 100.....	6 00 @ 7 00	Plums.....	5 @ 6
Cranberries, bbl. 14.....	00 @ 16 00	Pitted.....	13 @ 14
Figs, bx.....	50 @ 75	Prunes.....	9 @ 12 1/2
Grapes.....	85 @ 1 50	Raisins, Cal, bx.....	@ 2 75
Limes, Mex.....	5 00 @ 6 00	do, Halves.....	@ 3 00
do, Cal, box.....	1 50 @ 2 00	do, Quarters.....	@ 3 25
Lemons, Cal, bx.....	2 50 @ 3 50	Eighths.....	@ 3 50
Sicily, box.....	7 00 @ 8 00	Zante Currants.....	8 @ 10
Australian.....	@ 8 00	Artichokes, doz.....	@ 25
Oranges, Cal, bx. 2.....	50 @ 4 00	Beets.....	@ 5
do, Taliti M.....	@ 4 00	Beans, Lima, lb.....	@ 5
do, Mexican.....	25 @ 30 00	do, String.....	@ 7
do, Loreto.....	@ 30 00	Cabbage, 100 lbs.....	75 @ 1 00
Pears, bx.....	75 @ 1 50	Carrots, ak.....	30 @ 50
Plum apples, doz.....	7 00 @ 8 00	Cauliflower, doz.....	85 @ 1 00
Plums, bx.....	50 @ 75	Cucumbers, doz.....	@ 15
Strawberries.....	9 00 @ 13 00	Garlic, lb.....	13 @ 2
DRIED FRUIT.		GREEN FRUIT.	
Apples, sliced, lb.....	7 @ 7 1/2	do Sweet.....	@ 5
do, quartered.....	6 @ 6 1/2	Gr'n Pepp'rs, bx.....	@ 50
Apricots.....	15 @ 16 1/2	do, Chile, bx.....	@ 75
Blackberries.....	12 @ 14	do, Lettuce.....	@ 10
Citron.....	28 @ 30	Mushrooms, lb.....	@ 15
Dates.....	9 @ 10	Okra, lb.....	5 @ 8
Figs, pressed.....	4 @ 6	Parasuls, lb.....	@ 1
do, loose.....	3 @ 5	Horseradish.....	@ 1
Nectarines.....	14 @ 15	Squash, Marrow.....	@ 15
Peaches.....	11 @ 12	Tat, ton.....	14 @ 15
do pared.....	15 @ 17	Tomatoes.....	15 @ 25
		Turnips, ctn.....	@ 75

### Domestic Produce.

WHOLESALE.

WEDNESDAY M., November 16, 1881.

BEANS & PEAS.		PEANUTS.	
Bayo, ctn.....	2 00 @ 2 25	Filberts.....	14 @ 15
Butter.....	00 @ 3 50	do.....	@ 15
Castor.....	3 00 @ 3 25	do.....	@ 15
Pea.....	3 75 @ 3 80	do.....	@ 15
Red.....	1 75 @ 1 85	do.....	@ 15
Pink.....	1 75 @ 1 85	do.....	@ 15
Large White.....	3 00 @ 3 25	do.....	@ 15
Small White.....	3 75 @ 3 80	do.....	@ 15
do.....	5 62 @ 5 75	do.....	@ 15
Field Peas, h'l eye.....	50 @ 55	do.....	@ 15
do, green.....	2 60 @ 2 25	do.....	@ 15
BROOM CORN.		POTATOES.	
Southern.....	3 @ 3 1/2	Early Rose.....	65 @ 90
Northern.....	4 @ 6	Petaluma, ctn.....	15 @ 20
CHICORY.		do.....	19 @ 20
California.....	4 @ 4 1/2	do.....	19 @ 20
German.....	6 1/2 @ 7	do.....	19 @ 20
DAIRY PRODUCE, ETC.		do.....	19 @ 20
Cal. Fresh Roll, lb.....	32 1/2 @ 35	do.....	19 @ 20
do, Fancy Braids.....	@ 37 1/2	do.....	19 @ 20
Pickled Roll.....	34 @ 35	do.....	19 @ 20
Firkin, new.....	27 1/2 @ 30	do.....	19 @ 20
Eastern.....	20 @ 25	do.....	19 @ 20
New York.....	@ 25	do.....	19 @ 20
CHEESE.		do.....	19 @ 20
Cal. Fresh, lb.....	13 @ 15	do.....	19 @ 20
German.....	13 @ 15	do.....	19 @ 20
EGGS.		do.....	19 @ 20
Cal. Fresh, doz.....	50 @ 52 1/2	do.....	19 @ 20
Ducks.....	@ 35	do.....	19 @ 20
Oregon.....	35 @ 38	do.....	19 @ 20
Eastern, by express.....	30 @ 32 1/2	do.....	19 @ 20
Picked here.....	@ 35	do.....	19 @ 20
Utah.....	27 1/2 @ 37 1/2	do.....	19 @ 20
FEED.		do.....	19 @ 20
Bran, ton.....	@ 20 00	do.....	19 @ 20
Corn Meal.....	@ 32 00	do.....	19 @ 20
Hay.....	9 00 @ 15 00	do.....	19 @ 20
Middling.....	25 00 @ 27 00	do.....	19 @ 20
Oil Cake Meal.....	@ 25 00	do.....	19 @ 20
Straw, bale.....	42 @ 45	do.....	19 @ 20
FLOUR.		do.....	19 @ 20
Extra, City Mills.....	5 25 @ 5 75	do.....	19 @ 20
do, Country Mills.....	4 75 @ 5 00	do.....	19 @ 20
do, Oregon.....	4 75 @ 5 12 1/2	do.....	19 @ 20
do, Walla Walla.....	4 50 @ 5 00	do.....	19 @ 20
Superfine.....	3 50 @ 4 25	do.....	19 @ 20
FRESH MEAT.		do.....	19 @ 20
Beef, 1st quality, lb.....	6 1/2 @ 7	do.....	19 @ 20
Second.....	4 1/2 @ 5	do.....	19 @ 20
Third.....	4 @ 4 1/2	do.....	19 @ 20
Mutton.....	4 @ 5	do.....	19 @ 20
Spring Lamb.....	5 1/2 @ 6 1/2	do.....	19 @ 20
Pork, dressed.....	5 @ 6	do.....	19 @ 20
Dressed.....	8 @ 8 1/2	do.....	19 @ 20
Veal.....	6 1/2 @ 7	do.....	19 @ 20
Milk Calves.....	7 1/2 @ 8	do.....	19 @ 20
do, choice.....	@ 8 1/2	do.....	19 @ 20
GRAIN, ETC.		do.....	19 @ 20
Barley, feed, ctn.....	1 45 @ 1 47 1/2	do.....	19 @ 20
do, Browing.....	1 55 @ 1 65	do.....	19 @ 20
Chavalier.....	1 55 @ 1 57 1/2	do.....	19 @ 20
do, Coast.....	1 42 @ 1 47 1/2	do.....	19 @ 20
Buckwheat.....	@ 15 00	do.....	19 @ 20
Corn, White.....	@ 15 00	do.....	19 @ 20
Yellow.....	@ 14 50	do.....	19 @ 20
Small Round.....	@ 15 00	do.....	19 @ 20
Oats.....	35 @ 55	do.....	19 @ 20
Milling.....	60 @ 75	do.....	19 @ 20
Rye.....	@ 12 1/2	do.....	19 @ 20
Wheat, No. 1.....	75 @ 77 1/2	do.....	19 @ 20
do, No. 2.....	1 61 @ 1 72 1/2	do.....	19 @ 20
do, No. 3.....	1 45 @ 1 60	do.....	19 @ 20
Choice Milling.....	@ 1 77 1/2	do.....	19 @ 20
HIDES.		do.....	19 @ 20
Hides, dry.....	18 @ 18 1/2	do.....	19 @ 20
Wet salted.....	9 1/2 @ 10 1/2	do.....	19 @ 20
HONEY, ETC.		do.....	19 @ 20
Beehives, lb.....	23 @ 25	do.....	19 @ 20
Honey in comb.....	15 @ 20	do.....	19 @ 20
Extracted, light.....	10 @ 11	do.....	19 @ 20
do, dark.....	8 @ 9	do.....	19 @ 20
HOPS.		do.....	19 @ 20
Oregon.....	24 @ 25	do.....	19 @ 20
California, new.....	16 @ 30	do.....	19 @ 20
Wash. Ter.....	25 @ 26	do.....	19 @ 20
Old Hops.....	@ 25	do.....	19 @ 20
NETS—Jobbing.		do.....	19 @ 20
Walnuts, Cal.....	8 @ 9	do.....	19 @ 20
do, Chile.....	7 1/2 @ 8	do.....	19 @ 20
Almonds, h'd.....	8 @ 10	do.....	19 @ 20
Sweet shell.....	14 @ 15	do.....	19 @ 20
Brazil.....	10 @ 11	do.....	19 @ 20
Pecans.....	13 @ 15	do.....	19 @ 20

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**MILLER & CO.**  
J. P. HULME.  
**Wool and Grain**  
Commission Merchants.  
10 Davis Street, near Market,  
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Liberal advances made on all consignments, and prompt personal attention given to all sales.

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**COMMISSION**  
Grain and Wool Brokers.  
OFFICE:—28 California St., San Francisco.  
REFERENCE—LAZARD FRERES, BANKERS.

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Commission Merchants in Cal. Produce  
REFERENCES.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

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IMPORTERS OF AND DEALERS IN  
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Call and examine our stock, and get list of prices, or send for illustrated catalogue.

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A FIRST-CLASS LODGING HOUSE

CONTAINS 113 ROOMS.

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R. HUGHES, Proprietor.

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Samples sent free. Circular and references given on application to

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PERFECTLY RESTORE THE HEARING

and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address, H. P. K. PECK & CO., 553 Broadway, New York.

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WELL WATER SUPPLY SYSTEM

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The most useful invention for the home, in use; can be adjusted to any Cook Stove at a small cost. Home and County Rights, for sale. Address,

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Short Horn Bulls For Sale.

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Improved Patent Rotary Force Pump for

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This is a Durable and Compact apparatus for pumping, that will force water 100 feet and 2,000 to 4,000 gallons an hour. It can be moved from one well to another for Irrigating. For further particulars, address,

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We will soon be in receipt of the following varieties of choice yearling trees:

Silver Prunes,

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The above trees are all selected and on Peach Roots and free from scale and other injurious insects.

Orders taken now for above trees in lots to suit.

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Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks,

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I have a large stock of the above varieties for Sale Cheap, considering the quality of stock. For further information, send 3 cent stamp for new circular and price list to

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Fruit and Grape Lands

FOR SALE

In Santa Cruz County, in quantities to suit.

Call on M. P. OWEN,

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Nash Bros.' Pulverizing Harrow

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The Best Implement for Pulverizing, Harrowing, Cultivating; using steel curved teeth, and can be regulated to any depth.

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This is Automatic and Self-regulating, raising hay or straw to any height, and carries to any desired point. It will pay for itself in one season. L. D. BURGESS, Agent, Rio Vista, Cal.

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First-class Fire-proof Brick Building. Capacity, 10,000 tons. Goods taken from the Dock and the Cars of the C. P. R. R. and S. P. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

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Grangers' Business Association of California.—Principal place of business, No. 38 California Street, San Francisco, State of California.

Notice.—There are delinquent upon the following described stock, on account of an assessment levied on the Twenty-seventh (27) day of June, 1881, the several amounts set opposite the names of the respective shareholders, as follows:

No. of Cert.	Name.	No. of shares.	Amt. of Assess.
1189	Alexander, Chas	5	\$ 12 50
608	Black, W. H.	1	2 50
274	Black, W. H.	1	2 50
64	Boynton, F. Z.	5	12 50
1019	Bodfish, Olando	3	7 50
994	Gartleman, Daniel	2	5 00
1001	Gartleman, Daniel	2	5 00
1686	Caldwell, D. A.	1	2 50
1367	Caldwell, D. A.	4	10 00
1149	Caldwell, D. A.	1	2 50
259	Campbell, Basil	4	10 00
1621	Clock, Sarah D.	4	10 00
1481	Cleghon, I. A.	2	5 00
782	Colburn, B.	2	5 00
1983	Colby, G. W.	40	100 00
750	Corpstein, J. P.	1	2 50
1603	Costigan, J. M.	2	5 00
507	Cox, E. J.	5	12 50
505	Crook, John	5	12 50
509	Crook, Chris.	2	5 00
1374	Cox, W. W.	2	5 00
1376	Cox, Mrs. M. E.	1	2 50
174	Downey, Patrick	1	2 50
347	Dodge, D.	4	10 00
1498	Edwards, J. G.	10	25 00
412	Ebi, J. H.	1	2 50
189	Faber, G. R.	2	5 00
598	Finley, Miss Mollie	1	2 50
470	Oallup, E. E.	1	2 50
469	Gallup, Youngs A.	1	2 50
468	Gallup, Mrs. L. J.	4	10 00
1188	Galloway, A. J.	8	20 00
256	Gallup, T. A.	4	10 00
1023	Hamilton, Mrs Lou	5	12 50
1025	Hamilton, Emmor	5	12 50
1698	Harlen, J. H.	5	12 50
1090	Helms, A.	2	5 00
1477	Howard, Chas. E.	1	2 50
749	Hunter, A. B.	4	10 00
6	Helpenstein, L. H.	2	5 00
1671	Helpenstein, L. H.	1	2 50
1684	Jones, R.	1	2 50
1248	Judson, Homer	5	12 50
793	Judson, Homer W.	2	5 00
1494	Kellogg, G. P.	10	25 00
454	Kimball, G. W.	8	20 00
1681	Kneif, John F.	4	10 00
824	Langlois, Susan	1	2 50
1067	Lautenschlager, C.	4	10 00
1251	Little, Horace	8	20 00
783	Linebaugh, A.	20	50 00
784	Linebaugh, John	2	5 00
177	Lunney, Phillip	2	5 00
1159	Matterson, F.	1	2 50
75	Menzie, Thos	1	2 50
1674	Meyer, Jacob	5	12 50
5	Merrill, Chas. H.	1	2 50
1675	Merrill, Chas. H.	1	2 50
1623	McCampbell, S. S.	5	12 50
452	Nelou, C.	4	10 00
98	Niles, E. C.	2	5 00
642	Prince, N. J.	10	25 00
877	Prince, N. J.	5	12 50
236	Pendegast, M.	2	5 00
1344	Roberts, Chas	10	25 50
1656	Roberts, Chas	6	15 00
252	Reese, Elizabeth	1	2 50
250	Reese, David	2	5 00
397	Sawyer, E. A.	5	12 50
1502	Settle, C. T.	4	10 00
1139	Sherburn, D. N.	4	10 00
546	Slayton, O. O.	10	25 00
406	Stockton, S. W.	2	5 00
213	Stump, C.	1	2 50
460	Stephens, J. M.	2	5 00
445	Stevens, L. D.	4	10 00
461	Stevens, W. A.	2	5 00
825	Stanley, H. Y.	2	5 00
183	Taber, G. R.	4	10 00
191	Tor, Y. Jas	2	5 00
1438	Voorhes, Ono W.	4	10 00
1489	Voorhes, Effie A.	4	10 00
1377	Watson, Mrs. Tbos	1	2 50
1669	Warner, Jas	11	27 50
436	Whitout, Jessie	4	10 00
504	Witly, Jacob	2	5 00
731	Woodhams, A. R.	2	5 00
805	Woodward, F. J.	4	10 00
1611	Webster, John	3	7 50
543	Webster, John	2	5 00
1116	Wilson, James	2	5 00
818	Witrow, C. W.	1	2 50

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Quickly and Permanently CURED

Dr. Stinson's Asthma Remedy is unequalled as a positive Alternative and Cure for Asthma and Dyspepsia, and all their attendant evils. It does not merely afford temporary relief, but is a permanent cure. Mrs. B. F. Lee, of Belmont, O., says of it: "I am surprised at the speedy effects of your remedy. It is the first medicine in six years that has loosened my cough and made expectoration easy. I now sleep all night without coughing." If your druggist does not keep it, send for treatise and testimonials to

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An English Veterinary surgeon and Chemist, now traveling in this country, says that most of the Horses and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & CO., Boston, Mass., formerly Hanger Mc.

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Blue or Red Gum trees. Monterey Cypress, Acacias, and Pines of all sizes or the seed of each kind, very cheap for cash. Trees in condition to ship long distances. Send \$1 in stamps for samples of each kind, with prices. GEO. R. BAILEY, Berkeley, Cal.

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WE WILL PAY 20 CENTS PER POUND FOR ALL the Feathers that grow on the TAIL of the Turkey. We will pay 10 cents per pound for Feathers from the two joints of the wing next the body. We do not want the one-sided quills that grow on the outside joint or tip of the wing.

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A gilt-bound Floral autograph Album only 15c., 47 select quotations, a story paper & elegant sample chromo free with each. G. W. BOCEMSDES, West Haven, Conn.

And in accordance with law, and an order of the Board of Directors, made on the 9th day of September, 1881, so many shares of each parcel of such stock as may be necessary, will be sold at public auction, at the office of the Company, 38 California St., San Francisco, Cal., on Monday, the 21st day of November, 1881, at the hour of two o'clock, P. M., of said day, to pay Delinquent Assessments thereon, together with costs of advertising and expenses of the sale.

AMOS ADAMS, Sec'y,

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Woolsey's Steam Generator and Power

and Steam Cheese Vat for Ranchmen and Dairies.

This is the Cheapest and Best Steam Generator ever invented; and the cheese vat is so constructed that the temperature can be kept even and steady.

WOOLSEY'S TARPOLA GOPHER TRAP,

never fails to kill all varmints when properly set. Price \$2.50. WOOLSEY'S IMPROVED LAWN SPRINKLER, Cheapest and Best in use. Price, \$5. Address JOHN S. WOOLSEY, Inventor and Manufacturer, Gilroy, Cal.

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PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

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Importers and Dealers in Guns, Rifles, Pistols, and Fishing Tackle, etc.

50 Lithographed Chromo Cards, no 2 alike 10c. Name in fancy type. Conn. Card Co., Northford, Ct.



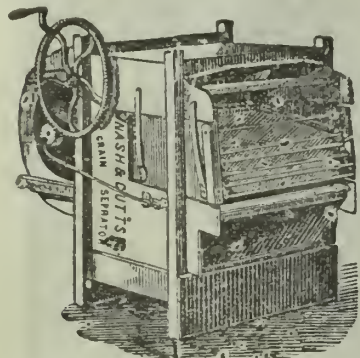
And Still We Take the Lead.

-THE-

## Nash &amp; Cutts' Grain Cleaner

Improved Again for 1881.

Five sizes, warranted to clean from 50 to 200 bushels per hour, perfectly. The fact that we have taken EVERY Diploma that has been offered by the State Agricultural Society for 11 years proves that we have the best.



THE IMPROVED  
NASH & CUTTS' GRAIN CLEANER.  
(TRADE MARK)

## OUR NEW WHEAT GANG,

Composed of perforated zinc and patent rolled wire. The zinc is not punched as of old, with all holes of a size, but they grow gradually larger as they reach the lower or nut end of the gang, thus allowing the wheat to pass through more readily. The patent rolled wire that we use is more instrumental to the efficiency of the cleaner than one would at first suppose; being rolled after it is wove, it is perfectly smooth, thus allowing Barley and Oats to run over more rapidly, while the Wheat being smooth will pass through readily, thus increasing the capacity both in speed and quality.

Notwithstanding the extra expense incurred by the purchase of this patent Wire and Zinc, the prices are reduced this season, thus giving the farmers the benefit of this new combination.

Farmers and Dealers are particularly cautioned against spurious imitations. Be sure that the one you buy bears this Trade-Mark: "THE IMPROVED NASH & CUTTS' GRAIN CLEANER." All others are frauds. See that it is manufactured by "H. D. NASH & CO., Sacramento, Cal." We mention the above for the protection of our customers who want the GENUINE. Every Cleaner fully warranted. Prices at Factory—No. 1, \$30; No. 2, \$40; No. 3, \$50. For further particulars address

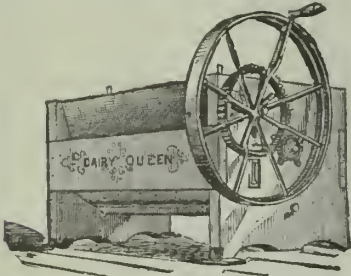
H. D. NASH & CO.,  
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Sole manufacturers of "The Improved Nash & Cutts' Grain Cleaner" on the Pacific Coast.  
We also make a Cleaner to attach to Threshing Machines that will clean ALL any machine can thresh.

## 'THE DAIRY QUEEN'

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars, address the Inventor and Sole Patentee,

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Or Jas. L. Haly, Janesville, Lassen Co., Cal.

## Holstein Cattle.

CLYDESDALE AND HAMBLETONIAN HORSES.

The largest and deepest milking herd of Holsteins in the world. 225 head, pure bred, mostly imported, males and females of different ages.

A Large and elegant stud of imported Clydesdale Stallions and Mares of all ages. Hambletonian Stallions and Mares of superior breeding. Personal inspection invited. Separate catalogues of each class, and milk records of cows mailed free on application. All inquiries promptly answered. State that you saw this advertisement in the PACIFIC RURAL PRESS.

SMITHS & POWELL,  
Lakeside Stock Farm, Syracuse, N. Y.

TRADE MARK.



## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.60 per gallon. For directions and testimonials apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

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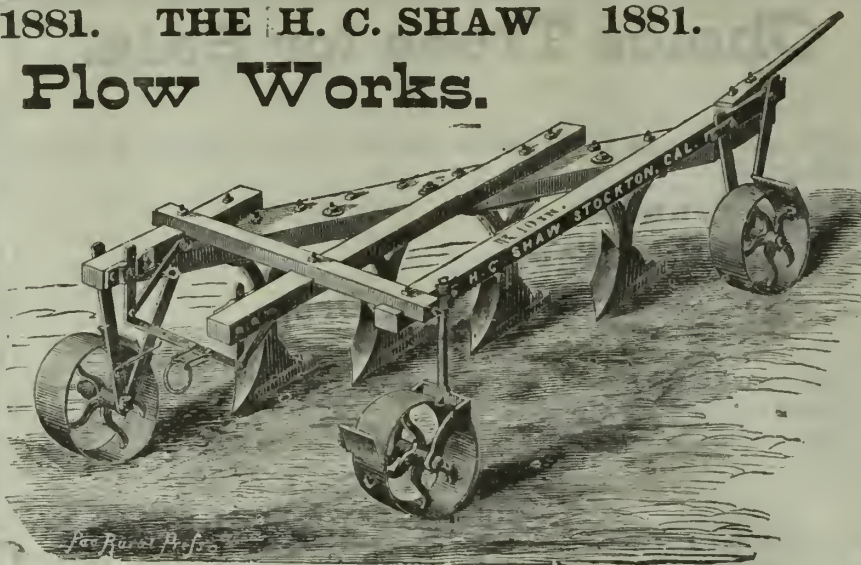
## Asbestine Sub-Irrigation Pipe

For sale at Davisville, Yolo County, Cal.

Apply to L. A. GOULD.

1881. THE H. C. SHAW 1881.

## Plow Works.



## GANG PLOWS AND EXTRAS.

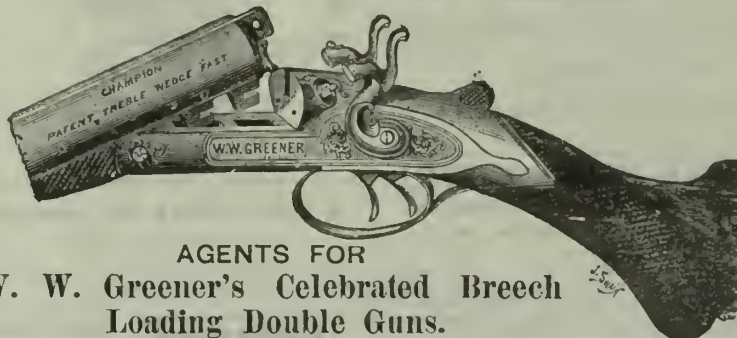
No. 201 and 203 El Dorado street, - - - - - Stockton.

## THE STOCKTON GANG PLOW,

Over 2,000 of H. C. Shaw's Improved Patent Stockton Gang Plows Sold in Five Years.  
Cahoon and Gem Seed Sowers, Harrows, Etc. Extras for all Plows and Machines I have sold for the past TWENTY YEARS in this valley. Send for Circular and price list. Always on hand a full stock of Single Plows. Have used these Gangs for over 15 years. Now using 70. Adapted to all soils.—JOHN W. JONES, Atlanta, San Joaquin Co., Cal.

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AGENTS FOR  
W. W. Greener's Celebrated Breech  
Loading Double Guns.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.

Ammunition in quantities to suit

A liberal discount to the trade.

Price List on Application

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SOLE AGENT FOR THE PACIFIC COAST FOR

## THE BALLARD RIFLE, AND MARLIN'S NEW BALLARD REPEATER.



A FULL LINE OF  
WINCHESTER  
and KENNEDY,  
SHARPS, BALLARD,  
and REMINGTON  
RIFLES.

Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to suit. Liberal discount to the trade. Send for Special Price List for Marlin's New Repeater and Ladd's Improvement on the Kennedy Rifles.

SEND FOR 1881 PRICE LIST.



## H. T. DORRANCE,

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## SADDLERY AND HARNESS,

CALIFORNIA, LADIES' and IMPORTED SADDLES,  
Whips, Robes, Team, Concord, Buggy, Coach and Trot-  
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## SPERRY'S FLOURING MILLS,

AUSTIN SPERRY, S. W. SPERRY, Prop'rs,

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And Dealers in FLOUR, GRAIN, BRAN,  
GROUND BARLEY, MIDDINGS.

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San Francisco Office—No. 22 California Street.

Ru sell's Hollow Tooth Harrow.

This Harrow is guaranteed to do double the work of any other Harrow and do it better. GEORGE SEANOR, Los Gatos, Agent for Santa Clara Co.

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640 Acres of level vineyard land for sale; Canal runs over it. Price, \$10 per Acre; about 2 miles from Railroad Station. CHAS. A. HENRY, 400 Montgomery St., S. F.



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Patent, Nov. 9, 1880.  
Medical Electricity.

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(The Only Genuine.) Received 1st Premium State Fair, Electro-Magnetic Belts, New Style, \$10. Electro-Magnetic Belts, Extra Appliances, \$15. Electro-Magnetic Belts, 9 Improvements, \$20. GUARANTEED ONE YEAR. BEST IN THE WORLD. Will positively cure without medicine—Rheumatism, Paralysis, Neuralgia, Kidney Disease, Impotency, Rupture, Liver Disease, Nervousness, Dyspepsia, Spinal Disease, Acute, Piles and other ailments. Address or call on CALIFORNIA ELASTIC TRUSS CO., 702 Market St. S. F. Send for Catalogue of Wonderful Cures.

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These horses were imported by

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## GREAT CHICAGO FAIR, 1881,

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M. W. DUNHAM'S

## Herd of Percherons

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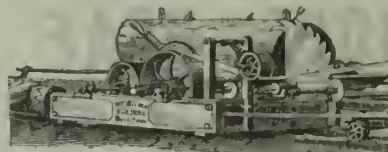
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His Mare "Mignonette" was awarded the 1st Prize \$500—and Grand Gold Medal; and his Stallion "Vidocq" was specially recommended to receive the Society's Gold Medal.

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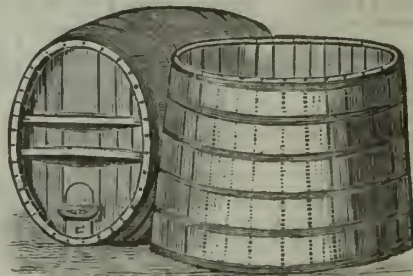
Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills.

Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved. Write for Circulars and Price Lists, and address of nearest Agent. [Name this paper.]

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FRUIT TREES, and ORNAMENTALS. A full assortment. Specialties for season 1881-2. GRAPE CUTTINGS from hillside vineyards, uninjured by frosts. \$4 per 1,000, all selected from the best wood. Varieties: Golden Chasselas, White do., Rieslings, Berger, Black Malvoisie, Zinfandel, Malaga, Muscatella, Muscat of Alexandria, Tokay, etc. ROOTED GRAPE VINES. Varieties as above. \$25 per 1,000, in quantities over 5,000, \$22.50 per 1,000. PHYLLXERA-PROOF GRAPE VINES, all best varieties, cuttings and rooted vines. These should be engaged at once. Prices on application. JAPANESE CHESTNUTS, 1 to 4 feet, recently introduced; trees thrifty; nut very large and rich. All stock raised at these nurseries grown without irrigation. LEONARD COATES, P. O. Box 2, Napa City, Cal.

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Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

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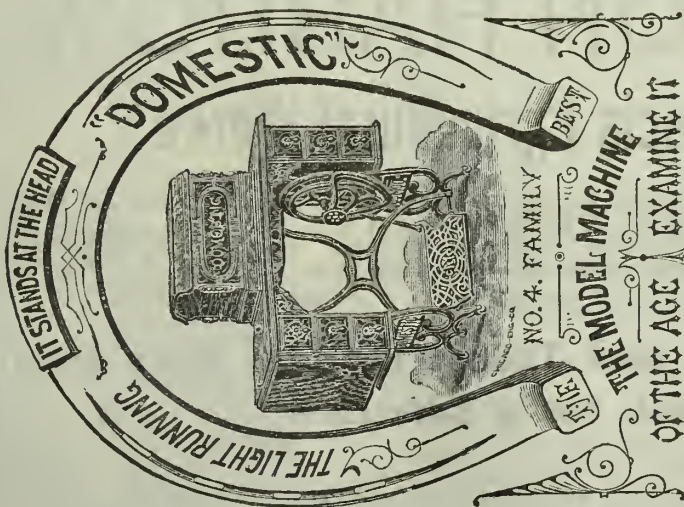
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Manufacture the Well Auger that will bore any kind of earth—makes a well any size required—and is a perfect success in Quicksand and Hardpan; will easily make a deep well in one day.

Our Combined Machine for Horse Power consists of both Earth-boring and Rock-drilling tools. The Earth Auger is used till rock is reached, when the rock-boring tools are attached, and the boring continued till an abundant supply of pure water is obtained.

Artesian Well and Prospecting tools for steam power a specialty. Our tools are equal to, if not better, than those of any manufacture in the United States, and prices below the lowest. Catalogues mailed free. Address,

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## Hubbell's Self-Cleaning Harrow.

This Harrow fills a long desired want among farmers. As it is built in sections for one or six horses, and can be cleaned while in motion without lifting the harrow. Address T. J. HUBBELL, PATENTEE, Mayfield, or McKENZIE &amp; CO., San Jose, Manufacturers.

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We are the Agents for the Celebrated Decker Pianos, and Organs from \$55 upwards.

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## Alfalfa and Clover.

And more can be put in. Ditches are all ready for irrigation, and water abundant. Fine

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Sites. Improvements are very complete. For further particulars and terms, apply to

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Positively self regulating with no coiling spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

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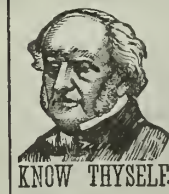
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Weight carried to the extremities of the Axles. Long, soft, double sweep springs. No side sway or pitching motion. It is jointed, relieving all strain.

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Traveling Agent for the Pacific Coast.

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Tempest Windmill Patent,  
Self-Regulating and Improved Gear.

Using the Celebrated "Davis Wheel." Took First Premium at Stockton Fair, 1881. Water troughs always on hand. Address,

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65,000 tons capacity. Storage at lowest rate

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I am now ready to sell Carp which were imported from Germany in 1872, in lots to suit. Address

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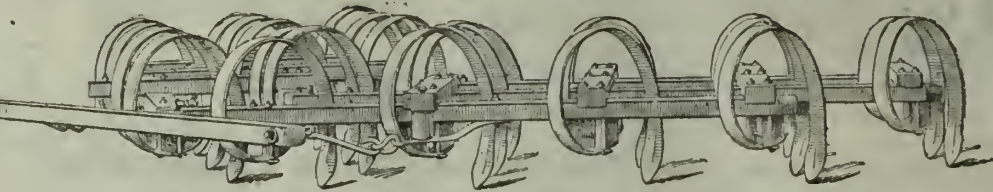
## Manufacturers of the

### CALIFORNIA SPRING-TOOTH HARROW AND CULTIVATOR.



Manufactured in Three Sizes  
—for—  
Garden and Vineyard Use.

The heavy demand and universal popularity of these implements is our strongest proof of their worth, and the time is near when no Intelligent Farmer will be without them. By permission, we publish the following communication from Dr. H. J. Glenn (the largest farmer in the world):



As Improved for 1881.

To the public we would say, after two years' experience on this Coast with these implements, the only defect we have found, was that of the frames working too close to the ground, thereby wearing rapidly in dry work and loading with mud in wet. This has been completely and effectually overcome by Our Improved Fasteners, represented in above cut, and described in our new circulars, thus: "We have recently originated and patented a simple device, by the use of which the Harrow can be worked upon the softest land without the frames coming in contact with the surface. It consists of an iron fastener so constructed as to be placed between each tooth and lower side of frame in such a manner that the frame is raised a sufficient distance above the surface to prevent all wear of the wood, and allowing a free discharge of any trash.

They are easily and quickly adjusted to any Harrow, at the farm as well as in the factory, simply requiring the use of longer bolts, which are always shipped with the improved fasteners."

And would add that lifting the frames, as they do completely out of the earth, materially lessens the wear on the woods, all the extra Cost; and the teeth, resting "IN AN IRON CHAIR, CANNOT WEAR OR MOVE SIDEWAYS."

They are easily and quickly adjusted to any Harrow, at the farm as well as in the factory, simply requiring the use of longer bolts, which are always shipped with the improved fasteners."



Handles and Fenders Attached when ordered for Orchard or Heavy Vineyard Work.

JACINTO, COLUSA Co., CAL., }  
October 20th, 1881. }  
MESSRS. BATCHELOR, VAN GELDER & CO., Sacramento, Cal.—Gentlemen: I am convinced that your Spring-Tooth Harrows and Cultivators, are the most practical, the most efficient and the BEST implement I have ever tried, used either as a Cultivator or a Harrow, for volunteering, for working summer-fallow, or land that has become compact by sun or rain, or for covering seed. I have tested them carefully under all circumstances and now have 18 of the largest sized at work on my ranch, and I think them indispensable. Have recently applied your IMPROVED Fasteners to the entire number, and consider that they fully double their value. Very Respectfully Yours,  
H. J. GLENN.

This from Gen. John Bidwell:

CHICO, CAL., }  
March, 21st, 1881. }  
MESSRS. BATCHELOR VAN GELDER & CO.—Gentlemen: Your Spring-Tooth Harrows are the best I have ever used. Am now trying them in my orchards, and find that they both master the weeds and cultivate the ground. The Cultivators, made on the same principle, are just the thing for vineyards and garden use. The thorough work and comparatively light draft of these implements should commend them to every farmer and orchardist. Very Respectfully Yours,  
JOHN BIDWELL.

This from Chas. Krug:

St. HELENA, CAL., }  
July 29th, 1881. }  
MESSRS. BATCHELOR, VAN GELDER & CO., Sacramento: The Spring-Tooth Cultivator I bought from you last spring gives great satisfaction to me. My neighbors, using the same size of this Cultivator or smaller sizes in their vineyards, are also very well pleased with them. Your Cultivator is a good practical farming implement.  
CHAS. KRUG.

Hundreds more could be given reiterating these opinions. In conclusion we would say we are manufacturing under the original PATENTS owned by D. C. & H. C. Reed & Co., Kalamazoo, Michigan. ALL others are considered infringers, and liable to prosecution, DEALERS and USERS are alike responsible.

Send for our revised Price List and Descriptive Circular. Address,

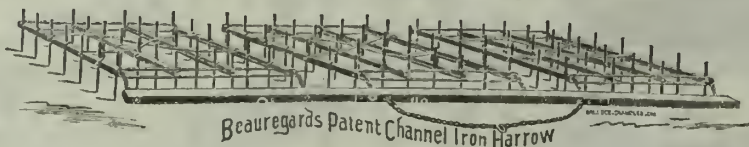
BATCHELOR, VAN GELDER & CO., 900 and 902 K Street, Sacramento, Cal.

# BEAURECARD'S PATENT

## CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to  
Break off,  
or Nuts to get Loose.



Is the Boss of the Field.  
It combines Strength,  
Lightness of Draft and  
Durability.

Light, Strong, Durable, Cheap, and Indestructible. Best Iron Harrow made. Good for a Lifetime.

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality, combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THERE IS NO THREAD CUT ON END OF TEETH—WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

OUR CLAIMS have been, and are daily being substantiated by farmers all over the Coast. Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW**—with Patent Concave Teeth, is the Best, Cheapest and Lightest Draft.

### PRICES:

1 Section, with 24 Teeth..... \$14 00 | 3 Sections, with 72 Teeth and Draft Bar..... \$42 00  
2 Sections, with 48 Teeth and Draft Bar..... 28 00 | 4 Sections, with 96 Teeth and Draft Bar..... 56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide.

For further particulars, Address

**BENICIA AGRICULTURAL WORKS, Benicia, Cal.,**

or **BAKER & HAMILTON, Agents, S. F., and Sacramento.**

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Anthem Harp. (\$1.25). W. O. Perkins.  
Emerson's Book of Anthems. (\$1.25).  
American Anthem Book. (\$1.25). Johnson, Tenney & Abbey.  
Gem Gleaner. (\$1.00). J. M. Chadwick.  
Perkin's Anthem Book. (\$1.50).

At this season, choirs are much in need of new anthems. In the above five books will be found all that possibly can be needed, and of the very best quality. Excellent Anthems and easy Choruses will also be found in Emerson's new **HERALD OF PRAISE** (\$1.00); in J. P. Cobb's **FESTIVAL CHORUS BOOK** (\$1.25); in Zerrahn's **INDEX** (\$1.00); in Tou Jee's **CHORUS BOOK** (\$1.50); in Perkin's **TRAMP** (\$1.00), and in Emerson's **VOICE OF WORSHIP** (\$1.00).

### MUSICAL SOCIETIES

should begin to practice some good Cantata, as **Joseph's Bondage**. (\$1.00). Chadwick.

**Christmas**. (50 cts.) Guttererson.

There are many others. SEND FOR LISTS.

### DO NOT FORGET

That the **IDEAL** (75 cts.), by Emerson, is the book of the season for Singing Classes. Any book mailed for Retail Price. Liberal reduction for quantities.

**OLIVER DITSON & CO., BOSTON.**

O. H. Ditson & Co., 843 Broadway, N.Y.

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135 Montgomery St., near Bush.

**SPECIALTY FOR 30 YEARS.**

### WHOLESALE AND RETAIL.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Compound Astigmatic Lenses Mounted to order in Two Hours notice. Orders by mail promptly attended to.

**REMOVED DEWEY & CO.**  
Patent Agency and Newspaper Offices, to 232 Market St., cor. of Front. Take elevator, 12 Front St.

### Hunter's Eccentric Patent Coupling.

For carriages, pumps and whiffletrees and other couplings. No bolts no rattling and no un hitching. State and County rights for sale. Address HUNTER & FRANCIS Merced, Cal.

70 All New Style Chromo Cards no two alike, name on 10 cents. Clinton Bros., Clintonville, Conn.



# PACIFIC RURAL PRESS

THANKSGIVING EDITION—24 PAGES.

Volume XXII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 26, 1881.

Number 22



DEER HUNTING IN THE MOUNTAINS A DEAD SHOT AT THE LEADER.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### San Diego Notes.

EDITORS PRESS:—Can it be possible that another season has passed since my last review? The cool nights, the early rains, and the preparations for the crop of 1882 show that the season of 1881 is fast drawing to a close.

Mistakes have occurred, to be rectified in the future. Some of us have had too much to do, consequently very little is well done. Some, not accustomed to working the soil, find it uphill work; others, delicate in health, weak in body, find it a continual drag, and mourn for the "flesh pots of Egypt." They long to return to old scenes, old friends and old homes, while others, who are preparing new homes, would not give up the meager comforts, the bright sunny skies and returning health for all the ease and luxury of former years. The majority are well satisfied with their labor—ready for more vigorous work and wider fields of industry.

The discovery of gold attracted more people to our State than any other interest. For advanced agriculture it would have been better that this precious metal had never been found. The mental excitement produced by the sudden wealth of a favored few, has demoralized the country, alluring young men from the study and labor of farm life, resulting in stock speculations, corners in wheat, corners in corn, and all that sort of respectable gambling. Thousands have been induced to try mining, expecting to make their fortune with a few strokes of the pick, without the long study and hard work necessary to success. They have failed; without means, ashamed to return home—tilling the soil is the only resort. It is well, the soil yields bountifully to such poor cultivation, otherwise, the stragglers, grumblers and home-returns would be greatly increased.

You don't expect one who can only drive a nail to build a fine house, to hang all the doors correctly, and adjust the windows properly, but you do expect of one who has learned the art of building. There are numbers of farmers here who can only drive the nail, who have never learned the trade, who expect in one season to do as much as he who has been years in the acquisition of his skill. Skilled labor, well directed, is appreciated the world over, and nowhere are the results more satisfactory than in our State evinced, by the efforts of such men as Briggs, Bowers, Col. Hollister, Cooper, Shorb, Rose, and a host of others, while the unskilled labor is a bane to any country.

That saving thrift which fills the barns and pockets of the old Pennsylvania farmer, which earns a frugal support on the barren hills of New England is scarcely known in California. We waste enough to feed nearly all New England; you can scarcely find a grocery from San Francisco to San Diego, without seeing Chicago bacon, Cincinnati hams, and Indiana pork and lard. It is fifty per cent. easier and cheaper to raise pork here than there. There is not a farmer among us who could not raise with the scraps thrown away, enough for his family and some to spare. Here it is almost a daily occurrence for farmers to buy eggs at their grocery, when a small outlay and a little care upon a few good fowls, would yield a handsome profit. It is said that one egg is equal in the supply of nourishment to nearly double its size, of almost any article of food. Farmers who keep two or three worthless curs, might make a good exchange for some fowls. Economy suggests, instead of wheat, wheat or barley, barley all the time, raise the family supplies, and devote the rest to wheat or fruits, as the case may be, and as Mark Twain would say: "By all means, plant a few chickens."

The results here have been more satisfactory than last season, the yield not as large, but prices much better. Preparations are being made for cultivating a larger territory. Honey and wheat have been shipped direct to Europe. The supply of apples is larger than heretofore; peaches were not equal to the demand; olives less than last season; citrus fruits of all kinds will be abundant; San Diego raisins have proved a success. The early rains do not interfere with drying, thus insuring success. A number of vines were planted, and thousands will be set out during the winter.

The great excitement and absorbing topic is the railroad—25 miles are completed and cars are running. Did you ever, Mr. Editor, after being surrounded with railroads, become exiled to where there were no railroads? If not, you don't know the pleasure of seeing the train move along, and you need not wonder that tears of joy greeted the engine when she first ran from National City to San Diego. Those who had been waiting for 12 long years under repeated promises, were made happy that day, as a realization of their hopes was fulfilled. The change is wonderful which these two parallel bars, the locomotive and the cars have made. Activity takes the place of dullness, new people are here, new houses are put up, and yet there are none to rent; new stores have been erected which would grace any city, all showing that the progress is to be permanent.

San Francisco need not fear that San Diego

will ever be a rival. There is a new city which will claim that honor. National City, four miles south on the bay, the terminus of the California Southern railroad, will claim that honor.

Gen. Nickerson, president of the road, is here devising large things. The wharf is to be extended, more shops put up, hundreds of additional machinists employed. The road will be pushed through as fast as the means and energy of the Boston capitalists are capable of making, guaranteed by their unparalleled success through the undeveloped regions of Colorado and New Mexico.

So that the temptation to buy land and hold for higher prices will be greater than the cultivation of the soil, but there never has been in the history of the county a better time for cultivating crops. All the speculators, merchants, mechanics and railroad hands must be fed. He who produces the supply will reap the harvest.

GEO. C. SWAN.

San Diego, Nov. 10, 1881.

## HORTICULTURE.

### Quarantine Rules for Fruit and Fruit Trees.

The following is the official announcement of the regulations about to be enforced for the protection of fruit and fruit trees in California:

To all whom it may concern: Be it known that I, Matthew Cooke, Chief Executive Horticultural and Health Officer of the Board of State Viticultural Commissioners, being duly authorized and instructed by said Board, do declare the following quarantine rules and regulations for the protection of the horticultural interests of this State, and due notice thereof is hereby given as provided by law, viz., 30 days of publication in two daily newspapers of general circulation in the State. All parties concerned therein are required to conform thereto, subject to penalties provided by law for any infraction or evasion of said rules and regulations.

#### Quarantine Rules and Regulations

For the protection of fruit and fruit trees from insect pests, namely, insects injurious to fruit and fruit trees, authorized and approved by the Board of State Viticultural Commissioners of California. In pursuance of an act entitled "An Act to Define and Enlarge the Duties and Powers of the Board of State Viticultural Commissioners, and to Authorize the Appointment of Certain Officers, and to Protect the Interests of Horticulture and Viticulture," approved March 4, 1881, the Chief Executive Horticultural and Health Officer may appoint local resident inspectors in any and all of the fruit-growing regions of the State, whose duties shall be as provided in Section 4 of an act entitled "An Act to Define and Enlarge the Duties and Powers of the Board of State Viticultural Commissioners, and to Authorize the Appointment of Certain Officers, and to Protect the Interests of Horticulture and Viticulture," provided that there shall be no compensation for such services of inspection excepting a fee, which shall not exceed \$1 for each certificate of disinfection, in case of compliance with quarantine regulations, and not to exceed \$5 for each certificate of disinfection, after seizure for non-compliance; provided, however, such inspection may be employed at the option of the owners of property requiring disinfection, to disinfect the same. And also said local resident inspectors will be entitled to such other fees as are provided in cases of conviction and seizures.

1. All tree or plant cuttings, grafts or scions, plants or trees of any kind infested by any insect or insects, or the germs thereof, namely, their eggs, larvae, pupae, that are known to be injurious to fruit or fruit trees and liable to spread contagion; or any tree or plant cuttings, grafts, scions, plants, or trees of any kind grown or planted in any county or district within the State of California, in which trees or plants, in orchards, nurseries or places, are known to be infested by any insect or insects, or the germs thereof, namely, their eggs, larvae or pupae, known to be injurious to fruit or fruit trees, and liable to spread contagion, are hereby required to be disinfected before removal for distribution or transportation from any orchard, nursery or place where said tree or plant cuttings, grafts or scions, plants or trees of any kind are grown, or offered for sale or gift, as hereinafter provided.

2. All tree or plant cuttings, grafts or scions, plants or trees of any kind, imported or brought into this State from any foreign country, or from any of the United States or Territories, are hereby required to be disinfected immediately after their arrival in this State, and before being offered for sale or removed for distribution or transportation, as hereinafter described; provided, that if on examination of any such importations by a local resident inspector or the Chief Executive Horticultural Officer, a bill of health is certified to by such examining officer, then disinfection will be unnecessary.

3. Fruit of any kind infested by any species of scale insect or scale insects, or the germs thereof, namely, their eggs, larvae or pupae, known to be injurious to fruit and fruit trees, and liable to spread contagion, is hereby required to be disinfected, as hereinafter provided, before removal off the premises where grown, for the purpose of sale, gift, distribution or transportation.

4. Fruit of any kind infested by any insect or insects, or the germs thereof, namely, their eggs, larvae or pupae, known to be injurious to fruit or fruit trees, and liable to spread contagion, imported or brought into this State from any foreign country, or from any of the United States or Territories, is hereby prohibited from being offered for sale, gift, distribution or transportation.

5. Fruit of any kind infested by the insect known as the codling moth, or its larva or pupa, is hereby prohibited from being kept in bulk, or in packages or boxes of any kind, in any orchard, storeroom, salesroom or place, or being dried for food, or any other purposes, or being removed for sale, gift, distribution or transportation.

6. Fruit boxes, packages or baskets, used for shipping fruit to any destination, are hereby required to be disinfected, as hereinafter provided, previous to their being returned to any orchard, storeroom, salesroom or place, to be used for storage, shipping or any other purpose.

7. Transportable material of any kind, infested by any insect or insects, or the germs thereof, namely, their eggs, larvae or pupae, known to be injurious to fruit or fruit trees, and liable to spread contagion, is hereby prohibited from being offered for sale, gift, distribution or transportation.

8. Tree or plant cuttings, grafts, scions, plants or trees of any kind may be disinfected by dipping in a solution composed of not less than one pound (1 lb.) of commercial concentrated lye to each and every two (2) gallons of water used as such disinfectant, or in any other manner satisfactory to the Chief Executive Horticultural and Health Officer.

9. Empty fruit boxes, packages or baskets may be disinfected by dipping in boiling water, and allowed to remain in said boiling water not less than two minutes. Said boiling water used as such disinfectant to contain in solution not less than one pound (1 lb.) of concentrated potash, or three-fourths (¾) of one pound (1 lb.) of concentrated lye to each and every 20 gallons of water, or in any other manner satisfactory to the Chief Executive Horticultural and Health Officer.

10. Fruit on deciduous and citrus trees infested by any species of scale insect or scale insects, or the germs thereof, namely, their eggs, larvae or pupae, may be disinfected before removal from the tree, or from the premises where grown, by washing or thoroughly spraying said fruit with a solution composed of one pound (1 lb.) of whale oil soap and one-fourth of one lb. of flowers of sulphur to each and every one and one-quarter (1¼) gallons of water used as such disinfectant, or in any manner satisfactory to the Chief Executive Horticultural and Health Officer.

11. Owners of fruit of any kind grown in any orchard, nursery or place, in which trees or plants are known to be infested with any insect or insects, or the germs thereof, namely, their eggs, larvae or pupae, known to be injurious to fruit or fruit trees, and liable to spread contagion, and all persons in possession thereof, or offering for sale, gift, distribution or transportation, are hereby required to procure a certificate of disinfection before removal for sale, gift, distribution or transportation.

12. Any tree or plant cuttings, grafts, scions, plants or trees of any kind, empty fruit boxes, fruit packages, or fruit baskets, or transferable material of any kind, offered for sale, gift, distribution or transportation, in violation of the quarantine rules and regulations for the protection of fruit and fruit trees, approved by the Board of State Viticultural Commissioners, may be seized by the Chief Executive Horticultural and Health Officer, or by any of the local resident inspectors appointed by him, said seizure to be the taking possession thereof, and holding for disinfection, or for an order of condemnation by a court of competent jurisdiction.

13. Any person violating the above quarantine rules and regulations shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by fine of not less than \$25 nor more than \$100.

MATTHEW COOKE,

Chief Executive Horticultural and Health Officer.

Sacramento, Nov. 12, 1881.

### Lye as an Insecticide.

EDITORS PRESS:—We are somewhat pleased to learn that the contributors to the RURAL have at last acknowledged that lye, the great disorganizer of animal tissue, is the substance to use to destroy all orchard pests known to injure fruit and fruit trees. It will destroy any and all kinds of animal tissue, if applied freely and in strong solution. We suppose that nearly every one knows this; therefore, there can be but one or two reasons why every horticulturist does not apply it, and these are the expense and difficulty of application. The expense is not so great as many suppose. Eight lbs. of commercial concentrated lye can be purchased at country stores for \$1, and perhaps in quantities, for practical horticulturists, much less. One lb. to one gallon of water is the strength of the solution we have used for some years, followed by good results. One gallon applied by a force pump having a spray nozzle attached will spray two trees from seven to ten years old, or several small ones or one large tree, and make every twig and branch dripping wet. This will cost from three to eight cents per tree, and will serve for the

destruction of all insects, both seen and unseen, if not deeply burrowed in the woody fiber of the tree. You ought to see the exit made by by all unhesitating insects that can either fly or run. Their larvae, deposited in the crotches of limbs and in little cavities of bark where the terrible acrid fluid forms little pools, are destroyed.

Now, a word in regard to the difficulty of application, which, in our humble opinion, is the greater; and which may save some inexperienced applicator from throwing down his pump, and using the language of the great (?) "Let them slide." Lye of the above strength is totally unfit to breathe in the form of fine spray. It will make the lungs smart and cause irritability of the bronchial tubes. In short, it should not be breathed. Therefore, place the vessel containing the lye and also the pump to the windward, and not to the leeward side; then the spray will be blown on the tree where needed. When the wind is changeable, a sponge should be placed over the end of one's nose, after the manner of those who feed threshing machines, and even a veil over the face, composed of mosquito net, or other material we have found necessary to protect the eyes, and the hands should be protected by gloves.

We also have with us a pail of water to be ready for emergencies; and on two occasions it was absolutely indispensable, for the fibers of the hose partially filled the fine holes in the nozzle, and it required great force to discharge the fluid. The hose flew off the pump, and the lye was carried into our face with great violence; and if we had ever doubted its strength before we were ready then to make frank acknowledgment. Sometimes the fibers of the hose entirely fill the holes of the nozzle, and the hose must be uncrowded and held under water, for when the pressure is suddenly relieved there is danger of getting an acrid shower bath.

This application must be made only in the fall or winter months, or before the buds come forth, as it will destroy young leaves or shoots.

Nordhoff, Cal.

II. J. DENNISON.

[By reference to our late articles on scale insects it may be learned that a weak solution of lye can be used without injury to buds or leaves.—EDS. PRESS.]

## THE STOCK YARD.

### Killing Domestic Animals.

As the murdering season in farm economy is approaching we have thought some of our newer farmers might be interested in some practical suggestions which would aid them in their amateur butchery to supply the fresh and cured meats for winter use. We find in the *Country Gentleman* an essay on the subject which will serve the purpose:

It is common to see farmers' pork brought to market with the inner part of one or both shoulders gashed, stabbed, and blackened by repeated misdirected cuts with the knife, which failed to reach a vital part, and consequently the poor hog has died slowly by mere loss of blood, and the pork is damaged. To kill and dress a beef, a sheep, a calf, or a pig should be a part of the business knowledge of every farmer, who may not be able in many cases to procure skilled assistance when it is required. But it is not enough to say how an animal should not be killed and how it should be killed, without giving at the same time explicit directions for performing the operation. There is not one in a hundred persons who could strike with certainty a point one inch square with a steel mallet, the point of a pick or the poll of an axe, without some particular help to guide him and give him confidence. The skilled miner himself, who has handled a steel mallet in striking the heads of drills for years, will always make a gentle trial blow first, to get his distance, before he gives a powerful swing, and much more a farmer or unskilled person will need to be instructed and aided by some device to help direct his blow.

The point for striking an ox or cow is the intersecting or crossing lines drawn from each of the roots of one horn to the opposite eye, but few persons could strike that point at one blow, and might even be several inches from it, in the nervous fear of making a miss, and so make serious trouble. But with the common heavy wooden iron-ringed maul or mallet, any person can strike the head of a bolt at the first effort, because his will never fear to fail. Then if the beast is blindfolded and its head tied down to a ring bolt on the barn floor, or to a stake driven firmly into the ground, and one takes a large clevis bolt, with the end drawn to a fine point, and held in a hickory withe, twisted around it and doubled as a blacksmith holds his chisels and swages, and this is held to the precise point mentioned, it will be driven through the brain, without any fear of failure, by the first blow of the maul, and the beast will drop. It should then be bled instantly (as the effect of the concussion of the brain will be to arrest the flow of blood), or the carcass cannot be drained.

A sheep or pig can be slaughtered painlessly without any such preliminary insensibility. A sheep is not easily made insensible by blows upon the head with an ax, its skull being re-



markedly thick and resistant, and formed for butting. One who tries to stun a ram as he would a bull will find his efforts futile. A sheep may be slaughtered as follows: Provide a bench about two ft. high; tie the four feet of the sheep together in a bunch, and lift it on the bench with the head and neck projecting over one end, the sheep being laid upon the side. A sharp-pointed knife is then thrust through the neck near the vertebrae, with the blade toward the throat, and with a quick sweep is brought forward so as to sever all the vessels at one cut. This causes instant insensibility, because the brain is at once deprived of its supply of blood, and some important nerves (as for instance the pneumo-gastric, which controls the lungs and other important organs) are severed. Death is practically instantaneous in this case.

With the pig a different method is required, because of the thickness of the neck; but it may be rendered insensible just as quickly, although its voice may not be at once silenced. A bench similar to that above mentioned may be used for small pigs, but large ones cannot be handled so easily, and must be held on the ground in a convenient place. A stout man seizes the pig by its fore leg, and another by its hind leg, upon the same side. The animal is, by a quick motion, turned upon its back and held there. The fore legs are held apart, and the operator, with a sharp-pointed knife, with a blade eight or ten inches long, and pressing at the same time with his left hand upon the pig's head to keep it down, makes a thrust in a line midway between the shoulders downward and backward, directly to the heart.

Poultry can be slaughtered similarly to sheep. A convenient way is to provide an empty barrel with nails or pegs driven around the end on the outside, and a number of loops of twine about six inches long. The loop, made into a slip-noose, is wrapped around both legs, and the fowl is suspended in the barrel by slipping the other end of the loop over a nail or peg; a sharp-pointed penknife is then thrust through the neck near the head, and drawn through the throat so as to cut all the vessels, and the bird is drained of blood in a very short time. There is no spattering of blood, and before the barrel is full the first one put in is ready for plucking.

## THE APIARY.

### The Beekeeping Lessons of the Year.

EDITORS PRESS:—There is such a lively discussion of the bee question going on of late, between friends Lyon and Enas, that it has hardly seemed necessary for smaller guns to shoot at all, but perhaps they will be tired out, or out of ammunition, by the time this reaches you, and it will do to keep the apiarian column open with. The question I propose to consider is, What are the

#### Lessons the Past Season

Has taught me?

First, that everyone is not suited to keep bees, and to persuade people that anyone can profitably keep either many or few without being adapted to, and taking an interest in, is as erroneous as to persuade all men that they will succeed as lawyers, doctors, or anything else, for although all will go well with anyone when all goes well with the case, or the bees, and a good year may give anybody some surplus honey, without trouble or care, when the trial year comes, they lose more than enough to make up for all they had gained, as has been shown in cases all around me this year. Some have lost all their bees, others came through without profit, and the three largest, excepting the Bay State Bee Ranch, have sold out to me at a losing price, we being determined to fight the rough time through for the good there might be in the future, and because we like the work as well as anything else. We hoped that though there was so little honey to come in through July and August, that the bees would not take the trouble to protect their combs. We hoped by constant labor to keep out the worms until golden rod should bloom, when, judging from the previous year, all loss would be made good. But alas for human expectation! For this year, though there was more golden rod in bloom around us than ever before, the bees did not work on it, except an occasional swarm. Why they did not, I could not find out, for the bugs and wasps flocked around it as though honey was to be found there. The bees spent their time bumbling around the cockle bur and sunflower, which contain but little honey, and I never know them to visit those plants much before.

Lesson No. 2 would be if you have ever so good a honey plant coming into bloom, do not feel sure the bees will take to it, even though they always did so before; and that shows how it will hardly do to plant for honey alone, unless you find it will pay on an average. After my experience in the fall of 1880, if the bees had been worked as well on golden rod this year as they did then, I thought of planting several acres of it as a honey plant; but now will only experiment in a small way on mignonette, figwort and clover.

The third lesson has been in regard to robbing; not the wholesale kind, where they pour down on a swarm and clean it out; but where a few bees keep crawling into a strange hive to steal, and get piled up dead outside, the remedy for which is to close the entrance so

only one or two can pass at a time, until honey is plenty outside.

Lesson 4. In extracting time, look out that too many strange bees do not drop in upon your empty frames as you put them in the hive, for they are sure to be carried out dead, and will soon make quite a pile in front of the entrance, with a less pile in your pocket at the end of the year.

Lesson 5. Look out for skunks. We often noted their peculiar perfume, which, though not agreeable, we did not well see how to dispose of, as the dog wished to keep as far from it as we did, until one day, finding some of the sticks which close the entrance moved, and tracks about it, we placed a steel-trap there, and the next morning had the pleasure of putting a load of shot into the head of one whom we had been taught to regard as the farmers' friend. So he probably is, but an autopsy disclosed the fact that we had been paying dear for his friendship, as he had a good pint of bees inside. How many pints he and his friends had disposed of during the summer I would like to know, for I would then be better able to form an idea how valuable they are to the farmer and how expensive to the apiarian. The trap has done duty since, with the same result, so one more leak in the apiary will he stopped for next year.

Friend Enos says if I would have Italian bees the moth would not trouble me, but he must excuse me for differing from him, as half my bees have two and three yellow bands, the queens being raised from a daughter of an imported mother sent to me by different parties. One Italian and one Cyprian swarm kept the worms out all summer, but others did not, and my friend of the Bay State Bee Ranch, who has some 200 swarms almost entirely blacks, with no new blood introduced for some years, had very little trouble with the worms, perhaps because his bees seldom, if ever swarm, whilst mine persisted in doing so, in spite of taking out all queen cells every week. He suggested the swarming might be caused by the introduction of new blood. What do you think of it? How are your Italians about swarming? Can you run 200 swarms only extracting from the top, and not have a half dozen swarms come out during the season, but all remain quietly at work filling up the frames for extracting? If so, I should feel like trying one of your queens. There are probably more lessons that have been learned the past season. But this letter is long enough, so we will close.

ISAAC B. RUMFORD.

Kern Island Apiary, Bakersfield, Cal.

## SHEEP AND WOOL.

### Sheep on Alfalfa.

The Visalia Delta has an interesting article concerning the growth of alfalfa and its value as sheep forage, from which we quote as follows:

#### Land Suited for Alfalfa.

E. Giddings, living between Hanford and Lemoore, was, among others, visited by the Delta in the interest of this subject, and much that here appears is the result of his careful and reliable experience. Alfalfa must have an open soil, with considerable depth to hard pan, and the soil must be moist. As the Mussel Slough country meets all these requirements, it follows, as experience has amply shown, that it is the best country in the great San Joaquin valley for growing alfalfa, with Kern island, perhaps, excepted; and Mussel Slough is fully as good as that locality.

To the northeast of Visalia, in the vicinity of the foothills, is an immense unoccupied tract of red clay land lying in hog wallows, and having a shallow depth. It would be useless to sow alfalfa on such land, although when the ground is leveled and irrigated, a good crop of wheat can be secured. As alfalfa requires water, the reason for selecting open soil is obvious; it readily receives water by percolation, and retains it for a long time. In the cultivation of alfalfa this axiom should always be borne in mind: The yield of alfalfa is in proportion to the amount of water supplied. Even on adobe soil alfalfa will yield abundantly, but in a dry year it will probably be burned to death. Furthermore, this kind of soil must be irrigated by flooding, as water cannot percolate through it in horizontal planes. Flooding alfalfa in summer is a dangerous practice, as it is apt to be scalded in drying off. In any case, it is advisable to irrigate as little as possible in summer, unless it is wanted to produce more alfalfa than is needed for home consumption. It will be understood that no part of the county, except Mussel Slough, can be successfully irrigated by seepage, which is the radiation of water from the ditches, as distinguished from irrigation by overflow. It so happens that the soil best adapted to alfalfa is that situated nearest to the water courses.

#### How to Irrigate.

It is impossible to drown alfalfa by overflow irrigation in winter; and it would be well to put as much water on the land then as it will comfortably take without great loss by evaporation. The seed, in starting a crop, should be sowed early in February. After the ground has once been well seeded it will not require sowing again for 15 or 20 years, if ever. Put on water when it is needed in the spring. The judgment of the farmer must be depended upon as to when this time arrives, as the irregularity of the sea-

sons, the variety of the soils and the variation in the amount of rainfall and irrigation render positive instructions impossible. May is the average time. It would be well to irrigate every time the growth is cut, which should, under favorable conditions, be once in every 30 or 40 days. The land need not be too level, as water fills the depressions and furnishes a gradual supply after the flow has ceased. In this county water may be had through the ditches until the middle of August. The most important consideration in this industry is the fact that a drouth cannot kill alfalfa. Its roots penetrate sometimes to an incredible depth, frequently reaching down 25 ft. They go until they find moist ground. It thus is independent of the seasons. Such a thing as a failure of the alfalfa crop is impossible. This is an important consideration in this country, where only one good year in three may be expected. In no case will it ever happen that properly selected land will fail to furnish sufficient alfalfa pasturage to keep alive and in fair order the number of sheep calculated for a good season. Alfalfa will even live a year without water either from rain or irrigation.

#### Starting the Crop.

The land should be prepared for sowing as is done in other crops. In adobe soil there should be no lumps. About 15 lbs. of seed to the acre is a good average. It is much more difficult to obtain a good stand in adobe soil than it is in a sandy loam. If the adobe soil has not a subsoil of a lighter quality, alfalfa will not grow. It requires from one to two years, owing to the quality of the soil, for the tap-root to find water, until which time considerable care must be taken. Hogs will destroy it if turned on before that time arrives. It is better to sow in a good season, and to use an abundance of water the first year. Sheep will not injure the young crop. On the contrary, they soon clear the alfalfa of every trace of weeds. It is not injured by the trampling of sheep, and in this respect it has an immense advantage over other kinds of pasturage. Where a good stand has not been secured the ground may be re-seeded by lightly stirring the surface with a harrow, as deep plowing (which will be unnecessary in view of the recent plowing the land has had) will destroy the cap at the top of the tap-root. This cap lies very near the surface, and a plow might cut it off. From it alone is the crop sustained and replenished after mowing or after it has been eaten down. Unless a good stand is secured weeds will be rank, whereas a good stand will destroy all foreign growths.

#### Some Suggestions.

The alfalfa, as may have been inferred, can be cut from time to time while the sheep are running on it, as 10 sheep to the acre will not keep it down in the growing season. In feeding it out in winter, it is neither necessary nor advisable, in Mr. Giddings' opinion, to feed it in racks. His method is to throw it on the ground. The sheep do not waste a particle, and in this way the expense and trouble of racks are avoided. Of course, an acre will, in the spring and early summer, support a much larger number of sheep than it would if it were not intended to cut any for winter feeding; but this number could not be supported on the slow growth of the late fall and early winter. Many farmers in this county pursue the very reprehensible course of making no winter provision for their stock, leaving it to live as it can on the scant dry feed of the plains. There is little growth of alfalfa in September, and not until the rains have had plenty of time to take effect will the growth keep the sheep in good enough order for a fine yield. The confining of sheep in this manner brings a somewhat larger wool crop than can be obtained by running them on the plains or in the hills, which exhausts them and causes them to consume more feed, with not as good results. Above all, the man who runs sheep on alfalfa is always sure of a crop, and has comparatively no work, no anxiety, no expensive machinery to keep in order—in fact, none of the wearing cares attending farming.

#### Remarkable Facts.

Whereas it is a common fact that these plains, once used only for sheep grazing, are now cultivated, while the sheep have been driven to the mountains, it is only a question of time when the sheep will return to the plains and crowd out the less profitable industry of wheat growing. The following facts were furnished by Mr. Giddings, and coming from him they may be relied upon: He has thorough business tact, and large experience. On 300 acres of alfalfa, 3,000 sheep may be run, or 10 sheep to the acre, the year around. They yield each 10 to 12 lbs. of wool per year. The spring clip will bring, on an average, 20 cents per lb., and the fall clip 15 cents. That is, dividing the year's yield into two equal parts, and taking the average estimate of 5½ lbs. for each half, it is seen that each sheep produces \$1.92½, or 10 sheep \$19.25. The increase by lambs is 80%, and in the fall they are worth \$1.50 each, or \$12 for the increase on one acre. From the \$19.25 must be taken 5% for loss by disease, leaving \$18.29. Estimate the land and fences at \$30 per acre—which is high—and interest at the high rate of 10% and there is \$3 per acre for interest on the investment, to which must be added 66½ cents for taxes, or \$2 on the \$100. For 3,000 sheep one man is required, \$30 and board, or \$40 per month, or \$480 per year; which, apportioned to one acre, would be \$1.60 per year. The total expense, therefore, is \$5.

26½ per acre, and the total income \$30.29 per acre, leaving a profit of \$25.02—say \$25. Hence the 3,000 sheep will pay a profit of \$7,500, or \$2.50 apiece. This is from one year to another, including those years when wheat may fail, the presumption being that proper ordinary skill and care have been exercised with the alfalfa and sheep.

## THE SWINE YARD.

### Curing Hams and Bacon.

A reader of the PRESS in Oregon recently asked for recipes for hams and bacon, to which we briefly replied. We find in the *National Live Stock Journal* some further information on the subject, which we present as follows, as it is the season for preserving pork in different ways: The curing of hams and bacon is a very simple process, and is well understood by many of our readers. The ham should be trimmed pretty closely, so that there shall be no large loose masses of fat lying in flabby folds at its lower extremity, for to leave this on is simply to have so much lard wasted. The sides may be cut in any desired shape for conveniences in packing, and they should always be salted away in separate vessels from the hams, shoulders and other parts containing bones.

Below are given a few receipts for curing hams, that have been long in use, and are fully approved: For 100 lbs. of meat take seven lbs. of good salt, two and a half lbs. of brown sugar (or one quart of molasses), two ounces of saltpeter, one ounce of cayenne pepper, and two and a quarter ounces of cloves; two ounces of black pepper may also be used, if it is not distasteful to those who are to eat the hams. Pepper is used merely to prevent attacks of flies. Boil all the ingredients in sufficient water to cover the meat when closely packed in the cask. Skim and cool before pouring over meat. The same ingredients can be used for rubbing the hams, if this mode is preferred to a pickle. For rubbing, however, it is better to add another lb. of salt and half a lb. of sugar to the above ingredients. This pickle is equally good for hams, shoulders, bacon, corned beef and dried beef. When corning beef the meat should be well rubbed in salt, and packed closely in a cask, two days before it is pickled. This extracts the blood, and the meat must be taken out and washed before packing for pickling.

For 100 lbs. of bacon or hams: Take four gallons of water, six lbs. of salt, two and one-half ounces of saltpeter, one and one-half lbs. of A or granulated sugar; boil and skim carefully, and apply cold. The same receipt is equally useful for beef during all except the hot months.

If the hams and bacon are carefully packed, the above mixture will entirely cover; if not, add enough to cover. A syrup or molasses barrel is probably the most easily attainable good barrel to use for hams and bacon. Such a barrel, if kept clean and used for nothing else, will last for years. The above is what would be technically called a store pickle. The length of time desirable to keep the meat in this pickle must be determined in each case by the temperature in which the barrel stands and the thickness of the pieces—four weeks for light to medium pieces of bacon; six weeks to two months for medium to heavy hams.

If the meat is bloody or dirty, it should be soaked before packing, otherwise the blood and dirt may rise to the top in scum, and will taint any piece of meat touched, and in the end spoil all. If such scum does arise, take it off; if it is had, repack and wash the meat. Boil, stir and skim the pickle, and replace all when cold. Concerning salt, use the best you can get. Turk's Island is the best, but any of the good brands will do.

For salt pork or pickled pork the following directions may be observed: Take a new clean oak barrel, cover the bottom with a layer of an inch of dry salt; pack your pork in even layers, the skin next the barrel in circles; cover each layer with the same quantity of salt, filling all the spaces; when filled, make a strong brine and cover all. Pork thus cured will keep in any climate or weather, and keep sweet, but the pork must always be covered in the brine, and any small floating pieces must be kept off. Never try to keep salt pork in a package that has been used for anything else, and never, under any circumstances, pack any "joints" or scraps along with the pork. Hams, shoulders, backbones, etc., must not go inside of your pickled pork barrel.

A correspondent, famed for the quality of his smoked hams and bacons, gives us the following as his method of smoking: After the meat is sufficiently salted, it should look bright and clean, should be hung up for three days in a warm, dry place, to drip and dry thoroughly, and then smoked. Five days' consecutive smoke is enough. Some careful men take a long time, smoking once every few days, keeping in the smoke-house meantime. I have no smoke-house, and my rule is to smoke for five days in the corn-cobs, then hang in a dark, dry place, of even temperature, using as desired until about the 1st of May; then I smoke the pieces again for a day or two, wrap in newspapers, and hang in cotton bags made for the purpose, into which the meat is slipped, the end tied up, and the whole hung in a dry cellar,



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Farmer Ransome's Thanksgiving.

(Written for the Rural Press by G. W. T. C.)

Thanksgiving day! The first rains of the season had just passed, and it was winter in California. The atmosphere was pure and clear; the air soft and balmy, so peculiar to our climate after the first rains, summer seeming loth to leave so fair a land. At one step we pass from summer and its labors into winter toils and pursuits. As our summer usually comes to an end about Thanksgiving day, we can close up our accounts for the season and hold our thanksgiving for the blessing vouchsafed in unison with the old folks at home.

At the home of Farmer Ransome, in one of our beautiful valleys, where he had resided 30 years, great preparations were being made to celebrate this day, and there was gathered a large company consisting of neighbors and friends, children and grandchildren. Besides, this was their golden wedding day, and the family had gathered in from all parts. For 50 long years they had traveled the dusty highway of life together. They had seen no very great ups nor very great downs; the tenor of their way had been an even one, and they approached the veil of the great future with full faith in an immortality beyond. The past year had been a "failing one," as it is called, for the old couple, and many feared they could not stay to celebrate their golden wedding on earth. To-day they stand before the minister again, once more to be united in wedlock, whose golden anniversary must be celebrated far across the river, beyond the shores of time.

Such a Thanksgiving dinner could only be found in California. The turkeys were there, of course, with their stuffed breasts and cranberry sauce, fresh vegetables and pumpkin pies. Flowers fresh from the garden brightened the table from end to end. Fruit dishes filled with oranges from Riverside and grapes from Strentzel's vied with the flowers to beautify the board. From Los Angeles came figs and pomegranates; Winter Nells pears and Yellow Newton pippins from Santa Cruz were ranged in pyramids, while almonds from Santa Clara and raisins from Yolo were strewed promiscuously the length of the table, giving the whole a rare picture of profusion. Beside each plate was a goblet filled with strawberries and cream.

The carving was done by the eldest son, Henry, who had with him his wife and three children. His father sat on his right, his mother to the left, and next to her his four sisters; opposite, next the father, ranged his three brothers; next to his sisters came his wife and the wives of his brothers, and next to his brothers sat the husbands of his sisters; next came the grandchildren; the boys on one side, and the girls on the other, thus ranging all the men folks on one side, and the women folks on the other. Then followed neighbors and friends, as suited their fancy. A blessing was asked by the old farmer, and the feasting began in high glee and merry repartee. It was a perfect Babel of rattle and clatter and gabble for nigh on to an hour. Then the venerable patriarch arose in his place and said: "Sons and daughters, neighbors and friends, it becomes us on these occasions of thanksgiving to look back through the past year and recall the various ways in which it has pleased God to bless us. Ever since the Thanksgiving day mother and I were married we have never failed to reckon up the blessings of the year. On our first anniversary we gave thanks for our first born, now at the head of this table, and so on through all these 50 years we have never failed to find that every year had within it some blessed thing to give thanks for. This day we thank God that we are spared to each other to meet with you all again. Humor the whim of old men, my children, and let each recount what you feel was the greatest blessing of the year, and let me judge who has been most blessed. How is it with you my son Henry?"

His son Henry, thus appealed to, arose from his seat to reply. He was not fluent of speech and could never express what he wanted to in any very satisfactory manner; said he had had a good crop this year and didn't see that he had any cause to complain and sat down; but not so with his wife, a medium sized dark-eyed woman, with a thoughtful countenance when in repose, but full of life and resolution when moved. She was a favorite member of the Grange, where she was well known for the business way in which she took part in its debates. Her heart was too full and she could not keep her seat. "Father," she said, "this has been a blessed year for us; we have had a good crop and paid off the mortgage, that has been over our heads for seven long years, and we don't owe a soul a cent. I feel as though I had come out of the shadow into the bright light of the sun; as though after a long weary journey I could sit down and rest; the world looks different to me, as though I could take breath and look around to see how it was getting along, and when my mind wanders off among my air castles there is no skeleton there. If any one has had a greater blessing than this I would like to

know what it is, that's all." "Well spoken, my brave daughter, you have well earned the right to sit down after a long journey. How is it with my son James?"

James arose quickly and said: "Father, you need not ask that question, you all know how our blessing came to us; how last spring my daughter Jessis was given back to us almost from the verge of the grave. The many, many days and nights we watched and prayed for her recovery! I would freely have given all I had for her. No one has more cause for thanksgiving than I."

"Yes, yes, my son, that was indeed a blessing almost beyond price."

The eldest daughter said: "We shall not compete for the prize, but I must say, I am thankful we have this year been able to build the new house we have dreamed about so long. We have lived ever since we were married in that poky old hole of a place."

The youngest daughter lifted above her head a baby of about six months. "I am like you, father, I give thanks for my baby boy—my first born."

And so it went on through all the family; and as the interest increased in the subject, none but could recall some almost forgotten good turn that had befallen them.

At last, an aged widow, who resided on the adjoining farm, arose, near the end of the table. "Friends," said she, "let me lay my blessings upon this family altar. I have a son, my youngest, my baby, whose feet have been fast treading the downward path of the drunkard, which leads to destruction. No tears, nor love, nor entreaty could turn him from this wine cup. Last New Year's day, in calling around with his friends, he came to one of his favorite places, and where again he expected to find wine, he found only water on the sideboard. The suddenness of this rebuke silenced him strangely, and he then pledged himself never to drink again. Oh! how I have blessed that home. He has kept his pledge, and is with me to be my comfort in my old age."

"Mother May! Mother May!" exclaimed the old man, as he rose to his feet, "you have been blessed beyond us all. A soul rescued from the drunkard's grave far outweighs all our earthly blessings."

Point of Timber, Cal.

### Co-operative Economy Illustrated.

The Co-operator, of New York, has the following: "The accompanying illustration of what co-operation may do for the people, is taken from a circular published for the purpose of interesting the people of 'Seneca Falls, New York,' in the co-operative movement. The statement is so clear that it will not be a difficult matter for any person to make a corresponding one for the city or town in which he resides. What might be saved in a city like New York under this system, is almost too fabulous an amount to be stated, while the saving for the State or nation would far outweigh the cost of the war for the maintenance of the Union. Thus, without the shedding of blood, without suffering or wrong, many more than 4,000,000 people, though not in bondage, can be raised to a position of self-sustained independence, which they have never yet enjoyed. In view of such a fact, these estimates are worthy of careful study.

"In this village there are, besides many other stores,

25 groceries, with a capital of about.....	\$ 70,000
4 meat markets, with a capital of about.....	7,000
5 tobacco and cigar stores, with a capital of about.....	7,000
2 coal and lumber yards, with a capital of about.....	21,000
9 dry goods and clothing stores, with a capital of about.....	80,000
5 boot and shoe stores, with a capital of about.....	20,000
4 hardware stores, with a capital of about.....	40,000

57 stores, each, as above, having invested in the articles named.....
 \$245,000 |

All the business done by these distributing agencies could be done on the co-operative plan with a capital of \$100,000, which would set at liberty for other uses the sum of \$145,000, making a saving in interest alone of \$10,150 per year, which the farmers and working people would gain either in the form of dividends or in lessened cost of their needed supplies of living. In addition to this saving in the item of interest, the profits made under the present system would also go into the pockets of the consumers. Again the cost of distributing the goods would be lessened one-half, on the co-operative plan, as may be seen from the following estimate showing the cost of distributing groceries and provisions under the existing system, and what the cost would be under that of co-operation:

Interest on the \$70,000 invested in the business of the 25 grocery stores.....	\$ 4,300
Rent of the 25 grocery stores.....	5,600
Salaries of the owners, or principals and assistants, say 50 persons, at \$450 each.....	22,500

Total for interest, rent and salaries per year.....
 \$33,000 |

On the co-operative plan all the business done by these 25 stores could be done as well, if not better, by 6 stores suitably located, at a cost not exceeding as follows:

Interest on \$20,000 capital required.....	\$ 1,400
Rent of 6 stores, at say \$450 each.....	2,700
Salary of agent.....	2,000
Salaries of 6 assistants at \$400 each.....	2,400
Salaries of 6 assistants at \$450 each.....	2,700
Salaries of 6 assistants at \$350 each.....	2,100
Salaries of 6 assistants at \$250 each.....	1,500

Amount for salaries of 25 employees.....
 \$11,900 |

Total for interest, rent and salaries per year.....
 \$16,000 |

Balance net gain on the co-operative plan per

year in the items of cost, as above specified, \$17,000.

Estimating the sales of groceries and provisions in this village at \$200,000 per year, the gross profits on this amount, it is seen, would be about \$40,000.

Expenses of carrying on the six stores as above, \$16,000 Insurance, freight, taxes, etc.....
 4,000 |

Total expenses per year.....
 \$20,000 |

This amount of net profits would be \$20,000, in this one branch of business, which the farmers and working people might divide among themselves every year. The other branches of business mentioned might, also, be taken hold of by the consumers, and carried on with the like profit and advantage.

**INFLUENCE OF THE STATE GRANGE MEETING.** Sister Mary E. Wheeler writes thus appreciatively of the effect of attendance at the last session of the State Grange: "We arrived home on the 11th, after a ride of 40 miles in a spring wagon, tired of course, but not sorry that we attended the State Grange. We considered the time well spent, and think it was for the benefit of all that had the pleasure of meeting there, and we trust will be a benefit to all the Granges in this State. We feel renewed in spirit of the work in our Order, and will use all our energies to get more of our neighbors into the Grange, and should like to see whole neighborhoods come in at once, not with a view to make money, but to live up to the principles of our Order. It would be good for the whole community, and make people think there is something more so live for than the little sums of money they are striving for."

**REPRESENTATIVES AT THE STATE GRANGE.**—

At the recent session at Santa Rosa, Bro. D. A. Ostrom presented credentials from Wheatland Grange as having been elected to represent said Grange in the absence of its Master. The W. M. ruled that none but duly elected Masters, and their wives who are Matrons, are entitled to vote on business presented before the State Grange.

A HARVEST feast will be spread by the ladies of Temescal Grange at Old Fellows' hall, Oakland, Saturday, December 31. Grange will open at 1 P. M. Two cultivators will be made husbandmen. After the feast, election of officers. All Patrons are invited.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

**THE RAIN.**—*Record*, Nov. 19: The rain which has been coming down this week will be generally welcomed as opportune. The advantages of early rains sufficient to start the plow are fully understood, and instances are very few wherein the early visitation of rains was not followed by a good season. The present rain will doubtless be sufficient to start winter plowing and the farmer will thus be enabled to put in his grain in time to reap the sole benefit of the rains that are almost certain to come at the usual time. It is true that the work of summer-fallowing has only been thoroughly inaugurated, but enough fair weather will doubtless intervene between now and the next heavy rain to permit the completion of that work. It is also fortunate that the rain is of sufficient amount to sprout and sustain the grain already sown, instead of a shower just enough to sprout the seed, followed by a long dry spell. The present indications can be accepted as favorable for another good season of plenty and home happiness.

#### COLUSA.

**COTTON.**—*Cur. Appeal*: George Ware's cotton venture is not so bad after all as it was reported. The perennial, or tree cotton, is not adapted to this climate, and is wholly unsuited for severe frosts, but his annual (the common upland cotton of the Southern States), about 150 acres, made a good crop. It is being picked at this time. He will put in several hundred acres on his home ranch, near Colusa, in the spring, so it is reported.

#### FRESNO.

**SORGHUM.**—*Republican*, Nov. 19: Ambrose Grow left at our office this week a bucket of homemade sorghum syrup that for quality and delicacy of flavor unquestionably takes the cake. The growth of sorghum and manufacture of syrup and sugar is becoming an important industry in the Eastern States, and in view of the peculiar adaptability of our soil and climate to the easy and abundant growth of this plant, we can conceive of no good reason why enough syrup and sugar for home consumption is not annually manufactured here in Fresno county. It has long been a settled principle of political economy that a large diversity of industries is the surest guarantee of social prosperity, and the growth and production of sufficient sorghum to meet the home demand would result in a public benefaction.

**LOCAL HAY MARKET.**—Something like three years ago, when alfalfa was being generally planted by our colonists, there were plenty of prophets who stoically shook their heads, saying: "The matter is being overdone. There will be no market for so much alfalfa hay." Had these "know-alls" been at the auction sale last Monday at the Washington Colony, they would have seen a resident of Fresno bid \$12.25

a ton for alfalfa hay, and that in the stack over six miles from town. The truth is, that the amount of work planned for the coming winter will require so many animals that our local supply of hay is likely to become exhausted, and importations from adjoining counties are almost certain to be a necessity by January 1st. KERN.

**PROPOSED DAIRY ENTERPRISE.**—*Californian*: The old Cotton farm, adjoining town, is about to be devoted to dairying purposes. It covers about 800 acres, nearly all of which is in alfalfa, and scattered over it are a great many huge stacks of hay that must contain at least 8,000 tons. It will be in charge of Mr. J. S. Ellis, who has been for many years engaged in the business, on a small scale in this vicinity. Operations are to commence immediately. The cows have been principally selected from the Greenfield farm of Messrs. Haggis & Carr, and are first-class. A temporary building for a dairy-house is about completed in the vicinity of the old farm buildings, but in the course of a few months good and permanent buildings of brick, that have already been commenced, will be erected on some elevated ground, on the prolongation of L street, that overlooks the whole farm. Exactly what the character of these buildings will be is not known, but among them will be an ice factory, so that carloads of butter, and other articles subject to injury from heat, may be sent to the city in a frozen state. At present a large cellar is being constructed at the place indicated, above which a two-story building is to be erected, and a deep 8-in. well is being bored from which water is to be raised by steam power to the height of about 33 ft. into a 20,000 gallon tank. The intention is to make this the largest and best appointed dairy in the State and, when in full operation, a carload of butter will be despatched to market daily. The water, before being converted into ice, will be passed through a patent filter warranted to free it from every impurity and leave it absolutely pure.

#### LOS ANGELES.

**SWEET POTATO.**—*Mirror*: The biggest potato story we have yet encountered, is that related to us by Mr. J. S. Baldwin, of Orange, and vouched for as the simple truth. His says in digging his sweet potatoes he came across one, which, after digging down a reasonable depth, refused to yield to his efforts to pull it up. He then chopped it off and after measuring the section, the family made a meal of it. He went back again when another mess was wanted, determined to see the end of the matter, or the potato, rather, and it was only after excavating a hole which seemed like digging a well, that the end was reached. The entire length of the potato, when the different sections were measured, footed up 3 ft. 6 inches. It was about 3 inches in diameter, in the largest place, tapering each way. Mr. Baldwin's neighbors bear testimony to the truth of this story.

**ORANGES AND PERSIMMONS.**—Our people, including the orange growers themselves, are astonished at the keeping qualities of our oranges. It has been thought necessary to have the crop all gathered and disposed of by the latter part of June at the latest, but our fruit venders are yet hawking the most delicious oranges about our streets of last year's growth. They are improved by the keeping, it seems, and many of them seem as though they would keep in good condition for months to come. Mr. J. S. Baldwin, of Orange, brought a couple of Japanese persimmons of different varieties, elegant specimens of the fruit, measuring 8½ and 9½ inches in size. He has three varieties on his place, and had brought up to Messrs. Woodhead & Gay 100 persimmons, the product of his trees.

**SCALE LEG IN FOWLS.**—Mr. D. Brunk gives us a very simple remedy for "scale-leg," which is troubling the poultry of many of the farms and ranches hereabouts. It is simply bathing with kerosene, and then thoroughly cleansing with strong soap suds. The most convenient method of application, Mr. Brunk thinks to be this: Take a small pail, fill partly with water, and pour in some kerosene, which will remain on top of the water. Then take your fowl and dip its legs into the pail. After two or three minutes wash thoroughly with soap suds, as this prevents any ill effects to the fowl from the kerosene. A number of other diseases are the direct result of "scale-leg," and when the cure is so simple and eggs so valuable, it stands the poulturer in hand to be watchful for signs of disease and to be prompt in arresting it.

#### MENDOCINO.

**A HOP VENTURE.**—*Beacon*: One of the prominent hop-raisers of Mendocino county was in San Francisco about the time of the late appreciation in the price of hops. After having himself posted, he inquired of the firm with whom he had his hops on sale whether they had made any disposition of it, and on receiving a negative answer, he asked whether they had any hops for sale, and at what price. This being answered satisfactorily, he at once closed a bargain for what they held, and also secured as much as he could to advantage outside, and in a few days realized about a thousand dollars on his venture, besides securing a good round price for his own crop.

**THE FAIR ASSOCIATION.**—*Dispatch*: Last Saturday, Director J. M. Standley circulated the following subscription paper in Willits, and in less than two hours secured \$1,030 toward liquidating the indebtedness of the Mendocino County Agricultural Association. The association is burdened with a debt of something over \$1,000, and it is earnestly desired to raise as much of the amount as possible, so as to escape



the necessity of making the further payments of interest.

#### MONTEREY.

**CELERY GROWING.**—Castroville *Argus*: After trying for a number of years, almost in vain, says a farmer, to raise good celery on an ordinary dry garden soil, I finally borrowed the use of a little patch of reclaimed swamp land—deep, black muck, well drained but moist, and for the past two seasons have grown on it very fine celery with but little labor. So I shall never again attempt to grow this vegetable on common garden soil without some cheap and easy method of irrigation.

#### NAPA.

**WINE STATISTICS.**—After careful collections of statistics the editor of the *St. Helena Star* finds that the total production of wine in Napa county this season is 1,016,000 gallons, a falling off of 894,750 gallons from last year, when the amount was 2,910,750 gallons. This wine is contained in 54 cellars.

#### SANTA BARBARA.

**A FARMING BOOM.**—*Press*, Nov. 19: In the vicinity of Lompoc and Los Alamos every available acre of arable land has been rented or purchased. This is something that was never before known in the history of the country. Parties 20 miles from a landing are giving one-fourth of a crop as rental for farming land, and thousands of acres more could be rented upon the same terms. The meaning of all this is increased immigration and abundant harvests. Merchants, mechanics, and in fact everybody, can afford to farm land which brings in such handsome returns. Everybody in the west end of the county is elated over the rich yield and good prices of this year's crop, and is anxious to seed more land next year. The farmers were never before so prosperous and hopeful. The result of all this will be such a demand for increased acreage that the large ranches of the county will ultimately be divided, and hundreds of new farms will be opened to settlers. Colonies at the present time could find more desirable bargains in Santa Barbara than in any other county in the State. The subdivision of ranchos is a problem which will readily be solved by an influx of immigration, a demand for farms and the consequent advance in the assessed valuation of lands.

**THE FAIR.**—*Press*, Nov. 12th: The joint exhibition of the Santa Barbara County Agricultural Association, and the Santa Barbara County Horticultural society was held at the theater. Though this is the first agricultural exhibition ever held in this county, it gives those in attendance a better idea of the advanced stage of our agricultural interests than could be obtained in any other way. The large audience room of the theater, where fruits and the products of the dairy and the farm are exhibited, is beautifully and tastefully decorated. The galleries are festooned with evergreen; the tall pillars supporting the galleries are wreathed with the delicate sprays and blossoms of the pepper tree, with clusters of golden fruits arranged about the capitals. In the center of the room stands a handsome pagoda constructed of evergreens, 12 ft. in height, surmounted by a conical-shaped roof covered with palm branches of different varieties, while from its topmost point rises a cluster of lovely pampas plumes. The slender pillars supporting the roof are concealed by pendant sprays of the pepper tree, intertwined with which are its delicate blossoms and shining clusters of red berries. Underneath the arches and between the pillars shelves are placed about 2 ft. above the floor, which are filled with choice plants and flowers. Beneath are drooping palms of several different varieties, making altogether a most attractive representation of sub-tropical foliage and flowers. The motto "Plenty Crowns the year" is placed over the stage. It is in large letters, made of the beautiful leaves of the rubber tree. Pomona's temple, a fitting tribute to that charming goddess, stands near the general entrance. It was constructed by Mrs. Ashley, and is crowned by a choice variety of fruits from her highly cultivated grounds. The walls of the exhibition room are decorated with palms, arranged in tasteful designs. At least four varieties are used in the decorations.

**WITHOUT IRRIGATION.**—J. Lambert in *Press*: As quite a number of friends have manifested an interest in our attempt at growing oranges without irrigation, with your permission I will give my experience so far through your columns. Last February I obtained from Mr. Harper's nursery 450 orange trees and 10 of lemon. I set them in the oldest cultivated land in the Montecito. I have not lost a tree, except by gophers, and have got a better growth than I have noticed on any that have been irrigated, while by simple cultivation my soil has kept so moist that at any time during the summer it would uproot any seed planted in it. I feel perfectly satisfied that on our place at least, irrigation is not only useless, but a positive damage both to trees and soil.

#### SAN BENITO.

**SQUIRREL POISONING.**—*Advance*: Although the vigorous war of extermination which has been prosecuted against the squirrels in San Benito county for years past has had the effect of greatly reducing the number of the pests, there are still enough left to do great damage. The war should be kept up, and as this is the proper season of the year, we present the following method, which is recommended as being very successful: To one stick of phosphorus use four quarts of wheat, to which put one cupful of boiling water. Take a cupful of boiling water, put in a stick of phosphorus three and a half inches long. It will soon dissolve. When

cool, stir in enough flour to make a middling thick paste, then add the wheat in its natural state. Care should be taken to stir the mixture all the time. If the water is allowed to cool before adding the flour, there will be no pieces of phosphorus burning. By this you will know whether it is mixed right. Put out immediately.

**AGRICULTURAL SOCIETY.**—The society met in regular session on the first Saturday of November and elected officers and directors for the ensuing year. L. M. Ladd, President. Wm. Kelly, Vice-President. S. F. Cowan, Sec.; Wm. Palmtag, Treas. Directors, L. M. Ladd, Wm. Kelly, S. F. Cowan, Wm. Palmtag, Granville Nash. There has not been much effort made by the county to support the society, and the directors have decided to dispose of the race track and grounds. This price is fixed at \$75 per acre.

#### SAN DIEGO.

**MAMMOTH APPLES.**—*Union*, Nov. 19: Mr. John Capron presented three apples yesterday to the *Union* office that are monsters in size. The largest measured 14½ by 15 inches. They are of the Rhode Island Greening variety, and are of fine flavor. These apples grew on the place of Charles Ellis, near Descanso, about 40 miles east of San Diego, at a considerable elevation above this place. Mr. Ellis says that all the hardy fruit trees grow thrifflily anywhere in that section, and require little or no care. That part of the county is full of valleys and nooks, that are specially adapted for choice mountain homesteads.

**PEARMAN.**—Mr. McRea, of Spring Valley, who is one of the best horticulturists of this county, brought to our office yesterday a sack of apples, to which he called our particular attention, desiring orchardists of this county to note the special merits of this variety. It is the White Winter pearmain. Its claims to favor, as enumerated by Mr. McRea, are these: It is a sturdy and vigorous grower; it is a prolific bearer; the fruit keeps sound for a long time; it is a good cooking apple; it is a fine mellow eating apple, having a rich spicy flavor; it bears in the body of the tree, at the base of the main branches, so that the fruit does not break down branches and interfere with the new growth of wood. Of more than a dozen varieties, well tested, Mr. McRea regards this as very decidedly the best.

#### SONOMA.

**TREATMENT OF ADOBE.**—*Santa Rosa Republic*: The Mock & Boyce gardens on the west side of the railway are good examples of what cultivation and surface drainage, alone, will do for adobe land. We count it, for all purposes, the best land in the valley in the hands of the intelligent owner. Its good qualities are not limited by any means to gardening, either; for it is undeniably good soil for most sorts of fruit, pears, apples, plums, etc.

#### SACRAMENTO.

**STOCK SHIPPED.**—*Bee*: R. J. Merkeley, the well known hop grower and stock raiser, has received an order to ship to Peter Saxe & Son the thoroughbred Darham cow Maritana and five-months old calf which he exhibited at the last State fair. The animals are to be forwarded to the Sandwich Islands, and their purchase from a Sacramento stock raiser is evidence of the advantage of dealers making a display of fine stock at the annual State exhibitions.

**LARGE HAY SHIPMENT.**—The bargeload of hay recently brought down from the upper Sacramento, consigned to R. S. Carey & Sons, was the largest quantity that has come down the river at one time for the past thirty years. It consisted of 1,400 bales, and so strong was the wind above, that the steamer *Governor Dana* and her barge had to lay over one entire day, till the gale subsided.

#### STANISLAUS.

**BLUESTONE WHEAT.**—*Modesto Herald*: J. G. Booth, of Stanislaus county, living near Oakdale, informs us that he has tried bluestone for a number of years, and while many of his neighbor-farmers have ceased using it because they thought it of no benefit, he has never failed until the last year in protecting his wheat from smut, they suffering more or less each year. Last year his failed, and he thinks it was because of some irregularity—either the bluestone had lost its virtue, or he had not applied it properly. He is not willing to concede that it has no virtue. There seems to be, just now, a lack of faith in this method of protecting wheat from smut and cheat; but we find sufficient evidence—aside from its having been so long in use—in the testimony of hundreds of farmers, to believe that it is always effectual when properly applied. The great trouble is, many farmers put too much faith in it, and by a loose mode of application, have allowed it to prove ineffectual.

**RAISIN VINEYARD.**—We are glad to notice that at least one of our farmers has determined to try his hand at the culture of the raisin grape. Mr. Stephen Rogers has already a young vineyard of growing vines on his ranch near the Tuolumne river, west of Modesto. This season he planted 1,700 cuttings of the choicest varieties, and last week he purchased a piece of land on the north of Ripperdan, consisting of 60 acres. A portion of this is fine bottom-land on Dry creek—say about 10 acres. It is sheltered from the wind on the north, and is a splendid spot on which to plant either vines or fruit trees. We believe he intends putting it in vines of the choicest varieties for raisins. He also has a tract of land in the foothills of the Coast range, and intends planting it in vines.

He has a man who thoroughly understands the business of caring for these vineyards, and expects to reap a reward in two or three years.

#### TUOLUMNE.

**EDITORS PRESS:**—We have had rain enough for plowing purposes and seeding. For a few nights the frost has been rather severe, but the days are specimens of good weather. The farmer could not conceive or make such beautiful sunshine, free from winds, for plowing and sowing. The returned Bodieites find it a different world from the cold, inhospitable land of sagebrush and cold zephyrs. Many of Bodie's richest citizens are wintering this side of the Sierras. As many as five different parties passed my place within a few days. Some of them were caught on the summit with a good snow-storm, but all so far were enabled to get through. The young grass is making its appearance. Stock will suffer some until we have warmer nights to give strength to the young shoots. All six and more horse teams unoccupied amongst the foothills find profitable employment on the plains, farmers finding it to their advantage to seed their lands as early in this season as possible. Also summer-fallowing follows until the spring sun dries up the ground, so that plowing is impossible. Horticulturists are making extensive preparations for extending operations. A great desire exists to plant the most desirable fruit. The Winter Nelis and Bartlett pears are in demand. Apples will not receive much attention. Pears, plums, apricots, peaches and grapes will be the favorites. The fruit which pays best and finds the most ready market will be called for at the nurseries. Figs have never been planted as a staple article, but the time is coming when they will be so. A correspondent in one of your late papers had a very good article on the preservation of the fig. My experience is this: It did not pay to put up the fig in small boxes and to put them in one by one, so that the box would be filled by even rows and in splendid appearing condition, I realized no more for them than when tumbled into a 25-lb box. Pressed figs this season brought 6½ cents per lb in San Francisco. This is considered sufficient to extend the fig culture. Our plan is this, which certainly can be improved upon. We gather the figs, dry them in the shade, give them a scalding bath, dry them, then box and press. Figs thus treated will keep soft for a year. —JOHN TAYLOR.

#### VENTURA.

**THE RAIN.**—*Signal*: If we had had a rain programme for our special benefit, we could not have made a better arrangement than did nature. The excessively dry winds following after the rain starting the grass, had got in pretty effectual work in the way of drying up that same grass, and would have done so had not a pleasing shower come upon us last Tuesday night, giving us eighteen hundredths of an inch, which was followed by a light shower on Wednesday night. This rain has had the desired result of putting new life into the vegetation, and cheering up the hearts of the stock men. The grass is safe.

#### ARIZONA.

**THAT GRAPE GRAFTING ON CACTUS.**—*Tucson Citizen*: The scheme of grafting grape cuttings into the saguaro cactus has not proven an entire success in Arizona. Messrs. Paul Plummer and H. H. Messenger tried the experiment last spring, but all the cuttings died during the summer months. Mr. Plummer will make other trials, of which we will keep a minute record, and his observations will decide the possibility of changing the cactus deserts into blooming vineyards.

#### NEVADA.

**LIVE STOCK NOTES.**—*Reno Gazette*: G. W. Mapes came in last night with a band of 493 beef cattle that he will feed on the meadows until they are ready for the market. He left Oregon with 508 head, but will feed 115 of them on his Sierra valley ranch. Last Wednesday A. and J. N. Evans bought an \$1,000 jack for their Humboldt county ranch, of Wm. Billups. C. Derby also bought one from the same band for which he paid \$1,200.

**THE BLACK LEG.**—*Winnemucca Silver State*, Nov. 14: The black leg has made its appearance among cattle on Big Meadows, and is proving very fatal. H. C. Marker lost eight of his largest and fattest calves from the disease last Friday, and several others had the disease, but were living last accounts. The black leg first made its appearance about two years ago in eastern Nevada, near the Utah line, and since then has been gradually spreading westward. A year ago it was on the Humboldt above Battle Mountain. Last summer it reached the Little Humboldt, and now it is at Big Meadows. It does not seem to remain very long in any particular locality, as it has not been heard of recently in the eastern part of the State. It is very fatal in parts of Idaho and Oregon.

**CARSON RIVER CATTLE.**—The Comstock and the capital usually consume all the cattle raised on the Carson river. The supply there is pretty short, as it is all over the coast. W. S. Bailey has probably 3,000 head; Springer & Bailey, 1,000; L. Allen, 600; W. H. A. Pike, 500; and Wightman, 300. Of fat beef cattle three and four years old, Allen has 100; Wightman, 80; Pike, 75; Springer, 60, and Bailey probably 200. Kaiser and Williams have each about 6,000 sheep east of Stillwater.

#### WASHINGTON.

**PUGET SOUND DAIRYING.**—A. N. Davis, in *Bulletin*: I milk 50 to 60 cows, principally grade Jerseys. The season with me commences about the middle of November, though many

of my cows I never let go dry more than a month. My cows are fed good hay in the fall, as soon as they will eat it. In bad weather they are only let out of the stable long enough to go to water, and are then shut up in stanchions. All the year round we commence to milk at six o'clock, morning and evening. As fast as milked, the cows are turned out to grass, if in the summer; we find this much better than milking in a corral, and less liable to waste or dirty the milk, and cows soon learn to take their accustomed places, provided they are never kicked or beaten. I never allow mine to be beaten. As fast as the milk is taken it is emptied into buckets on a shelf handy to the milker, and carried by a man to the milk-room, and strained into the pan. We have a strainer setting over the pan and use a common strainer-pail as well, so the milk is strained twice. I use four pans, holding 75 gallons each, made to order by Geo. Fitzsimmons, of West Chester, Pa. They are a great saving in a dairy. Each pan has a table, a hole in the bottom at one end, and a pipe with an elbow to put on so as to conduct the milk, after it is skimmed, to the vat, which sits on wheels and is moved from one pan to the other. The cream can sit on a stool with casters, so that there is no lifting in the milk-room. The cream is carried to the butter-room and churned in a maplewood churn, something like a thermometer churn. After the butter is churned it is rinsed in the churn, taken out on the worker, which is also of maple, and is worked carefully, using a little water and one ounce of the best of salt to one lb. of butter. The salt is worked well through, and then the butter is put away or left on the worker for 12 hours, when it again worked and made up into two-lb. prints. I use a mold oblong-square, and the butter is subjected in the mold to a pressure of about 500 lb. It is carefully put into cloth cut of a proper size and packed away in a box or barrel. If in a barrel, put on the end and keep it covered with brine or dry salt. We do not milk as many cows to the milker as they do in Mendocino. We milk from 10 to 15 to the hand here.

#### News in Brief.

A WILDCAT four and a half ft. long, and weighing 45 lbs., was killed near Lafayette, Contra Costa county, a few days ago.

At a meeting of the directors of the Denver and New Orleans railroad the road was definitely located by way of Pueblo.

CINCINNATI finds great comfort in the belief that Vanderbilt and Gould, working as rivals, are about to make that city a great railroad center.

THE total loss over the whole province of Ontario, Canada, by bush fires during the past season is estimated at between \$10,000,000 and \$15,000,000.

GRANT is said to have made a round \$500,000 out of his railroad connections this year. Gossip always has a fondness for round numbers in these matters. —*Philadelphia Press*.

THE *Whitehall Review* is responsible for the rumor that the Marquis of Lorne and his illustrious spouse may ultimately replace Earl Cowper and Countess at Dublin.

THE reports of Guiteau's trial excite the utmost astonishment among the English lawyers that such continued violations of decency are permitted in court.

THE San Jose Board of Education has voted \$500 for the purchase of type, cases and other printing apparatus, intending to have the art of printing taught in the public schools as a regular branch of education.

It is feared that Kaiser Wilhelm's health is declining seriously. The non-delivery of his speech at the opening of the Prussian parliament was entirely unexpected, and there is much comment upon the fact.

DIVERS afford a good income to hunters on the bays and rivers of this State. The breasts of one species readily sell for 50 cts. apiece. It is said that one hunter cleared \$1,500 last season in this way.

TRACK LAYING on the Georgia Pacific railway has been begun at Atlanta, Gen. J. B. Gordon, President of the road, driving the first spike. The occasion was one of great interest in that city—indeed, throughout the whole South.

THE Carson & Tahoe Lumber & Fluming company, of Carson, did an extensive wood and lumber business during the season just closing. Nearly 75,000 cords of wood have been flumed from the Summit, of which 40,000 cords are now piled up at the Carson terminus.

THE Naval Advisory Board recommends the construction of 41 ships, which would make our navy consist of 62 vessels, of the best descriptions. The cost of building and repairing is estimated at \$31,000,000, and the time required for the proposed work is eighty years.

A LARGE meeting of magistrates, land owners, tenants and trades, held at Roscrea, County Tipperary, Friday, passed resolutions supporting the government in suppressing the Land League, expressing their loyalty to the Queen and Constitution, and thanking the constabulary for their conduct in the late crisis.

WALTER, Member of Parliament, made an excellent speech in London, Thursday, on his American tour. It abounded with shrewd remarks as to the wonderful progress of the United States, and with good advice to Englishmen. He recommends emigration so strongly that the *Spectator* yesterday suggested that he has come to the conclusion that England is played out—at least for the gentry.





### A Poetical Thanksgiving Proclamation.

WHEREAS, It is a good and ancient custom to set apart after the harvest a day for public thanksgiving and praise to Almighty God:

Now, therefore, I, John D. Long, Governor, by an with the advice of the Council, appoint therefor Thursday, the 24th day of November next.

Unto Thee, O God, do we give thanks. Thou visitest the earth and waterest it. Thou blesses the springing thereof. Thou crownest the year with Thy goodness. The pastures are clothed with flocks; the valleys also are covered over with corn; they shout for joy, they also sing.

Blessed is he that considereth the poor. Come unto me all ye that labor and are heavy laden, and I will give you rest.

O Painter of the fruits and flowers,  
We own Thy wise design,  
Whereby these humble hands of ours  
May share the work of Thine!

Apart from Thee we plant in vain  
The root and sow the seed;  
Thy early and Thy later rain,  
Thy sun and dew we need.

Our toil is sweet with thankfulness,  
Our burden is our boon;  
The curse of earth's gray morning is  
The blessing of its noon.

And still with reverent hands we cull  
Thy gifts each year renewed;  
The good is always beautiful—  
The beautiful is good.

Given at the Council Chamber in Boston, this 29th day of October, in the year of our Lord one thousand eight hundred and eighty-one, and of the independence of the United State of America the one hundredth and sixth.

John D. Long, Gov. of Mass.

### Thanksgiving in the Hills.

That old Anstice Purcell loved her home was not to be wondered at. She had been born in it, and so had her mother before her. She had remembrance of no other, and it was as much a part of her existence as the sky and air. It would have seemed no stranger to her to be without a coping of blue sky than it would to see four different walls from these about her and to call them home.

And, certainly, if beauty could give one reason to love a spot, Anstice had reason enough. For was not the long, low stone house perched on a crag, so that it looked like nothing but a lichen on that crag? And did it not overlook purpling hill-tops below and far away, and elm-tringed intervals, with silver streams looping and doubling through them? And was not old Grayhead towering above her, with all his woods and precipices and storm-scored sides, and casting a shadow over her; and Redcap, taking the sunset fires on opposite upper blights; and greater peaks looming blue in the horizon? And did she not know when the weather was to be fine by the vapors round great Monasset? And, when tempests of rain or snow set in, did she not feel that Monasset and Redcap and Grayhead stood, like three powerful geni, and shut her in and kept watch and ward over her and her grandchildren, in their sad fortunes, as they had kept it over her ancestors for generations?

For her only son had been smitten with a strange unrest among these mountains—an unrest new to the Purcells—and he twice a Purcell, since Anstice had married her cousin—and, spurred by the fear of poverty, perhaps, and his children's fortune in the future, should Greta give him children, he had gone away to sea, 10 years ago, as if only boundless horizon, after these imprisoning hills, could fill his yearning for space. He had left Margaret, his young wife, with mother; for, although the Purcell acres had shrunk with every generation, there was yet a pittance which would support the household till he could send back or bring back the riches that he meant to have. But the moment when she saw his bright black eyes flashing through her tears, as he ran down the rocky path, to cross field and wood, and take the coach, and turned a moment to wave his hand joyously, was the last in which Anstice had ever seen him. The barque *Albatross*, the owners after a time wrote her, had gone down with all on board.

For a season, then, it did not seem to old Anstice that she lived. The world was blotted out, the crags and hills, Grayhead and Redcap and the rest were not, and she saw only the gray waste of waters for days and weeks and months, till she was awakened from her apathy by the sound of a child's voice in the night, the quick, amazed cry of a new-born baby. Of one? Of two of them! She rose tottering to her feet, looked about her in a half-bewilderment, then hurriedly dressed herself, as she had not done for so long, and went out into another room. "Greta," she said, "you have given me back my boy." And Greta used to think in after days that Anstice really felt as if the babies were her own, and she herself was only a well-meaning nurse. But she never grudged the care of her boys to their grandmother, great as the comfort of their care was to herself. She

knew what their love of their mother must needs be; and she used to tell them that it was because of them, stung to madness by the thought of them coming to live the life of poverty and care that he saw stretching out to old age, that her own son had gone away to come back no more. A woman, this sweet Greta, who shut her sorrow up in her own heart, and never whispered it except to her babies in the watches of the night, when she would say to them how beautiful, how bright, how brave a man their father was; how he had loved her and she had worshipped him; how they must grow like him and make haste to be strong and good enough to take care of their little grandmother, and let her herself away to her husband. The only trouble that ever came between her and Anstice was that she would not give either of the boys their father's name. "No," she said, "It is like parting his resentment. Call them what you will, but not John." And so Anstice called the one Benoni, the son of my sorrow, and the other Asher, because of her happiness that had been restored to her with him. And little Ash and Ben, as they presently were known, grew and thrived, and ruled the household with rods of iron. What pretty little darlings they were, rolling round the floor in their dimpled play, their curly yellow heads in the sun, their dark-fringed eyes—their father's eyes—dancing with mirth and mischief, their rosy faces so velvet-soft and sweet. Anstice would catch one to her heart, and drop him for the other, and go back to the first, and hardly let them alone at all, in the swelling ecstasy of her love, but for the kicking and struggling and loud-voiced protestations that they set up; but Margaret would only pause in her work and follow them with wistful eyes, wondering if this was the way that their father looked at their age, and silently thanking heaven, that, if the father had been taken, it had, at any rate, given them each other.

They needed each other, the little fellows, as they increased their days. They had nobody else. It was long since Anstice had kept a servant, and, although the old furnishing remained in other rooms, the small family lived chiefly in the narrow quarters of two, opening into one another. Neighbors were scarce in that hill country. Children did not exist at all. The only person within reach was the man round the side of the mountain, who managed Anstice's little farm for her. There was no school, of course (the nearest was down in the valley, about 10 miles away); no church any nearer; no soldiers marching through bannered streets with music; no other torchlight procession than that of the eternal stars; nothing to break the calm monotony but the mail coach, that once a day could be seen, a mere speck winding down the distant highway. But all made no odds to the children. The day was not long enough for their pleasure. They knew nothing of any world outside of their kites and balls and garden and birds' nests in the lovely, swift summers; their snow forts and snow shoes and sleds in the long winters. If it had not been for their perpetual longing and yearning for what was not, Greta and Anstice might have felt something like a reflection of their happiness in looking at them.

"Do other little boys have fathers?" asked Ash, one day.

"Only when they don't have brothers," answered Ben.

"But fathers are nice to have," reasoned Ash. "Don't you remember the tart the minister over at Bareback brought us? And he said his little boy had one?"

"Yes. It had raisins in it. Raisins are so good!"

"But I think I'd rather have a brother," urged Ash. "The brother's there next day to play, and the raisins isn't."

"Hear the darlings," said Anstice. "They will be father and brother both to each other. Oh! and they will have need of it."

For poor Anstice's age was even more troubled than her youth had been. Then she had seen, piece by piece, the substance of the old estate depart—farm by farm, field by field. For two generations, except to sow and reap the few acres left the old home-place, her people had done nothing but to sell their patrimony, till, at length, they had reached a point where all the fertile glebe was gone, and there was nothing left to sell. The Porter place had kept them alive so many years, the Green property so many more. When her father went to college, the sale of the Rye farm paid the bills—big bills, too. When he was buried, the great funeral cost the barley fields. The long acres down the valley had furnished her and John with food and clothes, after her own husband's death from mountain fever. And then there was no remnant of it at all, but the home-place, that anyone would take so much as a mortgage on; and it was when she mortgaged that that John, in desperation, went away to sea.

Anstice had depended on the rent of two or three little outlying spots to pay the interest on the mortgage; and now, this cruel year, they had been deserted by their tenants, who left the sterile heaps of stones and moss for the rich Western lands, and there were no other tenants to take them. She had no money, and, come the last part of November, the mortgage would be foreclosed, and she and Greta and the boys would be turned loose upon the world without a dollar. Greta could work, may be; but she herself and the little lads—there was not even the poorhouse before them. Up in that hill country, the abject poor were so few

that they were farmed out and boarded from place to place. And that was the end of all the Purcell wealth and Purcell hope. Death would have been a kind thing to old Anstice in comparison.

She used to be awake in the nights, thinking over the possibilities. The horror of them grew upon her. She would start up and pace the floor, and flinging something on, would run out, as if to get help from all outdoors—the stars, the wind, the sky—and end by wondering, as she leaned over the parapet of the old stone wall, if it would not be best to put an end to themselves at once down the precipice below her.

"When I think of it," said she, as Greta came once to fetch her in, "when I think that, as far as the eye could see an object and tell what it was, so far the land was the land of my family, yielding revenue, and now a bare two days and their children will not own a foot of their inheritance or have a roof over their heads, I doubt Providence and it drives me wild!"

"No, mother, dear," said Greta's gentle voice, as, with her arms around Anstice, she led her back to the house—"no, mother, dear, if we doubt Providence, then all is gone, indeed."

"To think of it!" cried Anstice, again. "You! old Parson Mildredge's daughter and my son's wife, adrift on the world, to earn your bread or starve! And the little lads—the last of the Purcells—with no future before them, no clothes to their backs! Think of the Thanksgiving dinners all this country over, and not a tart will my lads have. Other boys—"

"But, indeed, mother so long as they have bread and milk, and ask for no more, we need not fret at that. Such happy little rogues—"

"Happy they'll be in the State alms house!"

"It will never come to that! I have a pair of hands—"

"Much you can do with your hands, you as fragile as a reed."

"I can work for you and the children with them. Don't fear."

"If you can get work!"

"I shall see. We will go down to one of the great mill towns; and it will go hard but—"

"Go down to a mill town? Down in a dark, stifling alley of a town? Away from all the light and freedom here—the hills, the glory of them, the strength of them! Oh! I will die first. I had rather die!"

"But we can't die, you see. And if we doubt Providence, that is worse than death."

"Oh! we are tried," half sobbed Greta. "We are being tried! But somehow I seem to feel—I know! I know! that help is on the way to us, just as much as though I heard a voice from heaven saying so." And she went to bed and took the shivering little mother in her arms, and the nervous storm throbbed itself off into sleep for the weary old Anstice; and then Greta took her turn to see the stars slide by the window, pausing to look solemnly in, while she thought that, somewhere in the world, they were looking down on the spot where her husband slept. Once or twice she rose, after Anstice had been soothed to slumber, and moved about the room. When a great meteor went slipping by, in a swift blaze of glory, her heart gave a plunge; and then it seemed to be as if the stars themselves had sent her messages of comfort, and then she slept.

"Ben," said little Asher in the morning, sitting up in bed, with the sunshine breaking in new luster on his pretty golden head, and the color flashing freshly up his face, "did you ever see an angel?"

"No," said Ben. "Did you?"

"Once I did. Yes. I saw an angel last night, Ben."

"I guess so."

"I did. Really and truly, I did," said Ash. "I saw two of them, Ben. I woke up in the night, when it was dark, and the fire was out, and one was standing by the hearth, and the stars shone all over it. And I saw it all in white; and it went away. And it looked just like the angels mother reads about to us in the Bible."

"I guess it was mother," said Ben.

"The other wasn't mother!" answered Ash, indignantly. "The other was a real angel, any way. It went sailing by the window with great wings like fire, and it left a path shining behind it. And I know it was the Angel of the Lord."

"Do you really suppose it was, Ash?"

"I know it was. And, of course it came for something, you know, Ben. I shouldn't wonder if we were going to have Thanksgiving today, after all."

"I hope there'll be raisins in it, then," said Ben. "I like raisins so!"

"Just hear the darlings," whispered Anstice, after her custom, to Greta. "I'd give my hand to get him raisins for the day. Going to have Thanksgiving, after all! Thanksgiving for being cast adrift upon the world!" And she began to cry bitterly.

"Come, boys," called Greta, who had been gently moving about till the fires were bright in the two rooms, for of wood they had still plenty. "One should be stirring early on Thanksgiving morning. Porridge is ready when you have said your prayers." And she sat down where the rose and purple of the sunrise fell over her like an aureole, as the two little chaps came pattering out to the snapping fire, in their long white nightgowns, and kneel-

ing before her, hid their faces in her lap, while she said the prayer.

One would have thought it little enough that Greta Purcell had to give thanks for that day—handsome, homeless, portionless, and with three helpless souls hanging on her for help. But to one hearing the simple words that she offered in her morning sacrifice it would have seemed as though princes had no more to be grateful for—as she gave her thanks for life, for health, for hearts not yet broken altogether, for the bright morning, the lovely earth, for hope of heaven, for each other.

"Amen!" said a voice at the other. None thought of fastening any door in that unvisited country.

The children lifted their faces as they knelt, and Greta turned her head, to see a tall man standing in the doorway, with a loose cloak wrapped about him.

"Perhaps it is the angel," whispered Ben, still a little under the spell of his mother's prayer.

"John! John!" came a cry from the inner room. "Oh, John!" cried old Anstice. "My son! my son!" And she would have fallen before she reached the bearded, black-eyed stranger, with a sort of wild beauty on his dark, sweet face, had he not caught her on one arm, while the other already folded Greta, who sat like a white stone.

"I knew him! I knew him first!" cried Anstice, presently, to Greta. "Oh! trust a mother's instinct. He's my flesh and blood!"

"And do you suppose I did not know him?" flashed back Greta, not yet quite herself. "He is my very self! And I always knew he was alive. I always felt it. I was sure half of me was not dead!"

"But half of you came mighty near it twice," said John, from where he was sitting then, with an abashed and undraped urchin on either knee, and his cloak about them both. "I shall never be any nearer death after last night, than I was on the day the *Albatross* went down. I have thought, all these 10 cruel years, that I had better have been dead, for I was picked up by a craft that carried me into a Pormosan port, and I have been a slave," he said. "I have been a slave, with slavery made more terrible by thought of what had become of my mother, my wife, my child. I did not know that I had two of them!" said John, with half a sob.

"Oh, John! Dear John!"

"To think of us," cried Anstice lifting up her voice, "when you were suffering so yourself, my boy!"

"To think of you!" he exclaimed with a flash in his eyes that melted in the dew that followed. There never was day or night, sleeping or waking, that I did not. The agony of it passed all the rest, and I see now my worst forebodings almost true. You would have been starving in a little!"

"And the mortgage is foreclosed to-day," cried Anstice, wringing her hands with the sudden remembrance thrust upon her joy.

"Not exactly," he laughed—and he was fumbling in his breast for a little goatskin bag, as he spoke—"although heaven knows what might have been if last night, just as I was going over old Whitehorse ledge, a huge meteor had not suddenly blazed out, and showed me the chasm into which the next step would lead. Not exactly, for when I escaped, months ago, and found my way to the Caps—South Africa, you know—I went to the diamond-fields, while I waited for a ship. Great Heaven! How good it was to go where I would! Do you see this, Greta? Do you see this, mother? The little crystals are worthless-looking things, are they not?" And he poured them out in his palm. "They are diamonds, and of my own finding. I have sold enough already for emergencies—"

"And I need not leave my home, my father's home, this spot of heaven to me, and all of earth, full of the Purcell's life and death!" cried Anstice sharply, springing forward to look at her son's face again.

"Never, mother! And we will make it what it used to be; for, worthless as they look, in that handfull lies a whole universe of happy possibilities for us. Oh! Greta, my faithful wife! there lies home regained, my mother blessed, my children educated, and you without a care. There lie all the Purcell fortunes and all the Purcell acres once again our own."

"It was the angel, you see," whispered Ash. "And raisins, father?" asked Ben.

—Harriet Prescott Spofford.

HOW TO GROW BEAUTIFUL.—Persons may outgrow disease, and become healthy, by proper attention to the laws of their physical constitutions. By moderate and daily exercise, men may become active and strong in limb and muscle. But to grow beautiful, how? Age dims the luster of the eye and pales the roses on beauty's cheek; while crow-feet, and furrows, and wrinkles, and lost teeth, and gray hairs, and bald head, and tottering limbs, and limping feet, most sadly mar the human form divine. But dim as the eye is, as pallid and sunken as may be the face of beauty, and frail and feeble that once strong, erect and manly body, the immortal soul, just fledging its wings for its home in heaven, may look out through these faded windows as beautiful as the dewdrops of a summer's morning, as melting as the tear that glistens in affection's eye, by growing kindly, by cultivating sympathy with all humankind, by cherishing forbearance toward the feeble and follies of our race, and feeding day by day on that love to God and man, which lifts us up from the brute and makes us akin to angels.—E.C.



## Chaff.

THE acme of politeness was reached by the Nevada mining superintendent who posted a placard reading: "Please do not tumble down the shaft."

JONES says his wife is the most thrifty woman he ever knew. "Why, sir," he says, "she has made 10 bedspreads during the last two years; made them herself, sir, out of the samples she collected in her shopping tours during that time."

A GOOD-LOOKING old German with long hair sat in a barber's chair and was asked whether he would have his hair shingled. "Mein Gott, no! I want some hair koot off. Vy, vot you put zum shingles on it because? You tink I vas leaking?"

THE train-robbers have opened the fall season in Arkansas by robbing a train near Hope. As the robbers wore masks and could not be identified, several prominent members of the legislature have come out in cards declaring their ability to prove satisfactory alibis.

"ARE you fond of novels, Mr. Jones?" "Very!" responded the interrogated gentleman, who wished to be thought by the lady questioner fond of literature. "Have you," continued the inquisitive lady, "ever read 'Ten Thousand a Year'?" "No, madame; I never read that many in my life."

A KENTUCKY paper recently stated that a prominent citizen was "greatly troubled with insomnia." After the editor had got out of the hospital he decided to never again use anything but plain language in writing of his fellow-townsmen. Kentuckians are not troubled with education, but they shoot straight and make explanations afterward.

"I MUST say that I very much dislike this ostentatious furnishing," remarked the elderly Miss Pringle, as she looked about her in the new home of the Spankingtons. "Now look at that great elaborately framed mirror. I declare, I can see nothing beautiful in it." "You shouldn't expect impossibilities, Miss Pringle," remarked Fogg, the villain.

OBSERVATIONS ABOUT THE BABY.—The baby does not belong to the animal kingdom; the animal kingdom belongs to him. He is a king. In fact, he is always aching. However, a baby is often spoken of as "this wheat creature," which is why they cradle him. You can't shock him. He is not a creature comfort. The baby is sometimes called an infant, in fanciful allusion to infancy, which he is thought to resemble, because he is generally found with arms about him. Bless the baby!—*Boston Transcript*.

## Hints to Men and Women.

In a recent lecture in San Francisco, Dr. Anna M. Potts explained how men and women suffer by violating the laws of their muscular system. She also treated with humorous satire many of the absurdities that women adopt in dress, for fashion's sake, sacrificing health for a stylish appearance. The question with ladies now is not "Who am I?" or "What am I?" or "What am I for?" but "How do I look?" To the habit of wearing their hats and bonnets in church, at lectures or at the play, as well as out of doors, weighing themselves down with masses of false hair, big enough for a hen's nest, and tying their bonnets down close to their heads with the pressure equal to five lbs. in weight, she attributed the headaches that so many of the ladies complain of every day. She said that gentlemen are in a great measure responsible for the absurdities in female fashion, as they encouraged the women in adopting and adhering to them, and it was the work of the gentlemen to reform them.

A BULL IN A BED-CHAMBER.—A few days ago a bull was being driven from the cattle dock on Railway street, Newcastle, England, when it suddenly rushed into the room of a Mrs. Watson, an invalid, who was in bed. The bull jumped on to the large four-poster and beat its head against the opposite wall, but finding no escape in that direction it turned round in the bed with its head to the foot, when the four-poster with a crash gave way under the extra weight, Mrs. Watson sinking to the floor in a fainting condition, while the bull stood on the upright portion at the other end. The drover, who followed the beast in, immediately lifted Mrs. Watson from the broken bed and placed her in the care of some friends in a place of safety. He then succeeded in getting the animal into the street without much further damage. Mrs. Watson, who has been under the care of Dr. Ellis, is still suffering from the shock and bruises which she sustained, but happily she is not dangerously ill.

ANGULAR DISTANCE OF COLORS.—The projection of a table of colors upon the sides of an equilateral triangle, renders it possible to determine the exact angular distance of the colors, a result which has not yet been obtained, and which suffices to connect together the facts at present known. The author gives a diagram representing the law of the mixture of colors, and which will be advantageously substituted for Newton's rule.—*A. Rosenstichl*.

PRINTING WITH ANILINE COLORS.—It is proposed by Mr. Benner to print aniline black along with dyed alizarin violets. He prevents the colors from spreading or running by adding acetate of lime in large excess to the violet mordant.

## Young Folks' Column.

## Baby's Thanksgiving.

Loaming in the meadow,  
Little four-year-old  
Picks the starchy daisies,  
With their hearts of gold.

Fills her snowy apron,  
Fills her dainty hands;  
Suddenly—how quick!  
In the grass she stands!

"Who made flowers so pretty—  
Put 'em here? Did God?"  
I, half-heeding, answer  
With a careless nod.

Dropping all her blossoms,  
With uplifted head,  
Fervent face turned skyward,  
"Thank you, God!" she said.

Then, as if explaining,  
(Though no word I spoke);  
"Always must say 'thank you'  
For the things I take."

O, my little preacher,  
Clad in robes of praise!  
Would we all might copy  
Baby Thankful's ways!

Time to fret and murmur  
We could never make,  
Should we first "say 'thank you'  
For the things we take!"

## Thanksgiving at Grandma Deane's.

We were sitting in our cozy little sewing room, busily engaged in making fancy-work for a church fair soon to be held. Lue, the eldest, 21, quite a dignified young lady, tall and fair—in a word, the pride of the Stacy family. May, her sister, was of medium height, neither blonde nor brunette, and her features were of no decided type. Of myself there is little to say. I was a "poor relation," who had been taken into my Aunt Emma's heart and home some years previous, and at the time of which I write was a little past 17, just six months younger than my cousin May. My home was a very happy one, and I was not the one to grieve because I had neither wealth nor beauty.

I looked up from my work to ask Lue a question, but lost the answer, as Nora—May's twin sister, a black-eyed gypsyish girl—came dancing into the room with a letter in her hand.

"Girls, girls!" she cried, in her impetuous way, "you can't guess who has invited us to a Thanksgiving dinner."

"Well," said Lue, "if we can't guess, there is no use trying, so tell us right off—there's a good girl."

"What think you of an invitation from Grandma Deane?"

"Oh, you don't mean *that*, surely," we all cried out, for the old lady had years ago closed her doors and forsworn all society—she who had always been such an agreeable hostess that her house never lacked company. The reason for this freak lay in the fact that her youngest boy—our Uncle Wellesley—had left home suddenly and failed to return. It was easy for grandma to guess his motive, for she knew he had always loved to talk and dream of the sea, but she had tried to influence him against it. A week after his departure, a letter came from the truant, who was about to sail in the *Ocean Queen* that day. Uncle Wel. expressed regret that he had not tried to win his mother's consent before leaving, and made many loving promises for the future. He would return to his darling mother as soon as he landed in Liverpool. Poor grandma! I can just remember hearing my father, her eldest son, tell how she watched every item of marine intelligence for several weeks, when one day a paragraph in the *Times*, announcing the wreck of the *Ocean Queen* and loss of the crew, caused her to lose consciousness for a time. As soon as she had revived, grandma called her children—my father and Aunt Emma—to her side, and sadly said:

"Read that news. Your brother is lost, and henceforth I will live alone. You have your homes and your children, and can be happy; but for me there is only grief, unless I can learn to revel in the 'pleasures of memory.'"

When it became known among the neighbors that the Widow Deane's son was lost, they would fain have gone in numbers to offer heartfelt sympathy, but they were informed of her strange whim, and respected her wish to be left in solitude. Only Chloe, one of the most faithful of servants, who had lived at the "Hall"—as the Deane place was sometimes called—nearly 20 years, remained, while the others were dismissed.

Now, after a lapse of almost 15 years, in which time we had grown from mites of girls into young women, grandma intended throwing open her doors to us. We had corresponded regularly, Aunt Emma leaving the writing to us girls as soon as we were old enough, and we were very proud of the honor. How we loved to get letters from grandma! They were so kind and loving, and contained so much encouragement. We had sent our pictures several times, that she might see the changes wrought by time and growth from child to womanhood.

Lue could remember going to grandma's once, and had often talked of the great, beautiful parlors, the long dining-room and the pretty sleeping-rooms, until we were half wild with curiosity about the old place which was now to be thrown open to us.

Well, the days sped away until Thanksgiving

came. From our home to Fernwood, grandma's place, was a long ride, but the distance was finally passed. Hitching the ponies, we walked up the path to the broad piazza, where grandma stood. The moment she saw us she came down the steps, and beginning with Aunt Emma, she embraced us in such a good, old-fashioned way, we were convinced there was a good deal of strength left in grandma's arms. Then old Chloe came up to greet us. "Lawd bless you, Mis' Emma," said she, showing two full rows of ivories, "I'm powerfully glad to see you, I ie; an' dese young ladies dat I toted 'round when day was babies—it does my old heart good to see 'em." Then remembering her duties in the kitchen, she courtesied to us all and withdrew, grandma meanwhile having led us into the house.

It was very bright and warm weather for the season, but a blazing log in the big old fireplace was a very pleasant sight. To us it was something of a novelty, too. Grandma stood for some time by the mantel, watching us as we "explored" the parlors that we had so longed to see. The portraits claimed my attention more than anything else. Grandpa's hung directly over the mantel, while on the opposite side my father and uncle "Wel" smiled down on us. O, what laughing, full-of-fun eyes he had! I grieved that the family circle was so broken that day. Turning toward grandma, I began to study her as a living picture. If I had time I'd like to describe her as she stood there with her arms around Aunt Emma. Tall and straight, in spite of her 60 years, and I thought she must have looked like Lue in her younger days, only that she had been a decided brunette, but in feature Lue resembled grandma. She looked very happy, as one after another would stop to give her a kiss, and pat down her silvery hair.

The sound of the dinner bell was a welcome one, and we all marched in solemn state to the dining-room. That was for form's sake, but we didn't sit down with formal appetites, for the sight of Chloe's table was enough to make any one hungry. How delighted the old woman was when we called for "more." "Pears like you was hungry, chile," she said several times, and showed great eagerness to appease our hunger.

Just as we were rising from the table there was a loud knock at the hall door. We got into the back parlor by the time Chloe had admitted the caller, and grandma looked bewildered. It was so strange to hear the heavy old knocker used, but she had no time for conjecture, as Chloe handed her a card inscribed "Cecil Winters." The caller was bidden into the parlor where we sat, and introduced himself as the friend of Wellesley Deane. We became interested in him at once. He was bronzed and bearded, but as he sat with his back to the light, we could not see what his eyes were like. I always notice eyes particularly, and did not like this stranger's way of keeping the lids down so much. But I listened intently to his account of Deane's adventures, wrecks and losses, of his repeated efforts to hear from home, until he decided that he had forfeited all claim upon his kindred, and settled down in California. I looked at grandma several times during the recital. I wondered if she and I were not thinking somewhat alike. I saw that her face wore a puzzled expression, and several times her glance had wandered to Uncle Wel's portrait. But he was a smooth-faced boy then, and I thought time might have made him like the man who was telling his story. When he had finished it, grandma asked him out to dinner, and as he rose, she said, "Come to the light; I want to see you." He complied with her request, and raised his eyes frankly for the first time—the very eyes I had so admired in Uncle Wel's picture. Oh! what a time ensued! Easy to imagine, hard to describe, for the lost was found! Uncle Wel went to dinner, escorted by the whole family, and grandma sat beside him all the time. Old Chloe sank upon her knees, rolled her eyes and said, "Bress de Lawd, dis am de best Franksgibin yit." So we all thought.

## GOOD HEALTH.

## Benefits Derived from Washing in Cold Water.

As in most things, so in washing, there are two ways of doing it. Some people take a bath who have but a dim idea of washing themselves, and are vexed and annoyed when told the result is not happy.

It is a well-known fact, but rarely remembered, that the skin is one of the great safety-valves of the human machine—that the millions of little perspiratory tubes with which it is pierced throw out from the inner body an average amount of 33 ounces of gray refuse and worn-out material in an hour, in the shape of invisible perspiration and in the same time often as much as two or three lbs. in visible perspiration. Should these tubes or pores be allowed to remain choked with their own secretions, the refuse matter is thrown back into the other great corporeal scavengers—the lungs, stomach, liver or kidneys. Thus it stands to reason that a careful and general cleansing of the skin is absolutely necessary to the life and well-being of the individual at least once in 24 hours, and few people who rejoice in the comfort of cleanliness will feel that it is secured under this amount of washing. And we should

also here point out the mere passage of water, especially cold water (e. g., what is ordinarily called a sponge bath), does not cleanse. In fact, it rather has a tendency to clog the pores, which, like delicate flowers, shut up to a cold current of wind or water. We therefore recommend, as warm or tepid water tends to open the pores, to use that with the course of soap scrubbing (not an unreasonable friction) which should precede the universal sponging. This last may be done with cold water, which certainly invigorates and braces the system when followed by a reactionary glow of warmth. Should this not occur it is unwise to use it, and warm must be substituted, especially in the case of children, who by ignorant mothers are often forced into cold water (from which they have not a sufficiently active circulation to recover) as part of that much-abused system of "hardening," which, nine times out of ten, ends in "hardening" the child off the face of the earth, or checking its growth.

"Hardening," it must be understood, should be strengthening, not "roughing," and many people with the best intentions think, very erroneously, that to make a child strong consists in causing it to undergo more physical hardships than they, with their perfectly matured strength and age, would dream of doing.

As people, in conclusion, generally rush to extremes, it might be well here to remark that we do not at all recommend coddling; but no wise mother will put her young children into quite cold water in winter time, nor with a cold, and, above all, will never allow them to be washed and bathed in a draught, on the same principle of consistency that plenty of fresh air is good, when it is not damp or foggy, but drafts are most injurious.—*Journal of Health*.

## DOMESTIC ECONOMY.

CHARLOTTE RUSSE.—Take half an ounce of gelatine and put in only just enough warm water to cover it; while this is slowly dissolving take one pint of thick sweet cream and whip it up to a stiff froth; beat well the white of one egg; after the gelatine is dissolved boil it for two or three minutes, then sweeten and flavor it; when it is about as warm as new milk, add the cream and egg, and beat the mixture until it is cold. If the sponge cake over which this is to be turned is baked on a large round tin which is scalloped around the edge, it adds much to the pretty effect of the dish. Put the cake while warm, to prevent its crumbling, into a round dish, allowing the scallops to show on top; then pour the whipped cream over it.

TO RAGOUT A DUCK WHOLE.—After having emptied and singed a duck, season it inside with pepper and salt and truss it. Roast it before a clear fire for 20 minutes, and let it acquire a nice brown color. Put it into a stewpan with sufficient well-seasoned beef gravy to cover it; slice and fry two onions, and add these with sage leaves and lemon thyme, both of which should be finely minced, to the stock. Simmer gently until the duck is tender; strain, skim and thicken the gravy with a little butter and flour; boil it up; pour over the duck and serve. One and a half pints of young peas, when in season, added to the gravy improves the ragout immensely.

PUDGING WITH WINE SAUCE.—One cup of butter, two of sugar, three of flour, four eggs, six tablespoonfuls of sweet milk, half a teaspoonful of soda. Sauce—One and a half cups of boiling water, into which stir two cups of sugar, three-fourths of a cup of flour; after removing from the stove add one cup of white wine. Serve while hot. At this season of the year when eggs are so dear it is quite essential to economize in their use. A good cake can be made by only using one egg, one cup of sugar, half a cup of butter, one cup of buttermilk one teaspoonful of saleratus; flavor to taste.

A CARROT DISH.—Trim a quantity of the smallest young carrots that can be obtained, and boil them in salted water. When done drain off the water; add a piece of fresh butter to the carrots, some parsley finely minced, a dash of pepper, a little powdered sugar and a squeeze of lemon; moisten with a little stock free from fat and serve very hot.

TOAST.—Put a spider over the stove half full of milk and cream; add a lump of butter and a little salt. Toast the bread evenly on both sides without burning it, and put it in the milk. When the bread is soft enough remove to a dish and put in some more, and so on till you have enough; pour the gravy over it and eat while hot.

OLD-FASHIONED BAKED APPLES.—Take juicy apples, pare, and core whole; use a large corer. Put side by side in a baking pan, and fill up centers with brown sugar; pour into each a little lemon juice and into each a long piece of lemon evenly cut; put enough water in the pan to prevent the apples from burning, and bake gently until done.

CREAM-OF-TARTAR CAKE.—Half a cup of butter, two cups of sugar, three and a half cups of flour, three eggs, two teaspoonfuls of cream-of-tartar, one teaspoonful of soda dissolved in one teaspoonful of milk, one teaspoonful of flavoring. Mix together quickly and bake in a quick oven.





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### The Week.

The week thus far has been a succession of frosty mornings followed by peerless sunny days. The rains last week were not so wet as they seemed when falling, and the result is that the starting of the plows has not been so general as was anticipated. Work has, however, commenced with zeal in some parts, and everywhere the rains have been enough to carry along the new growth of grain and pasture which was evoked by the preceding rain. Thus the situation is a safe one, and so far as one can see at present, there will be an early and abundant growth of pasture to cheer the flocks and herds.

We give our readers an enlarged edition this week, which we trust will be found to contain matters of interest, entertainment and instruction. As the year is drawing to a close, we would remind our readers of the many assurances they have given us that the RURAL PRESS has been unusually good this year, and we ask them to extend this view to their friends and neighbors who will soon be making out their lists of newspapers for the coming year. In this way we can gain the acquaintance of many whose work lies in the direction in which we are all endeavoring to advance, and strengthened in popular support and drawing upon a wider range of experience, we shall still

go forward together into the grand future which lies before California agriculture and all those who truly serve it. Progress and activity in an industry always bring new problems and new responsibilities. We would fain join the workers in a union of feeling and of wisdom, that the experience and achievements of each may minister to the general advancement. We bespeak the kindly aid of every friend of our journal in this effort, which we believe is for the general good. A word in season: how good it is.

### Themes for Thanksgiving.

Probably California was never in better humor for sincere thanksgiving than at present. It is true that the thankful spirit is not always produced by prosperity, and that discontent sometimes dims the fairest success. It is also true that, the world over, when thousands rejoice, there are individuals into whose lives grief has come, and darkness and disappointment will not flee away at the approach of a Thanksgiving holiday. For those to whom good things bring not joyful hearts, we can but cherish pity; and for those who bow in sorrow on the day of gladness, the sympathy of true friends goes forth unbidden. But while we pity or extend our sympathy as occasions require, we cannot but enter heartily into the general rejoicings which will mark the approach of Thanksgiving day, 1881.

The year has been full of good things. Never has there been so general a disposition toward industry on the part of the people, and never, taking the whole field into account, has industry been so well rewarded. There has been a constant increase in the disposition of the people against seeking for the few lost pieces of silver in the stock market—a search which has cost amounts of treasure and transformed thousands of earnest workers into penniless beggars. It is gratifying to one who has full faith in productive effort as the only true basis of prosperity, to see that the whole population are looking no more for a "lively stock market" to advance their trade and manufacturing interests, but are with one accord attributing the present general activity to the downfall of the power they once courted. It is a signal triumph for industry. It alone would give occasion for a general Thanksgiving.

Passing to the field of production which is our especial care, one hes but to call up the multitude of mortgages which have been lifted this year to testify to the improved condition of our agricultural workers. Next come the train of improvements in homes and in fields, the new residences, new farm buildings, new irrigation facilities, etc., which are reported from all directions. The sawmills no longer stand with cold boilers, the throng of laborers and artisans have deserted the sand lots—than which there could be no better evidence of the progress of constructive arts and the abundance of work for those who have proper skill and disposition. This change in the general face of affairs has been in the main produced by the abundant products secured by our farmers and the fair price which has been obtained for them as a rule. The money which has been brought to producers' pockets has not been squandered upon illusive speculations, as too much of it once was, but has been invested in improvements which have brought new comfort to the home and new facilities for still better effort in the future. Thus have the people profited by their earnings, and thus has the State advanced. Here again is a theme for thanksgiving.

While agricultural producers have prospered, while their increased ability to purchase has stimulated trade and manufactures, their success has also been a shining light which has attracted thousands to the investment of their surpluses in land and animals and trees, and has largely increased the number of small farms which are the backbone of a country's prosperity. It is fortunate, indeed, that the revival of our agriculture should have come just as the people have sickened of the baits of the stock manipulators. Had this avenue for investment not thus opened wide, there is no doubt that some new fallacy would have sprung its jaws and gorged itself upon the workers' savings. It is not to be expected that all the amateur efforts at agriculture and rural benefits will satisfy or be successful, and yet it has often been shown that no occupation of men has so small a percentage of failures as agriculture. Some will fail through action suggested by their inexperience, but even those who fail may console themselves with the assurance that they lost in a good cause and were not mulcted of their savings by gamblers' arts. The majority will succeed. They will make many a nook and corner beautiful with their cultures, and their families will grow strong and rejoice in innocent country pleasures. Thus they will advance the State in production, in morals and in population. Let them rejoice and give thanks.

The fact that our State was never better fitted than now to welcome the self-reliant and capable from all lands, should not be overlooked. We have abundant room for hundreds of thousands, and we can show them how to win a livelihood better than ever before. The day of small things is a period of great promise. Making California a synonym for immensity in all respects, has been a brave upon our progress as a State. California is now becoming better known, and better known herself. And each new fact in her self-education calls for thanksgiving.

### Underground Farmers.

(Written for the RURAL PRESS by EDW. BEARWICK.)

Some months since, I had the pleasure of indicating you a letter about "Nature's Farmers." Therein I stated my conviction that a constant upturning of fresh soil was performed by them. I was pleased yesterday to find so eminent a scientist as "Evolution" Darwin confirming my theory. His recent publication on "The Formation of Vegetable Mold through the Action of Worms" should possess a lively interest for farmers. Let me give a few extracts from a review of the book in the London Times:

The worm has no eyes and no ears, but good digestive organs, including a kind of gizzard. Everyone knows the difficulty of pulling a worm out of its hole; it will break rather than yield; this is owing to a multitude of tiny bristles that fix themselves against the sides of the hole. Worms may have a sense of smell, and certainly have one of taste, as is proved over and over again by their preference for certain kinds of food. Where they can get them, their staple food seems to be leaves, though they are especially partial to onions. These leaves they drag down into their holes, not only for food, but to line the mouths of their holes with, probably for the sake of keeping their bodies from the cold earth. And in the method followed by the worms in dragging leaves thus down through their narrow holes, Mr. Darwin discovers clear traces of intelligence, of a faculty for adapting means to an end. The holes themselves exhibit workmanship of some elaboration; they are carefully lined often with a thin layer of fine, dark colored earth, which, when carefully smoothed, makes the holes fit easily, but perfectly, to the body of the worm. Often their holes are covered with a tiny heap of small stones, and some times they are plugged up by the stalks of leaves that have apparently been on purpose placed in proper position. But these and many other details as to the structure of worms and their habits are all preliminary to the great purpose of the work, which is to show that what is generally called "vegetable" mold is almost solely the work of these worms, and is, therefore, more animal than vegetable. They are constantly swallowing earth and tiny stones, and passing them through their bodies to the surface in a finely triturated and fertilized condition; in fact, they may be said to manure the earth inside their own bodies. By means of this process the entire earthy surface of a country is constantly in a state of change. The whole earth underneath our feet all over the world is swarming with worms; probably all over there are in every acre of land from 35,000 to 50,000 worms. Everyone is familiar with the casts of worms, which themselves look like worms of earth. With so many worms at work, then, it is not difficult to imagine what will be the effect of a constant accumulation of such casts. In some cases, if spread over the ground, they would measure one-fifth of an inch in depth per year, equal to one inch of earth brought up from below, passed through the bodies of worms, and deposited on the surface in five years. In one instance given by Mr. Darwin, 12 ozs. of castings were thrown up in a year on a square foot, or 6.75 lbs. on the square yard, equal to 1 1/4 tons of so-called fertile "vegetable" mold over an acre in one year. Leaves and stones and lime and other substances spread over a field, and left untouched, have been found in a very few years several inches below the surface in a uniform layer. This, there can be no doubt, from the multitude of data supplied by Mr. Darwin, is all the work of worms. The millions of leaves and other vegetable matter dragged by the persevering creatures underneath the soil, whether passed through their bodies or not, form a splendid natural manure. Not only so, but "the bones of dead animals, the harder parts of insects, the shells of land molluscs are before long all buried beneath the accumulated castings of worms, and are thus brought in a more or less decayed state within reach of the roots of plants." The worm burrows generally do not go beyond a few inches beneath the surface, though not infrequently they have been found at the depth of several feet, and thus, it is supposed, materially aid the drainage and allow the air to penetrate deeply into the ground. They are even a powerful factor in geology, performing a great part in the disintegration of rocks, not simply by direct action on the softer kinds, but by the indirect action of the acids which get mingled in their bodies with whatever they swallow, and which will have a slow but ultimately powerful effect on even hard rocks. Not only the farmer, but the archaeologist ought to be grateful to the worm for the work it has done. Mr. Darwin shows that large stones, and even paved walks, when left undisturbed, have in the course of a few years been completely buried beneath the casts of worms. To this cause we owe the preservation of part of the floor of Bauleuil Abbey, and the recumbent huge stones of Stonehenge have sunk partly underground owing to similar action. Not only so, but Mr. Darwin shows that there is the greatest probability that whole towns, like the old Roman towns of Silchester and Uriconium, owe their preservation for the inspection of modern archaeologists to a large extent to the ceaseless work of generations of these lowly creatures, showing the stupendous effects of a continually recurring cause, even when it seems almost infinitesimally small.

### Botanizing in Arizona.

At the last meeting of the Academy of Sciences, Prof. J. G. Lemmon read a paper describing his observations during his trip through Arizona the past six months, when, with his brave wife as a companion, they traversed a large part of that Territory. He spoke of four especially rare trees which they discovered in Arizona—two pines, a cypress and a sycamore. Many ordinary travelers have supposed that no trees could be found in the arid Territory of Arizona, because not along their special line of travel. Arizona comprises a large cross-section of that broad interior region west of the Rockies and east of the Great Basin which is characterized by areas of desert lands, so-called, undulating plains of white or reddish sand, sparsely dotted with shrubs and plants that love the sun, and thrive with little water. It is the home of the cactus, and its many forms extend from the little pincushion species to the large and stately cactus tree. Rising at intervals from these plains are bald mountains of many hues and shapes, varying according to their rock composition. Some of these long and parallel chains of mountains on the north end of the Great Basin extend into the State of Nevada. In Arizona, the mountains are generally so deeply submerged with sand and gravel, the recent bed of a vast inland sea, that only a few of the most elevated peaks remain uncovered. Such peaks stand up as islands, remaining uncovered and often separated by wide stretches of desert. This perfect isolation leads to a differentiation in their varieties of floral products, most of which, owing to the absence of living springs, are a dry weather vegetation, with certain annuals, nourished by winter rains and the short rainy season of mid-summer. Beside these isolated peaks are higher mountain ranges, revealing the distinct vestiges of great submerged mountain chains, that traverse the entire region parallel with the great Rocky and Nevada ranges. These high chains are of considerable breadth, and their outlying peaks frequently enclosed valleys of great fertility, which are generally well forested on their northern slopes, as well as on the floors of the valleys, which are high enough to have a cool climate, and to be well watered. Some most delightful parks have been discovered, walled around with bristling peaks. In these mountain valleys and slopes Mr. Lemmon found many new specimens. Many trees of our Coast Range and high Sierras are found in the highest mountains of Arizona, and lumber mills have been in active operation for years at several localities. Tombstone is supplied with pine lumber from a very prolific forest valley in the Chiricahua mountains. Large plateaux of good timber are crossed by some of the contemplated railroad lines about the 35th parallel. These forests are principally composed of Douglass, spruce and white fir, with several species of oak. He then described Wright's cypress, a new species growing along the lower marshes of certain streams in Arizona, being 10 to 15 ft. in circumference. Its leaf and button-balls are smaller than those of Eastern species. He found it near Tucson, along streams flowing from the Santa Catalina, Santa Rita and Patagonia mountains, on the Mexican frontier. The new species of Arizona pine he found at an elevation of 10,000 ft. on Mt. Graham, among spruce, fir and junipers, forming a lovely park on the mountain top. In May last he found it also in a deer park, about the summit of the Santa Catalina mountains. It is a small tree not exceeding four ft. in diameter, but is in much request among lumbermen, although not as free from knots as the immensely tall and limber pines of our royal Sierra, yet the timber is hard and durable, serving many useful purposes among mining and building enterprises of the rapidly growing communities of Arizona. In August last, Mr. and Mrs. Lemmon, after encountering varied experiences, hindrances from the Apaches, some sickness from overwork and exposure, quartered themselves in a hermit's tunnel in Rucker valley, in the south end of the Chiricahua range, under the slope of its highest peaks. Here in the farthest corner of the Territory they found the summit ridges thickly clad with beautiful cypress. The young trees are gems of beauty, with quadrangular, pyramidal foliage, attaining a height of 60 to 80 ft., and a diameter of four to six ft. Their symmetrical beauty and very tractable nature will render them a valuable acquisition to streets and gardens.

JUTE AT THE UNIVERSITY.—In answer to an article in the Oakland Tribune, Prof. Hilgard writes as follows: In a late issue you refer to a Legislative enactment passed two years ago, relating to an experiment on the growing of jute, to be tried on the grounds of the University, and you inquire as to the results or why it has not been made. The explanation is simply this: Jute has been sown in the garden of economic plants of the University for four years past, the result being to show that in the bay climate it cannot be made to attain a height of more than a foot or two, the summer's heat being insufficient for its development. These facts were communicated to the chairman of the proper committee at the last session of the Legislature. The spirit of the law has therefore been complied with, it being known that compliance with its letter would involve an utterly useless expense, a thing certainly not contemplated either by the author of the bill or by those who passed it.



## Filberts and Walnuts.

A fine dish of nuts is a welcome addition to Thanksgiving cheer, and we deem the present edition a fit occasion to introduce to our readers a couple of shell-fruits which have lately been imported and "fruited" in this State. No one will be surprised to see the name of Felix Gillet, of Nevada City, mentioned as the grower of the beauties which we portray on this page, for his many good deeds, in bringing to California soil the choicest nuts grown on the continent of Europe, are well known. Mr. Gillet's new catalogue, which has just been issued, will serve as a reminder of his services to California horticulture.

We have alluded upon several occasions to the filberts grown at Nevada City, and we are glad to be able to give engravings of two of the varieties. The one shown in the cluster will give an idea of the fruiting style of the filbert to those whose acquaintance with the filbert has only been at the grocer's counter or the dinner table.

The filberts are the aristocracy of the race of "hazelnuts," which are the fruit of different species of the genus of trees and shrubs known by the botanist as *Corylus*. The hazel nut, which grows wild in some parts of the Eastern States, is *Corylus Americana*. The filberts of commerce are produced by two species, *C. avellana* and *C. colurna*, the latter growing in Turkey. The chief part of the filberts of commerce belong to the species *avellana*, and which includes varieties which have been greatly improved by cultivation, and the general term "avellanes" has been applied to them. They are chiefly produced in Spain and the south of France, and yield a considerable income to the growers. Their characteristics are delicate flavor of the kernel, comparatively thin shell, being much more easily crushed than the other species of *Corylus*, and the kernel being clothed in a very thin, smooth and in some varieties a handsomely colored skin. The Red Aveline grown by Mr. Gillet exhibits these characteristics in a marked degree. Some samples which he has sent us are most delicious and handsome. The Avelines are very productive and regular bearers, the nuts growing generally in bunches of 2 to 8. The largest nuts, however, as the one represented in the engraving, come single or in bunches of two; but the nut from bunches from 3 to 8, give better the average size of the Aveline, as shown in the cut representing a bunch of five nuts. Mr. Gillet has in all five varieties of filbert, the Red and the White Aveline, the Grosse of Piedmont, the Bysance and the Sicily. We give an engraving of the Grosse of Piedmont, the fruit of which is large and round, the kind generally sold at the stores.

We have also an engraving of the Gand walnut, as introduced and grown by Mr. Gillet. In his catalogue he alludes to it as a "valuable and attractive sub-variety of the *Juglans Regia* family. It is a regular thin-shelled nut, with a full-fleshed, sweet kernel, very easily extracted from its socket—the whole meat, in fact, coming out in a bunch. The extraordinary size and beauty of the nut recommend the Gand walnut as a variety well worth planting and propagating wherever walnuts grow." The engraving shows the size and shape of the nut perfectly, and as in the case of the filberts, the engraver, Mr. Van Vleck, has done himself due credit.

Considering the growth of the preparturiens walnut and the ordinary English walnut, Mr. Gillet gives us the following interesting note, accompanied by the samples alluded to:

I have the pleasure of sending you a little box containing some preparturiens walnuts. The two walnuts enclosed in paper were gathered from a three-year-old tree, of which about 100 trees bore this year in nursery rows, as some of your subscribers from abroad who paid me a visit last summer could testify. The largest nuts are from my oldest trees; and, by the way, I wish you would compare them for size with that represented in the cut I am giving the public through my catalogue and advertisements in the Press. The nuts from the three-year-old trees are of course smaller, but you will find them to be well matured, with a good sized sweet meat. This last season was very good for walnuts in general; for if my preparturiens bore so well, and including even three-year-old trees, I must say that our 24-year-old English walnuts around here bore at last, though for the first time, and from 20 to 200 nuts per tree. This is very little for trees of that size and age, though it is a beginning.

The specimen nuts received bear out the above descriptions fully—the fruit of the old trees showing that Mr. Gillet has kept well within the truth in his engraving of preparturiens.

**TEST FOR GLUCOSE SUGAR.**—A correspondent of the New York Times gives the following test for detecting glucose in sugar: "I wish to call the attention of your readers to another process which I published one year ago, and which can be applied immediately by any one, using only such means as are always at command. This is a great advantage to the average consumer or retail dealer who wishes to know if there is any glucose in his sugar, but who has neither methylic alcohol or a microscope at hand. This process consists in putting about a tablespoonful of cold water in a tumbler, and adding successively several pinches of sugar. After each addition the liquid is shaken with a little stick or a spoon, or with any other convenient stirrer. After putting in four or five pinches of sugar the starch glucose if present, will be seen as chalky white specks. This test occupies three or four minutes."

## QUERIES AND REPLIES.

## Mr. Blower's Steam Irrigating Arrangements.

**EDITORS PRESS:**—In answer to your inquiries concerning my mode of irrigating, I would state that I have a well sunk on one of the many ridges which Cache creek has left scattered pretty much all over the central portion of our county. In digging, I found six ft. of fine sandy loam, four ft. loam sand and fine gravel and 13 ft. of rather coarse gravel with some sand. The well is 18 ft. across the bottom, 17 ft. across the top, and 23 ft. deep, and was made in this manner: I had a cast-iron ring made with a 6-inch face, having a cutting flange 10 inches deep and perforated. It is cast in segments and bolted together; the whole ring then being 18 ft. across. On this is placed a ring of redwood segments seven inches deep and eight inches wide, ends of segments five inches apart, thus leaving apertures 1x5 inches every 3 ft. throughout the whole ring. There are 3-inch rods passing through the wooden ring and the middle of cast-iron segment. On this I laid a brick wall the length of a brick in thickness in cement, wall perforated 2 ft. in height, and then a perforated wooden ring like the first. After that, again a solid wall in cement. Afterwards, every 3 ft. I placed a 2-inch wooden ring in segments to keep the wall from springing. After having excavated seven ft. in depth, I built 13 ft. of



CLUSTER OF AVELINE FILBERTS.

wall, with a wooden ring on top, and screwed down the nuts on the ends of the rods, they running from the casting at the bottom upward through the center of the wall. In two weeks the cement had hardened. Then as we dug the wall settled, until the water stopped us. Then extension rods and more wall was provided, upon which we placed a No. 6 Heald & Sisco pump, to which I attached a straw-burner Hoadley threshing engine. By pumping we completed the work, the pump and wall settling together.

In April and May the well furnishes 150,000 gallons of water per hour continuously. As the season advances, the supply decreases to about 100,000 gallons per hour in the fall.

The cost of pump and connections was \$425; engine, \$1,625; well, \$600; 12 inch conducting pipe to vineyard, \$100; total cost, \$2,750. One wagon-load of straw runs the engine 12 hours.

I have a few acres sub irrigated, but consider that it costs too much to come into general use, and am entirely satisfied with surface irrigation where the land permits of it, as nearly all the land does in this vicinity. I prepare the land in this manner about the middle of May: Having cut off any runners which would interfere, I run a small plow down and back through the center of the row, thus throwing the earth out each way. This leaves the trench capable of carrying plenty of water to run 60 rods in my lightest soil. At the lowest point of the row I run a cross furrow or trench to carry off surplus water, and aid in distributing it in the lower part of the rows. I allow the water to run one day in a place. Then, after an interval of four or five days, turn the water back into the same trenches again. Four or five times will thoroughly irrigate the vines. I now cut off runners at the edge of the trench (when the soil is sufficiently dry), and run a light plow, filling it up, following with a five-ft. weed cutter, thoroughly tilling the exposed soil as well as that under the vines. The result is good.—R. B. BLOWERS, Woodland, Cal.

[This is a very interesting statement. Now that our readers have had direct reports from Mr. Briggs (last week) and Mr. Blowers, they may be sure that they have trustworthy information of two of the leading efforts in the use of steam to bring water upon California vineyards. Mr. Blowers' raisins enjoy the distinction of being quoted highest in the San Francisco market. They are a choice fruit prepared with great care, and a credit to the producer and to the State.—EDS. PRESS.]

## The Santa Barbara Bee Hive.

**EDITORS PRESS:**—Will you please ask Mr. Temple to give a description of the hive he mentions in his article in the Rural Press of October 1st, and which he says costs, "all made," one dollar?—READER.

**EDITORS PRESS:**—In answer to your "Reader" I would state that the hive I use, and which can be purchased in Santa Barbara all ready to nail together for 50 cents, is but a variety of the many movable frame hives of very simple construction and convenient form. It is here known as the "Archer" hive, though I believe Mr. Archer does not claim to be its inventor. In fact I believe it is but a modification of the original "Quimby" hive. It is made of thoroughly seasoned lumber, dressed both sides, and is of the following dimensions: Sides, 18 inches; ends 13½ inches—rabbeted ½ inch deep at top to receive the ends of frames. The depth is 10½ inches. The top board 18 inches, with cleat at each end to prevent warping. The bottom board is 22 inches, with cleat as above. The top bar of frame is 17 inches long and ¾ of an inch square, with a shoulder 1 inch from each end, made by removing a triangular-shaped piece 1 inch long, so as to present a corner of the bar to which to attach the comb. The bottom bar is 15 inches long by ¾ of an inch thick. The ends are 9½ inches long by ¾ of an inch thick.

There is an entrance of 4 inches by ¼ of an inch cut in the bottom of the front board, and also a 1½ inch hole in each end board for ventilation, which is only used, however, when moving bees. Two pieces, 1 inch by 5 inches, for handles, to be nailed in the center of the sides, completes the hive. The ventilating holes when not in use, may be closed by a tin cap inserted between the hive and the wire



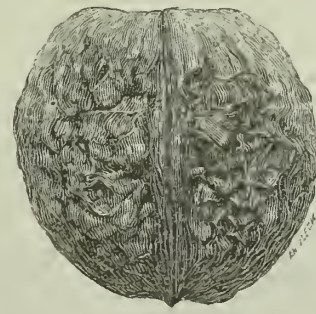
Red Aveline



Grosse de Piedmont.

cloth which covers the opening when moving the bees.

When made up, the inside dimensions of the box are 13½x16½ inches, and 9 frames is the complement for the hive. Nearly all the hives in Santa Barbara county are of this pattern, and they give universal satisfaction.—GEO. A. TEMPLE, Queen City Apiary, Santa Barbara.



The Gand Walnut.

**Canning Meat.**  
**EDITORS PRESS:**—Can you, through the Press, inform me how to can fresh meat.—R. WILKIN, San Buenaventura.

We are not practically acquainted with the canning of meats. Perhaps some of our readers can favor us with full descriptions of processes, which they have found satisfactory. The methods employed by the large establishments which produce for the trade are usually looked upon as "trade secrets." We may, however, give some brief notes on the methods of canning meat, which we find in "Spons Encyclopedia of Industrial Arts," a new and valuable work pertaining to manufactures and commercial products, now being published in parts by E. & F. Spon, of London and New York. The first mentioned is called the Aberdeen process. The meat is placed in vessels nearly closed; these are then put into a close steam boiler and the heat raised to 234° Fahr. After three hours cooking, the vessels are hermetically sealed. By the "steam retort" process the raw meat is canned up, leaving a pinhole, and the cans are put into a retort under steam at 230°, and kept there one and one-half to two hours. They are then taken out and the pinholes soldered up while the steam is issuing from them. Afterwards the cans are steamed at 240° and cooled. There are other processes named which are more complicated. A simplification of the "steam retort" process is doubtless best adapted to home canning; a few cans

at a time can be steamed in the kitchen "steamer." Perhaps some reader will tell us just how to do it.

## Plant Used to Stupefy Fish.

**EDITORS PRESS:**—Enclosed you will find a little bunch of a growth which is very abundant in all this upper Russian river country. The name I am not botanist enough to give. The Indians call it "Lume." I would like you or some of your botanical patrons to give us its name and a description of its leading nature and qualities. The reasonableness of this request you will see in the following statement: A few days ago in passing along Russian river I came to a long hole of water, in the main about three or four ft. deep, the bed of the river near above being dry. At the head of this hole of water the Indians had packed in a quantity of these bunches of growth, and in the water below some 20 or 25 Indians—men, women and children—(a number of them being naked) were gathering up the stupefied and apparently dead fish, using their baskets and other Indian appliances. They had already gathered several baskets of fish, from those of good size down to the small minnows.

Mr. A. F. Redemeyer, of Ukiah, informs me that he saw the same operation of Indians fishing at another place, and passing by the place the next day he saw that there were no living fish in the water, but many small eels and all kinds of small fish lay about the edges of the water dead.—LORENZO WATSON, Ukiah, Cal.

The plant is *eremocarpus setigerus*, the plant being identified by Dr. Kellogg, of the Academy of Sciences. It is of a botanical family containing several plants endowed with active properties when brought to bear upon animal life. Our correspondent's account of its use is interesting, but the practice should be stopped, as it is contrary to the law for the protection of fish and game, which contains the following clause: "Every person who places, or allows to pass into any of the waters of this State, any lime, gas tar, cocculus indicus, or any other substance deleterious to fish, is guilty of a misdemeanor; provided that sawdust shall not be deemed a deleterious substance."

## Carp Culture.

**EDITORS PRESS:**—I wish to know something about "Carp Culture." From what source can I get the most information?—W. R. TRALK, Calistoga, Cal.

One of the best ways now to get a practical knowledge of carp culture is to make an excursion to the nearest pond. The carp breeders are now so generally distributed through the State that one need not go far to find ponds and take an object lesson from the owner. It would not take our correspondent long to go to Mr. Poppe's at Sonoma, or Mr. Davis' at Forestville, and there may be others still nearer to his place which we do not now recall. The literature of the subject may be found in the reports of the United States Fish Commission for the last three years, and in the files of the Rural Press for the same period. Carp breeders have given us many practical letters on the construction of ponds, feeding of fish, etc., and we shall be glad to hear more from them.

## U. S. Department of Agriculture.

**EDITORS PRESS:**—Please tell me how to send for garden seeds and reports of the United States Department of Agriculture.—SUBSCRIBER, Hanford, Cal.

The U. S. Commissioner of Agriculture is Hon. G. B. Loring, Washington, D. C. No doubt any communication addressed to him on the subject of seeds or documents will receive attention. We do not know what plan governs the seed distribution, but no doubt our correspondent can find out all about it by addressing the Commissioner.

## Natural Enemies of Insect Pests.

**EDITORS PRESS:**—In the last number of the Rural Press, I read that the French government is offering a prize of \$600 to the person who shall make known one or more enemies of the phylloxera; in other words, that will find the parasite or parasites of that pest. This is a step in the right direction, though the prize is altogether too small. In my report to the Board of State Horticultural Commissioners on the codling moth at our September meeting, it is exactly the ground I took, and dwelt at some length on that very point; that is, to fight "noxious" insects through "predaceous" insects. I hope that our Board will finally see it in that light, and, with the help of the State, take hold of my suggestion and go to work to raise predaceous insects, and at the proper time, hurl them against the noxious insects. I suggested, too, the awarding of prizes for the best traps to catch the codling moth in its perfect state. And I gave my reasons why we ought, by all means, fight the pest under all its forms—larva, pupa and moth—particularly the moth proper or perfect insect.

I have gone all round this county taking a look at our vineyards, but I will send in my report to and through Mr. Blanchard of Placerville, Viticultural Commissioner for this district.

I have found the codling moth pretty had in those parts of Yuba county where I have been; it is all over Nevada county, but we are doing our best to check its ravages.—FELIX GILLET, Nevada City, Cal.

**POISONOUS HONEY.**—In had seasons honey in some localities is apt to be poisonous. This arises from the fact that in such seasons the bees are often obliged to gather it from poisonous flowers. Great care should be taken to remove all poisonous plants from the neighborhood of hives. In 1790 a great many people in Philadelphia died from eating honey gathered from the flowers of the *kalmia latifolia*. In good seasons the bees avoid poisonous plants.



## MISCELLANEOUS.

### Successful Moving of a Large Hotel.

At a recent meeting of the Engineer's Club, of Philadelphia, the secretary read a detailed description of the moving of the Hotel Pelham, corner of Tremont and Boylston streets, Boston, for the purpose of widening Tremont street. The hotel is built of freestone and brick, 96 and 69 ft. frontage. The Boylston street wall is supported on 8 granite columns 12 ft. high, 3 and 4 ft. square. There is a basement and 7 stories above the sidewalk. Eight above tramways upon which it was moved, 96 ft. Weight, 5,000 tons, exclusive of furniture, which was not disturbed during removal, as also were not the occupants of the stores on first floor and some of the rooms. The general arrangements for moving consisted of heavy and substantial stone and brick foundations for iron rails and rollers, and the building was forced to its new position by 56 screws, two inches diameter, half-inch pitch, operated by hand against timbers arranged to uniformly distribute the pressure against the building.

Much care and ingenuity was displayed in the details of the arrangements and work. Two months and 20 days were occupied in preparation, but the actual time of moving was but 13 hrs. and 40 min. The greatest speed was 2 in. in 4 min. The hotel moved about one-eighth of an inch at each quarter turn of the screws. The whole distance moved was 13 ft. 10 in.

Four thousand three hundred and fifty-one days' labor was required for the work. The whole cost was \$30,000. This is the largest building that has ever been removed, although larger have been raised, which latter is a much simpler and less risky operation. The complete success of this undertaking is shown by the fact that cracks which existed in the walls prior to removal were not changed by the operation. Paper was pasted over them before commencing, so that if any change occurred it might be seen.

### A Great Piece of Masonry.

Among the many splendid specimens of masonry which have from time to time been erected in various countries, and are pointed at as monuments to the honor of their designers, the largest and most splendid masonry arch in the world is probably the least known. Erected, along with many other engineering works in connection with the Washington aqueduct, of which it forms a part, during the decade immediately prior to 1863, very little public attention was directed to this wonderful work, either in America or England, consequently, doubtless, in great part, upon the discordant condition of the United States during the progress of the civil war; and in quarters where one would expect to find its proportions delineated, the least mention occurs. The Union arch carries the Washington aqueduct over the Cabin John creek, the entire span being 220 ft., or 20 ft. in excess of the span of the famous Chester arch across the Dee in England, 68 ft. longer than the central arch of London bridge, 92 ft. longer than the noted bridge over the Seine at Neuilly, and 100 ft. longer than the arches of the Waterloo bridge over the Thames. The width of the structure in question is 20 ft., and the height of the arch is 101 ft. The dimensions of this arch, therefore, eclipse those of any of the celebrated structures which are most commonly pointed to as wonderful achievements.

### Drainage by Electricity.

The first extensive application of electricity for mechanical or engineering purposes is about to be undertaken in Mexico, in connection with the engineering operations already mentioned in these columns, having for its object the draining of the great water basin, in the center of which the city of Mexico is situated. The plan in brief is to establish on the western slope of the mountains, where the fall is great and rapid, a number of water wheels sufficient to develop some 20,000-horse power, and make them drive dynamo-electric machines of high electric-motive power. The current from these machines is to be conducted about 20 miles to a set of electric motors placed on the margin of the lake, and driving pumps, which will require about 7,000-horse power to work them. The water has to be raised about 40 ft. to clear the ridge, but once raised it has an uninterrupted fall toward the Pacific of several thousand feet, so that the descending water is made to add to the power required for keeping up the work. The whole apparatus constitutes what Mr. Maxim calls an "electric syphon." This plan obviates the necessity for extensive blasting operations, and, it is believed, will succeed, and thus relieve Mexico from the inundations that have damaged it so much for several centuries.

ANCIENT ANTI-PATHY TO TOBACCO.—April 18, 1621—Sir William Stroud moved that he would have tobacco banished wholly out of the kingdom, and that it may not be brought in from any part nor used amongst us; and Sir Grey Palmes said that if tobacco be not banished it will overthrow 100,000 men in England; for now it is so common that he hath seen ploughmen take it as they are at plough.

### The Lumber Question.

The question of our future lumber supply was discussed from a scientific point of view at the late meeting of the American Association for the Advancement of Science. The discussion was introduced by the reading of an elaborate paper by William Hlosea Ballou, of Evanston, Ill., on "The White Pine: Its Origin and Natural History: Statistics of Its Industry in Michigan: The Coming Substitute for Lumber." This paper possessed much general and commercial as well as scientific value, and if space permitted, would be given in full. We give its concluding portion on the Michigan lumber trade, which will be read with peculiar interest as relating to a region which has recently been devastated by such terrible forest fires.

There are 20,000 vessels engaged in the transportation of this lumber, employing 120,000 men, and valued at \$100,000,000.

In the log woods in winter are 50,000 men at work, and 20,000 in the sawmills in summer.

There are 30,000 animals thus engaged, one-third of which are oxen and the remainder horses.

There is a total of 190,000 men, 30,000 animals, and a total capital invested in mills of \$111,750,000. The lumber taken annually since 1835, has sold for \$1,500,000,000.

The ancient lower limit of the white pine belt extended from Grand Haven to Port Huron, dipping on the west side of the State to Kalamazoo. The whole pine area now comprises 288 townships, in 18 counties, in the lower peninsula, embracing 10,268 square miles, or 6,571,520 acres; in the upper peninsula, 179 townships, or 4,134,160 acres.

It almost seems like a task of despair to hope to raise the forests for another such enormous production. Science will doubtless devise other materials as a substitute. Indeed, I have been shown a material manufactured in Chicago in the shape of a board one inch thick, made from wheat straw, which can be colored to represent any lumber now known, so accurately as to deceive the eye. The inventor manufactures 2,000 square ft. from a ton of straw. It is more durable and much cheaper than lumber. As a parallel to the use of paper wheels, Mr. Pallman is now finishing off palace cars in this material. The limit of its manufacture will depend only on the production of wheat straw.

### Painting of Cement and Plaster.

Much difference of opinion prevails respecting the question of painting Portland cement, and we have seen work painted a few weeks after the cement has set, which has stood well. There is one point which has a great deal to do with the question of successful painting, namely, the absorbency and dryness of the brickwork itself. Many new walls, saturated with moisture, are cemented, and in this condition no paint can possibly stand if laid on too soon. It is a good and safe rule to enforce that Portland cement work should not be painted within a year of its completion, to allow it to dry thoroughly; but we are safe in saying the majority of new fronts are painted before they have been finished three months. A very desirable precaution seems to be to coat the work with linseed oil first.

The painting of plaster work requires the same care, and the lime works out in small bubbles, destroying the paint. In painting plaster, white lead and linseed oil, with a little drier, is recommended by one authority. This coat should be of the consistence of thin cream, so that the oil is absorbed into the plaster in a few hours. In a day or two another thicker coat may be applied, and a third a few days after, rather thicker, followed by the finishing coat. Four coats are not too much for good work. By the absorption of the oil into the plaster the surface becomes hardened, and may be washed. Another method to facilitate this absorption is followed by painters, which is to give the plaster two or three coats of boiling linseed oil, and then to apply the other coats of paint. We are inclined to think the application of the oil before the paint a better plan, to insure a thorough saturation of the material. The color of Portland cement, and then even tint it sometimes assumes, is the main reason why painting is resorted to. For this reason we think it may be worth the attention of manufacturers to turn their consideration to the subject, and those using cement as a stucco might also prevent a blotchy and uneven tint by attending to the preparation of the wall and the sand they use with the cement.—*Building News*.

SOUTHERN AND TEXAS PACIFIC.—The connection with the Southern Pacific and Texas Pacific roads will be made in about 5 days at a point about 100 miles east of El Paso. The express trains from San Francisco will run clear through to the point of junction, instead of to Deming, as now. The new road will encourage a great deal of new travel to and from Texas, and that will do much to fill up the trains of the Southern Pacific. One advantage the Texans will have what may encourage them to travel or at least to start on their travels, is that by a state law local fares are limited to five cents a mile. All down through Arizona and New Mexico the companies charge 10 cents a mile, but as soon as the Rio Grande is crossed at El Paso down comes the fares to five cents. As a through line to the East, the line via El Paso and the Texas Pacific will possess many attractions, especially in the season of storms and snow blockades on the old route.

## METEOROLOGICAL.

### Climate and Altitude.

The Virginia City *Enterprise* (Nevada) furnishes the following: "The relations of climate to altitude are very intimate, but in most regions are not apparent—that is, not visible to the eye. Here, however, it is different. For instance, yesterday (November 15th) while all the hills and mountains round about were arrayed in robes of dazzling white there was in the center of the eastern landscape one big spot of brown. This was on the Carson river, down toward Fort Churchill. There not only the valley land, but also all the low bordering hills remained a deep and desolate brown. It was like a dirty spot left in the middle of a newly whitewashed wall. Although this spot is at no great distance from this city the people there walk about on bare ground, while here we wade in a foot of snow. With them it is only late autumn; with us it is genuine winter. However, they have not far to go to get a taste of winter. Half a mile from their homes would take most of them up into the snow belt.

Persons who have lived all their lives in prairie and other level regions have but an indistinct notion of the great influence altitude has upon climate. When their plains are bare, they do not know that winter is often but 100 ft. above their heads.

In this mountainous region we have an excellent opportunity of studying the effects of altitude. It is sometimes quite wonderful to observe the evenness of the snow line. It is drawn midway up the face of the whole line of hills as neatly as though marked with a chalk-line. Sometimes it is higher, sometimes it is lower, owing to the temperature. The evenness depends a great deal upon the air. When there is much wind the snow line is not well defined, but when it is calm the strata of the atmosphere are perfectly regular. The snow line is then as level as though it were the water line of a lake.

Frequently, when no snow lies on our streets, we can see on the slope of Mt. Davidson, only 200 or 300 ft. above us, the line separating us from the region of winter.

### A Beautiful Sight.

The same paper, as above quoted, gives the following under the head of "Snow Streamers": "The peak of Mt. Davidson last evening presented a most wild and wintry appearance. The snow streamers were abroad in all their glory. Last evening, however, they could hardly be called streamers. They were in reality an unending series of whirlwinds that chased each other along the crest of the mountain. The spiral columns of snow took a thousand shapes in forming and vanishing. Being strongly lighted by the setting sun, the great surging columns looked like whirls of flame and illuminated smoke rolling up from a great fire. This brilliancy was seen in places where the rays of the sun passed through the thin mist of a single snow whirl. In places where three or four columns happened for a moment to fall in line between the spectator and the sun, the whole was black as the smoke from the funnel of a steamboat. Frequently several of the colors of the rainbow would flash out around these dark columns, and a moment after all above the peak would be deep red, giving the top of the mountain the appearance of an active volcano. It would have been a fine opportunity for a scientist interested in the study of atmospheric currents. The motions of those snow whirls show us what is always taking place in the air at the top of the mountain, both winter and summer, and if on our mountain, doubtless on all mountains of like height. The straight current of the atmosphere is broken up into thousands of little whirlwinds that rise from 50 to 200 ft. above the surface of the ground.

THE CYCLE OF THE SEASONS.—Different men of science in England hold different opinions in regard to what is called "the cycle of the seasons." E. J. Lowe said, in 1879: "There can be no reasonable doubt that a cycle of seasons exists, though its precise period has yet to be ascertained. A lengthened investigation has, however, satisfied me that the cycle is about 11 years. Thus, every 11 years drouth and heat are experienced, usually of three years' duration—that is to say, the drouth recurring in three consecutive summers." And in the same year, Mr. Roe, F. R. A. S., broached a theory closely resembling Mr. Lowe's. G. T. Ryves, F. M. S., now calls attention to the fact that the last three summers, which, according to the theory, should have been hot and very dry, have, on the contrary, been cold and wet, and from this he draws the conclusion that at best such predictions are but scientific guesses, and when put forth as prophecies they are not only sure, in many cases, to disappoint those who put faith in them, but are apt to create a false impression in the public mind as to what is attainable in the present state of meteorological science. On the whole, it seems that any such predictions, no matter who makes them, are not a whit more likely to be verified than if Mr. Venner had made them.

RED ANTS.—The judicious use of oil of turpentine will effectually exterminate red ants. It may be injected into cracks and crevices in closets and elsewhere from an ordinary sewing machine oil can.

### San Francisco.

Our city has made rapid progress in material prosperity during the last 30 years. The little village of the sand dunes of early days has grown year by year until now we rank the ninth city in the United States in point of population. The gold and silver mines of California and Nevada have been the prime factors in establishing the onward march of the Bay city. The proceeds from their hidden treasures have erected most of our stateliest private residences and public buildings. In other large centers of population this upbuilding has been caused by men who have won fortunes in business, and in mechanical and manufacturing industries. Without attempting to discuss which of the two systems are the best for a community, it will be only necessary to state that the future prosperity of San Francisco lies in the direction of an extension of its trade and the development of manufacturing industries.

The peninsula on which this city is situated affords unrivaled advantages in the way of location for establishments seeking to manufacture at home those articles which we at present import from the East.

The greatest drawback that manufacturing establishments have heretofore encountered, has been the high rate of interest demanded for money, and also the onerous rate of local taxation. But this cannot always be kept up. The quick communication which will soon be established between this city and the Eastern States will bring new blood and capital to our city, eager to engage in any legitimate enterprise that will afford a fair remuneration for the labor. We also seem to be entering upon a new era as regards local taxation, and the profligate waste of the old days is likely to give place to that rigid economy which the times demand. When capitalists could obtain a high rate of interest for their money, of course they would not invest in manufacturing enterprises. They looked not beyond the cent-per-cent. policy which insured them a handsome interest on their loaned capital without the risk and bother of investing it on their own account. In the East men were willing to place their money in some manufacturing industry, stick by it, and be content with small profits until such time as the business would expand. Here, in a great majority of cases, a different line of policy was pursued, money was loaned to the struggling manufacturer, a high rate of interest exacted, and if not promptly paid, the sheriff was called in. Of course such a line of action has been ruinous to our manufacturing industries, for they could not possibly stand up under the exactions imposed upon them. But, as we said before, there is hope that all this will be changed, now that connection with the East will be more rapid and the ways of going hither and thither more numerous.

The fact is—there has been a little too much of the old pioneer spirit among many of our business men. They were rudely shaken up by the construction of the C. P. R. R., and those that are left will receive a further awakening when the four or five lines of railroad now pushing their steel bars across the continent reach San Francisco. It will not do to sit in back offices and wait for the arrival of a customer. They will have to enter into the race with all the vim and energy of the new arrivals, or else retire as gracefully as they can before they are compelled to.

With this new life infused into our business circles, it would seem that San Francisco will soon occupy a rank second to no city in the country. Her fine harbor, excellent climate and the many advantages of location render this almost certain. It only needs a dash and enterprise to assure her future greatness.—*Pacific States Watchman*.

THE LAW'S PHRASEOLOGY.—Have any of our readers seen a copy of the indictment of Guiteau? It is certainly unique, and for legal nonsense takes the palm. Here is a portion:

"The said Charles J. Guiteau, with a certain pistol of the value of \$5, then and there charged with gunpowder and one leaden bullet, which said pistol he, the said Charles J. Guiteau, in his right hand then and there had and held, then and there feloniously, wilfully and of his malice aforethought, did discharge and shoot off to, against and upon the said James A. Garfield, and that the said Charles J. Guiteau, with the leaden bullet aforesaid, out of the pistol aforesaid, then and there by force of the gunpowder aforesaid, by the said Charles J. Guiteau discharged and shot off as aforesaid, then and there feloniously, wilfully and of his malice aforethought, did strike, penetrate and wound him, the said James A. Garfield, in and upon the right side of the back of him, the said James A. Garfield."

Now, it does seem that this mass of iteration and reiteration could be done away with in this day. It looks like reading an indictment of the 18th century instead of the 19th.

UNDERGROUND TELEGRAPH IN PHILADELPHIA. The work of laying the conduit for the underground telegraph system on Market street has now proceeded as far as Eleventh, east from the public buildings, and work is progressing at the rate of half a square a night. The conduits have 20 separate chambers. Each chamber has capacity for 50 wires, and connection is made by means of manholes, which are located at each square.



# GRAIN DRILLS.

Improved over the Buckeye, and All Others.

## The Best Force Feed Grain Drill in the World!

### DRILLS FROM ONE PECK TO ANY QUANTITY PER ACRE.

### Does not Crack the Grain.

The TRIUMPH GRAIN DRILL possesses many features of merit peculiar to it alone, to which we invite the careful attention and consideration of every farmer contemplating the purchase of a Grain Drill.

It has been rightly named the TRIUMPH; for, wherever introduced, it has triumphed over all competitors, and taken the lead as the most regular grain sower, and most reliable Drill in the market; and in those sections where most generally introduced, and the more best known, have its sales most rapidly increased. This increase cannot but continue, for the perfect satisfaction which the TRIUMPH has in all cases given, makes every farmer owning one an advertiser of its merits. We can, with confidence and pride, refer to thousands who are using it, knowing that they who have practically tested it, and are most thoroughly acquainted with it, are its warmest friends and admirers. By comparison, the TRIUMPH will be found to be **inferior in no respects, equal in all respects, superior in many respects, to any Drill made.**

In the TRIUMPH we accomplish all that can be done by any other Drill, with all their combinations of gear wheels; and that, too, without any change of gearing whatever. There is no need of changing to pecks or half pecks at a time in the TRIUMPH it can be regulated to quarts or pints, and will sow any kind and any quantity of seed per acre—from one-half bushel of flax seed, to three bushels of oats—and will sow beans and corn in any desired quantity.

Inders are attached to a separate iron bar, that extends through all the seed-cups, and is moved by a screw at the end of the hopper, and can be moved either much or little as desired, a perfect feed-wheel, either large or small, to suit the quantity desired to be sown.

Much complaint is justly made against Grain Drills that regulate by change of gearing, on account of their bunching and skipping—a serious fault that manufacturers of that class of Drills have not been able to overcome, although they have resorted to all kinds of devices in their feed-wheels; using zigzag, spiral, and double spiral, etc., and all claiming their particular device as being just the one needed. Yet they have the same old complaint. The cause of their trouble is readily explained, as it is impossible to sow a constant stream with any Drill that varies the quantity seeded, by a change in the speed of the feed-wheel. The same principle applies to Grain Drills as to other machinery—a principle well understood by all mechanics—there is always a certain *uniformity of speed* required to do the work successfully. We have kept this fact in view in the TRIUMPH, and consequently its remarkable success as the most regular grain sower in the market. Examine the TRIUMPH before you buy any of the old foggy cog-wheel Drills, and you will be convinced that it is the Drill to buy.

The quantity is regulated by simply turning a screw at the end of the seed hopper, which enlarges or diminishes the feed-wheel. The regulating cylinders being attached to an iron bar extending through all the seed-cups, all the feed-wheels are enlarged or diminished simultaneously; and as the feed-wheel always carries out all the seed the wheel will hold, it will be readily seen by increasing or diminishing the size of the wheel, any desired quantity can be sown.

The gauge-plate on the back of the hopper indicates the quantity to be sown to the acre; it always sows the quantity indicated; there is no guess work, as is the case with many other Drills.

#### PRICE, WEIGHT, ETC., OF TRIUMPH DRILLS.

9 Hoe,	8 Inch,	Weight,	625 pounds	.....	\$105 00	13 Hoe,	7 Inch,	Weight,	725 pounds	.....	\$130 00
10 "	6 "	"	650 "	.....	110 00	15 "	7 "	"	800 "	.....	150 00
11 "	6 "	"	670 "	.....	115 00	17 "	7 "	"	900 "	.....	175 00
11 "	7 "	"	675 "	.....	120 00	19 "	7 "	"	1000 "	.....	195 00
12 "	6 "	"	700 "	.....	125 00	21 "	7 "	"	1100 "	.....	205 00

**BAKER & HAMILTON, San Francisco or Sacramento, Cal.**

## THE GORHAM SEEDER & CULTIVATOR COMBINED,

Is constructed upon the theory that by placing the seed-droppers the greatest practical distance apart, it not only increases the size of the seed-cups, which insures greater accuracy in measuring the seed, but also enlarges the passage through which the grain flows to the ground, thereby rendering the machine less liable to clog. The seeding device consists of a series of seed wheels, or droppers, placed two feet apart, and attached to a shaft that runs through the center of the box. To each of the seed-wheels five cups are attached; each wheel is enclosed by partitions on either side that are open at the bottom to admit the grain the grain from the seed-wheels, distributes it equally over every square foot of land, yet being so open in its throat as to pass straw and other foul substances without clogging.

The quantity sown is regulated by different sized gears, placed at the end of the box, which gives the seed-wheels different required motions. Grass seed, clover seed, and other small seeds are sown by inserting a supplemental cup in the grain cups closing the grain orifice, leaving an orifice proportionally large for the smaller seeds, when the same series of gears are used to regulate the quantity per acre. Thus it is the finest seeds as well as the coarsest grains are distributed with the greatest accuracy.

The Cultivator Attachment of our Seeder is on the independent slip-tooth principle, with a new device, very simple and effective, that eight years' use proved perfectly reliable. Our plan for attaching the cultivator beams to the draw-bar with wrought iron straps not only strengthens the beams, but prevents them from swinging sidewise, holding them steadily to the work.

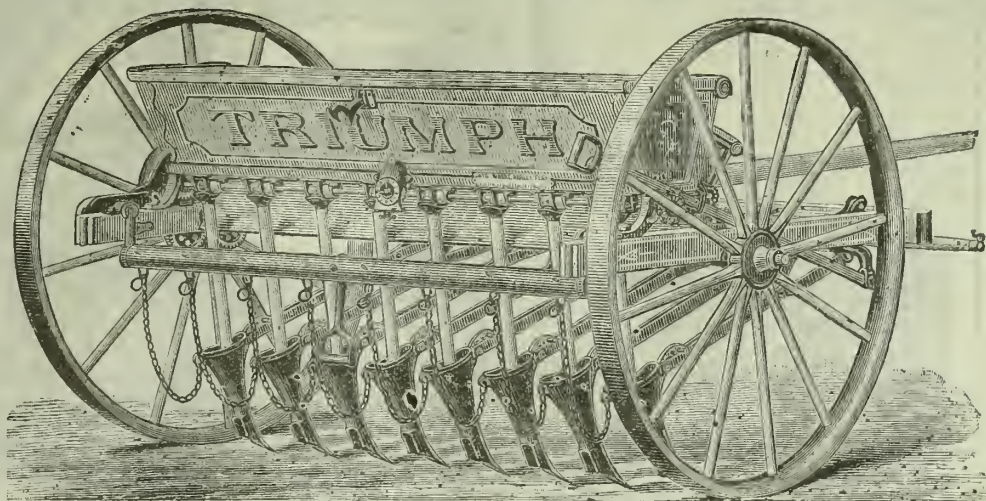
The cultivators can almost instantly be detached if occasion requires. The weight of the combined machine is 500 lbs., and is the lightest draft machine in use, and all say is easily handled by an ordinary team in any kind of soil. We here append our price list.

6-ft. Single gear, with two horses, will seed 8 acres per day. Weight, 580 lbs. ....	\$100.00	12-ft. Double gear, with four horses, will seed 35 acres per day. Weight, 1,250 lbs. ....	\$160.00
8-ft. Double gear, with two horses, will seed 15 acres per day. Weight, 730 lbs. ....	125.00	14-ft. Double gear, with six horses, will seed 40 acres per day. Weight, 1,400 lbs. ....	175.00
10-ft. Double gear, with four horses, will seed 25 acres per day. Weight, 1,010 lbs. ....	140.00		

San Francisco.

**BAKER & HAMILTON,**

Sacramento.

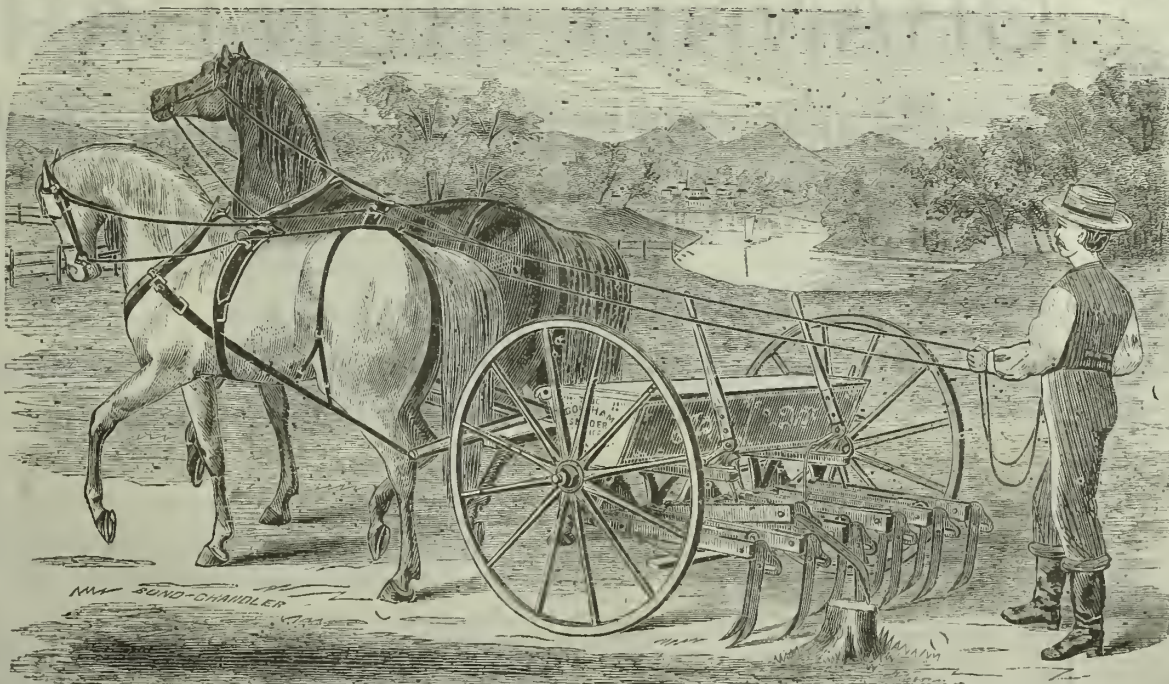


The Triumph Grain Drill.

#### THE FEED.

The Feed of a Grain Drill is its most important feature. Many drills still use the old foggy and unreliable mode of regulating the quantity by change of gear-wheels, in which they vary the speed of the feed-wheel for every change of quantity seeded. To sow a small quantity to the acre, the feed-wheel revolves so slowly, that the grain is fed from the feed cup, not in a steady, flowing stream, but in bunches, so that the grain is not drilled in, but dropped, leaving unsowed spaces between the bunches. Others, again, called "adjustable force-feed," regulate the quantity by moving the feed-shaft, to which the feed-wheel is attached to increase or diminish the quantity desired to be sown. As this shaft has but one bearing, by means of which it is moved, this bearing in a short time becomes worn, and thus permitting the feed-wheels to have lateral motion, which causes the feed-wheel to be constantly changing its position while the Drill is seeding; especially this is the case on hilly ground, as the shaft will always move towards the lowest point on a side hill, and consequently the Drill in going one direction will sow too little, and returning, sow too much.

These objections are entirely obviated in the TRIUMPH. The feed-wheels of the TRIUMPH are fastened permanently to the feed-shaft, and are held firmly against the end of the seed-cups, so that the shaft or wheels cannot have the slightest lateral motion. The regulating cylinder is firmly locked in position; thus making



GORHAM COMBINED SEEDER AND CULTIVATOR.

to the wheel. Now when the seed-wheels are caused to revolve, the cups are drawn upward through the grain, each taking a given quantity, and as it passes around pours it on the beveled surfaces in front of the cups, deflecting the seed into troughs on either side, where it runs in a continuous stream upon the scatterer below.

It will be readily understood by the above description that the essential principle is the measuring and pouring of the seeds, and that this result is produced by a device that cannot cut or injure seed in its passage to the ground.

The scatterer is a distinct fixture that receives



## BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

50,000 ACRES

—OF—

## Fruit and Grape Lands FOR SALE!

In Santa Cruz County, in quantities to suit.

Call on M. P. OWEN,

At Santa Cruz and he will show them to you.

## Woolsey's Steam Generator and Power and Steam Cheese Vat for Ranch- men and Dairies.

This is the Cheapest and Best Steam Generator ever invented; and the cheese vat is so constructed that the temperature can be kept even and steady.

WOOLSEY'S TARPOLA GOPHER TRAP, never fails to kill all varmints when properly set. Price \$2.50. WOOLSEY'S IMPROVED LAWN SPRINKLER, Cheapest and Best in use. Price, \$5. Address JOHN S. WOOLSEY, Inventor and Manufacturer, Gilroy, Cal.

M. COOKE

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## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.  
ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY

## ASTHMA

Quickly and  
Permanently

Dr. Stinson's Asthma Remedy  
is unequalled as a positive  
Alternative and Cure for  
Asthma and Dyspepsia.

## CURED

and all their attendant evils. It does not merely afford temporary relief, but is a permanent cure. Mrs. B. F. Lee, of Belmore, O., says of it: "I am surprised at the speedy effects of your remedy. It is the first medicine in six years that has loosened my cough and made expiration easy. I now sleep all night without coughing." If your druggist does not keep it, send for treatise and testimonials to  
H. P. K. PECK & CO.,  
853 Broadway, New York.

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Secured. Also Bounty, Back-pay, Increase of Pensions New and Honorable discharges, Patents, etc. Thousands entitled. New Laws. Now is the time! Do not delay Soldiers, Widows, Children, Parents, Brothers and Sisters entitled. Have your claim investigated. Apply at once. Send two stamps for blanks and instructions, complete, to JENKINS A. FITZGERALD, U. S. CLAIM AND PATENT ATTORNEY, P. O. Box 524, Washington, D. C.

## Nash Bros.' Pulverizing Harrow and Clod Crusher.

The Best Implement for Pulverizing, Harrowing, Cultivating; using steel curved teeth, and can be regulated to any depth.

GARDINER'S HAY ELEVATOR AND CARRIER. This is Automatic and Self-regulating, raising hay or straw to any height, and carries for desired point. It will pay for itself in one season. L. D. BURGESS, Agent, Rio Vista, Cal.

## SMITH & JOHNSON,

(Successors to J. S. Davis.)

MANUFACTURERS OF THE

Davis Gain Twist Regulating Windmill,

Tanks, Troughs, Etc., Etc.,

Jobbing of all Kinds Promptly Attended to.

No. 183 Commerce St., Stockton, Cal.

## JOHN JENNINGS.

Hooper's South End Grain Warehouses,  
Cor. Japan and Townsend Sts., S. F.

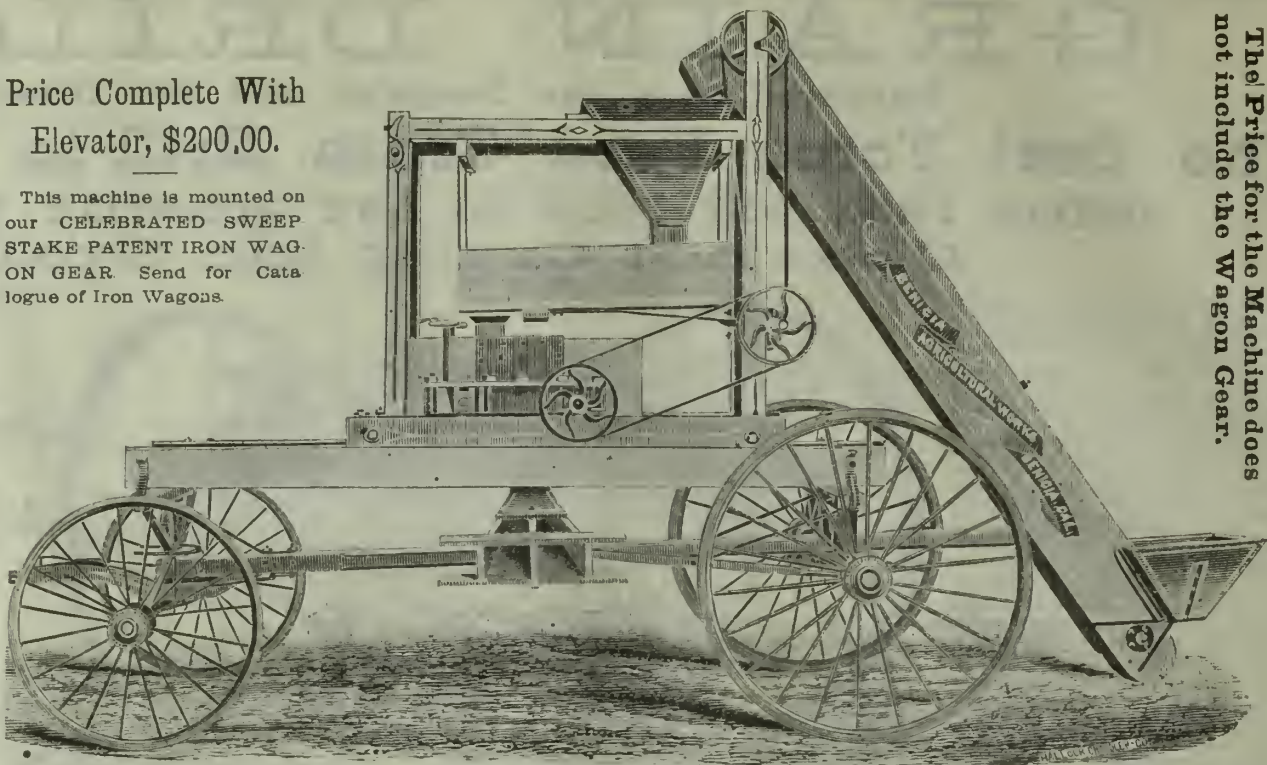
First-class Fire-proof Brick Building. Capacity, 10,000 tons. Goods taken from the Dock and the Cars of the C. P. R. R. and S. F. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

75 LOVELY FRENCH CHROMO CARDS with name on 10 cents, Chas. Kay, New Haven, Conn.

40 Comic Transparent Cards, name on, 10 cents, or 50 fine Chromos, 10 cents, Wise & Co., Clintonville, Ct.

## Price Complete With Elevator, \$200.00.

This machine is mounted on our CELEBRATED SWEEP STAKE PATENT IRON WAGON GEAR. Send for Catalogue of Iron Wagons.



The Price for the Machine does not include the Wagon Gear.

## HALL'S BARLEY CRUSHER, Manufactured by the Benicia Agricultural Works

Is the best machine for crushing barley that has ever been invented. It does its work effectually without separating the grain and hull, and cleans it from all foul seed. Barley cleaned and crushed by this mill can be fed to stock with a certainty that no foul seed will be scattered, which is of itself an important feature and improvement. It is practical, simple in construction, durable and not liable to get out of repair.

To those who wish to see the machine in operation we invite them to call at our works and examine for themselves. Numerous machines have been built and placed on the market for sale as Feed and Barley Mills, etc., but when put to a practical test have been proved to be comparatively useless. It is not alone our experience, but that of others, that stock fed on barley crushed by this machine, thrive much better, and require less feed than when fed on what is usually called ground barley. The feed is also free from all dirt, sand, or grit of any kind.

Address Manufacturers, **BENICIA AGRICULTURAL WORKS**, Benicia, Cal.  
Or Agents, **BAKER & HAMILTON**, San Francisco and Sacramento.

## BEAURECARD'S PATENT CHANNEL-IRON HARROW. Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to  
Break off,  
or Nuts to get Loose.



Is the Boss of the Field.  
It combines Strength,  
Lightness of Draft and  
Durability.

**Light, Strong, Durable, Cheap, and Indestructible. Best Iron Harrow made. Good for a Lifetime.**

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality, combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in a implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THERE IS NO THREAD CUT ON END OF TEETH—WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

**OUR CLAIMS** have been, and are daily being substantiated by farmers all over the Coast.

Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW**—with Patent Con cave Teeth, is the Best, Cheapest and Lightest Draft.

## PRICES:

1 Section, with 24 Teeth	\$14 00	3 Sections, with 72 Teeth and Draft Bar	\$42 00
2 Sections, with 48 Teeth and Draft Bar	28 00	4 Sections, with 96 Teeth and Draft Bar	56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide

For further particulars, Address

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## The Mount of the Holy Cross.

["The Mount of the Holy Cross, the principal mountain of the Saguache Range, Colorado, is 14,176 ft. above tide water. The cross is located near the top, facing the east, and consists of two crevices filled with snow summer and winter. The crevices are about 50 ft. wide, and the snow in them from 50 to 100 ft. in depth. The perpendicular arm of the cross is some 1,500 ft. long, and the horizontal arm 700 ft. The cross can be seen at a distance of 30 or 40 miles."]

The ocean divided, the land struggled through,  
And a newly-born continent burst into view.  
Like furrows upturned by the plowshare of God,  
The mountain chains rose where the billows had trod;  
And their towering summits, in mighty array,  
Turned their terrible brows to the glare of the day,  
Like sentinels guarding the gateway of Time,  
Lest the contact of mortals should stain it with crime.

The ocean was vanquished, the new world was born,  
Its headlands flung back the bold challenge of morn,  
And the sun from the trembling sea marshaled the mist  
Till the hills by the soul of the ocean were kissed;  
And the winter-king reached from his cloud-castled height  
And hung on each brow its first garland of white,  
For the crystals came forth at the touch of his wand,  
And the soul of the sea ruled again on the land.

Then arose the loud moan of the desolate tide,  
As it called back its own from the far mountain side;  
"O! soul of my soul, by the sun led astray,  
Return to the heart that would hold the alway;  
The sun and the silver moon woo me in vain;  
By day and by night I am sobbing with pain;  
O! loved of my bosom, O! child of the Free,  
Come back to the lips that are waiting for thee!"

But a sound like all melodies mingling in one  
Came down through the spaces that cradled the sun,  
Like music from far-distant planets it fell,  
And earth, air, and ocean were hushed in the spell;  
"Be silent, ye waters, and cease your alarm,  
All motion is only the pulse of my arm,  
In my breath the vast systems unerringly swing,  
And mine is the chorus the morning stars sing.

"'Twas mine to create them, 'tis mine to command  
The land to the ocean, the sea to the land,  
All, all are my creatures, and they who would give  
True worship to me must for each other live.  
Lo! I leave on the mountain a sign that shall be  
A type of the union of land and of sea—  
An emblem of anguish that comes before bliss,  
And they who would conquer must conquer by this."

The roar of the earthquake in answer was heard,  
The land from its solid foundation was stirred,  
The breast of the mountain was rent by the shock,  
And a cross was revealed on the heart of the rock;  
One hand pointing south—where the tropic gales blow,  
And one to the kingdom of winter and snow,  
While its face turned to welcome the dawn from afar,  
Ere Jordan had rolled under Bethlehem's star.

The harp of the elements over it swung,  
In the wild chimes of Nature its advent was rung,  
Around it the hair of the winter king curled,  
And against it in fury his lance were hurled;  
And the pulse of the hurricane beat in its face  
Till the snows were locked deep in its mighty embrace,  
And its arms were outstretched on the mountain's cold breast  
As spotless and white as the robes of the blest.

And the spirit of summer came up from the South,  
With the smiles of the Junes on her beautiful mouth,  
And she breathed on the valleys, the plains, and the hills,  
And the snow rippled home to the songs of the rills;  
The winter was gone, but the symbol was there,  
Towering mutely and grand, like the angel of Prayer,  
Where the morning shall stream on the place of its birth  
Till the last cross is borne by the toilers of earth.

It will never grow old while the sea-breath is drawn  
From the lips of the billows at evening and dawn,  
While heaven's pure fingers transfigure the dews,  
And with garlands of frost-work its glory renews;  
It was there when the blocks of the pyramidal pile  
Were drifting in sands o'er the plain of the Nile,  
And it still shall point homeward, a token of trust,  
When pyramids crumble in dimness and dust.

It shall lean o'er the world like a banner of peace  
Till discord and war between brothers shall cease,  
Till the red sea of Time shall be cleansed of its gore,  
And the years like white pebbles be washed to the shore;  
As long as the incense from ocean shall rise  
And weave its bright woof on the warp of the skies,  
As long as the clouds into crystals shall part,  
That cross shall gleam high on the continent's heart.

—By James G. Clark.

## Thanksgiving Proclamation of 1680.

The following is the proclamation issued by the court in Massachusetts appointing Nov. 25th, 1680, as a day of thanksgiving. We give the ancient proclamation, which is as follows, and in the original style of its spelling, etc.:

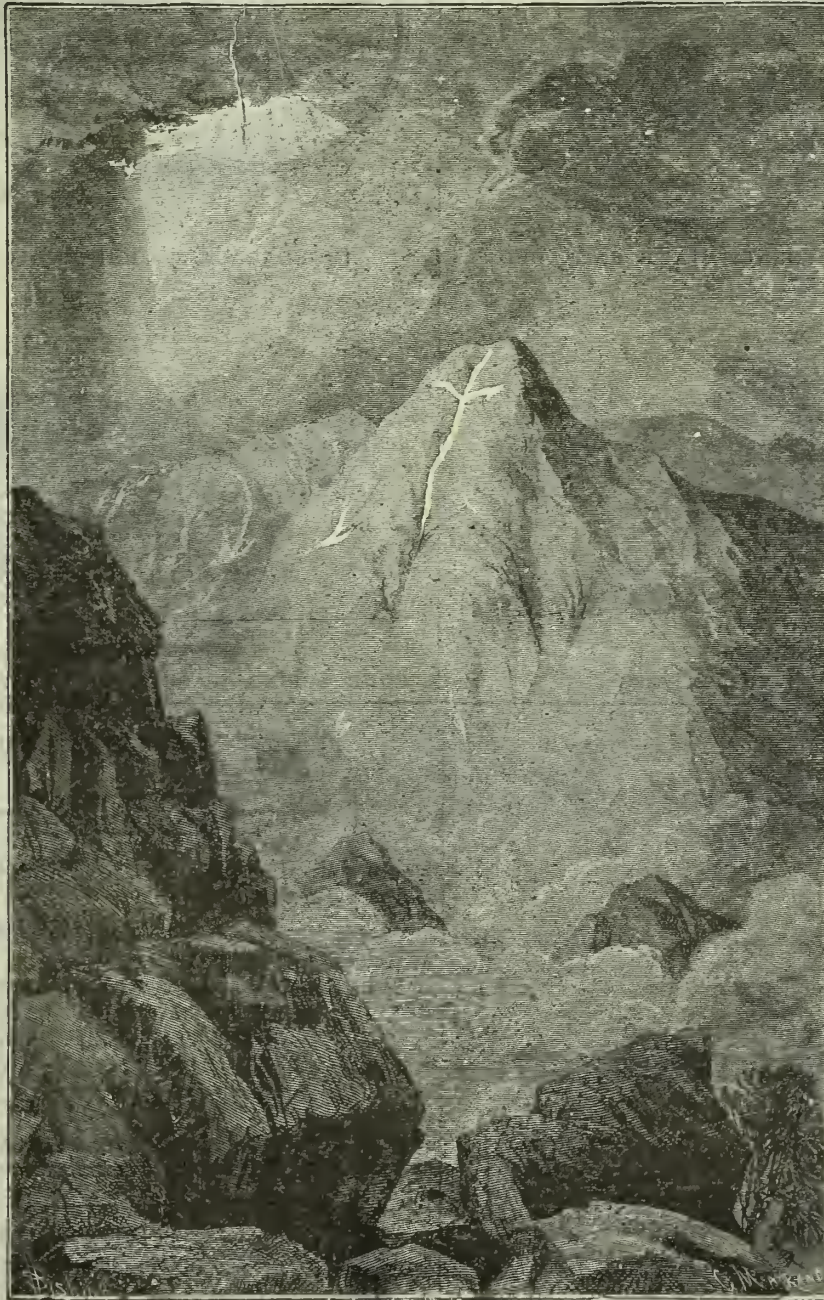
## The Proclamation.

"Since it hath pleased the God of all our mercies to manifest his tender compassion towards his people in this wilderness, both by former & latter dispensations of His providence, remembering mercy in the midst of judgments, which wee have had experience of; having this year also blessed us with peace & health in a gracious measure, and not hath given us cleanliness of teeth & want of bread in all our places, but having obtained help from God, wee continue to be his people still, and in the full enjoyment of all our liberties, both civil & sacred, for which invaluable mercies we can never enough prayse the God & Giver of them; considering also, that solemn thanksgiving is a duty pleasing to the Lord, who hath sometimes lett us see tokens for good evidences of his gracious acceptance through Jesus Christ, when we have, through Him, been giving thanks unto his name; this Court doth therefore appoint the 25th of November next to be kept as a day of publick thanksgiving throughout this jurisdiction, exhorting all the ministers, churches & people therein, to endeavor that it be religiously & with all due solemnity, observed, that so the Lord our God may have the prayse and glory of all those great things which he hath done, and doeth, and wee trust will doe for his poore people hereby prohibiting all servile labour on said day."

## To Sis.

Come here, Sis, and sit down beside me, and let me give you a little talking to. Sit clear to the other end of the sofa; it makes more room for my gont and corns, besides being a good habit for a young lady to become addicted to. Always pander to this habit, and you will in time find yourself walking through green meadows and beside the still waters of self-respect. You may be walking alone, to be sure, but you will have fewer lawn dresses to do up Monday mornings. I wish to speak to you for your mother. It may be you have noticed a careworn look on her face lately. Of course, it has not been brought there by any act of yours, still it is your duty to chase it away. I don't mean for you to run at it, and shake your skirts and tell it to "Shoo," as you would a hen, nor do I expect you to get on the other side of the fence and throw old oyster cans and pieces of barrel staves, as you did at the cow yesterday. But I want you to get up to-morrow morning and get breakfast, and when ma comes down

many unnecessary things for you—will be crossed upon her lifeless breast. Those neglected lips—that gave you your first baby kiss—will be forever closed, and those sad, tired eyes will have opened in eternity; and then you will appreciate your mother, but it will be too late. There, there, don't cry; she has not left you yet. She is down in the kitchen stringing beans for dinner, and, if you feel so badly, you might go down and finish them and let her change her dress and rest half an hour before dinner. And after dinner you might do up the dishes while she takes a little nap. Then you might take down her hair and do it up for her. You need not wind it over your finger, and fuss to make little spit curls, as she used to do with yours, but give it a good brushing and wind it up gently and tenderly, as though you enjoyed doing it for her. The young man down in the parlor can wait until you have performed these duties. If he expresses any impatience, you may explain to him that you feel under more obligation to your mother than you do to him. If this does not seem to satisfy him, ask him how many times he ever got up in the middle of the night to warm peppermint for you when



THE MOUNTAIN OF THE HOLY CROSS, COLORADO.

and begins to express her surprise go right up to her and kiss her on the mouth. You can't imagine how it will light up her dear old face. Besides, you owe her a kiss or two. Away back, when you were a little girl, she kissed you when no one else was tempted by your fever-tainted breath and swollen face. You were not as attractive then as you are now. And all through those years of childish sunshine and shadow she was always ready to cure by the magic of a mother's kiss the little dirty, chubby hands, whenever they were injured in those first skirmishes with this rough old world. And then the midnight kisses with which she has routed so many bad dreams, as she leaped over your restless pillow, have all been on interest these long, long years. Of course, she is not so pretty and kissable as you are, but if you had done your share of the work, during these last ten years, the contrast would not be so marked. Her face has more wrinkles than yours, far more, and yet if you were sick that face would appear to be more beautiful than an angel's, as it hovered over you, watching every opportunity to minister to your comfort; and every one of those wrinkles would seem to be bright wavelets of sunshine chasing each other over the dear old face. She will leave you one of these days. Those hndens, if not lifted from her shoulders, will break her down. Those rough, hard hands—that have done so

you were dying with the colic, or how many hours he has carried you up and down the room just because you would not be quieted in any other way. Ask him to repeat Mother Hubbard backwards, and, if he is unable to do it, it will be proof positive that he is not the one who has repeated and explained it to you seventeen hundred times. Catechise him to find out if he is the one who gave you the black silk dress, and sat up nights to make it, while you were off having a good time. Corner him up, and make him admit that he went without a new bonnet last winter that you might enjoy a \$12 one that you admired so much. Wring from him a confession that he has a stitch in his side, brought there by doing up your finery, week after week. Then show him out of the back door, put on a calico apron and go out and help your mother pick currants for jelly, and I guarantee you will think more of yourself, the world will think more of you, and you will be happier and better for having done so.—*Stockton Independent.*

The Oswego Iron Works are reported sold to the Oregon Railway and Navigation Company, together with a large amount of real estate, comprising timber land, etc. Villard proposes to erect rolling mills, to give additional facilities for turning out iron.

## The "Eastlake Style" of Architecture.

This modern idea of architecture is of comparatively recent origin, being the outgrowth of conceptions originating with Mr. Charles E. Eastlake of England—not as a style of house architecture, but in connection with house furniture and internal decorations, as contained in a published work by Mr. Eastlake, entitled "Hints on Household Tastes." Its peculiar features, however, soon became popular, not only in the sphere of the mechanical arts to which it was first applied, but in the external embellishment of buildings. This popularity, to a greater or less extent, has spread throughout all sections of the United States, and is now being greatly sought after upon the Pacific coast.

Unfortunately, it is simply a "style"—not a classified "order" of architecture, with defined principles of treatment, and rules of application and delineation. It is so unrestrained in its requirements, that the wildest conceits of the uneducated pretender may be imposed, and the most absurd and distorted features defended as "in keeping with the style." Delineated with accurate taste and good judgment, its application in the construction of a certain class of buildings may be made pleasing to the eye; but the excessive *gaucherie* indulged in by a class of reckless adventurers, who abuse the integrity of this new idea by extravagant, unsightly and ill-conceived creations of their own, is calculated to render it offensive and repulsive to those enjoying a fair degree of refinement in the aesthetics of architecture; this may cause its rejection even as a "style," except by a limited number who prefer oddities and peculiar things because they are such.

Could Charles E. Eastlake behold some of the extravagant delineations covered by his name, he would doubtless cry to the gods to blot out the monstrosities as hideous deformities. Judicious liberties and combinations are excusable in all orders and styles of architecture; but when they run rampant, with no regard to consistency, beauty or harmony, the doctrine and rules of propriety cease, and disorder and distraction ensue. The tendency of the "new style" runs in this direction, as it provides the basis upon which unqualified men may operate, and find a defense for their stupid creations.

"All can't invent and imitate,  
No more than those who clothe us can create."  
And so it runs with the Eastlake style. Those who can invent nothing meritorious in architecture can imitate the new idea; that is to say they can scribble up something that looks peculiar, and give it the name of Eastlake.—*California Architect.*

## The Bursting of Saws.

When the shaft of the Cunard steamship *Catalonia* recently broke, and the vessel was obliged to return to New York for repairs, the captain was interviewed, and asked to give an explanation of the cause of the accident. He could, says the *Northwestern Lumberman*, give no reason for it. Mr. Roach, the superintendent of the iron works where the shaft was made, was also interviewed, and the conversation led to a general discussion of the lasting qualities of iron. Mr. Roach said that iron had its time of usefulness just as men and horses have. That time completed, the iron must be boin again, as is were.

Railroad men understand this law, and know how much weight their freight cars will carry, and estimate how many miles they will run before the wheels and axles will give out. When the shafts run out their natural lives, they are thrown aside, though there may be no visible defect in them.

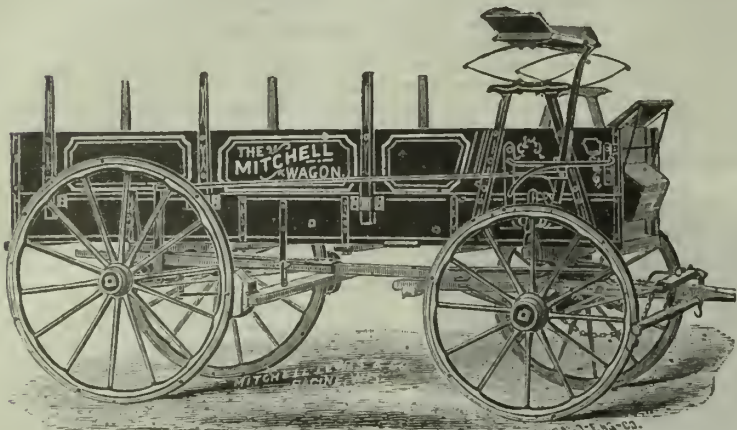
Iron has a way of crystalizing in the process of time, and often when a piece of it breaks, one can find no flaw in the material—no apparent reason for its giving away. It has been held by engineers and scientists that a constant vibration of iron disintegrates it, the infirmity becoming pervasive throughout the mass of metal. For this reason iron bridges have been supposed to have a limit of endurance and safety, and it has been predicted that the time will come when the Niagara suspension bridge, by reason of the constant vibration caused by passing trains, will outlast its cohesive integrity, and suddenly go down, probably while a weight of valuable life is passing over it.

This mortality in iron and steel, under vibratory influence, may account for the bursting of circular saws, which often causes sad havoc of life and limb in mills. The intense vibration of the dizzy steel, by reason of its long use, at last brings the inevitable weakness, and it suddenly flies in pieces. If sawyers could arrive at some definite knowledge as to the life of a circular saw, as the railroad men do as to the endurance of axles and wheels, many serious accidents might be avoided.

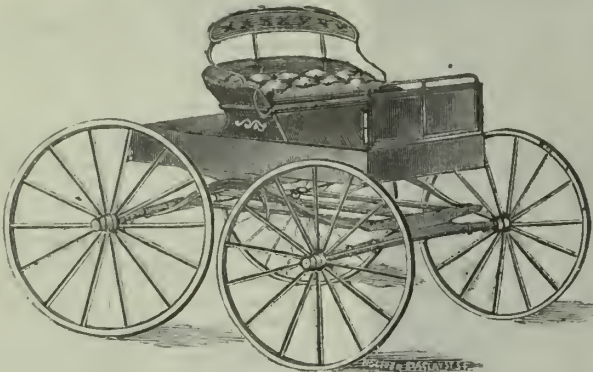
FINE DRILLING.—Prof. Edward C. Pickering, of Harvard College, says that in undertaking to measure the intensity of the light of the satellites of Mars he had occasion to need an extremely small hole. Among the artisans who essayed to furnish what was required was one who had succeeded in making a hole edgewise through an old fashioned three-cent piece, and another who had pierced a needle through from end to end. A hole about the 25-100 part of an inch in diameter was finally secured.



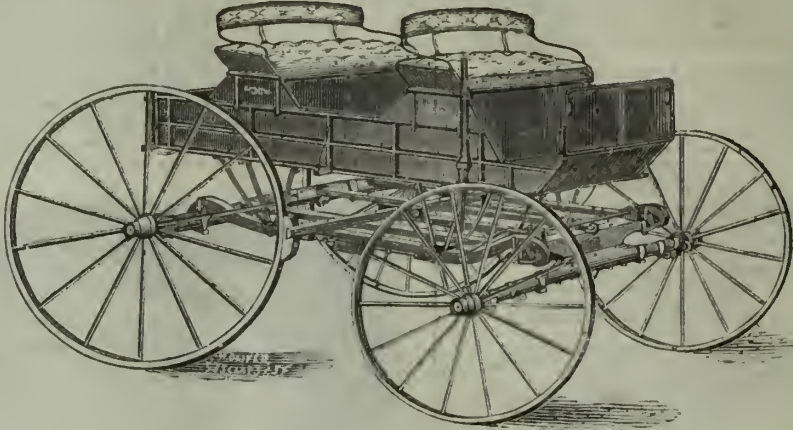
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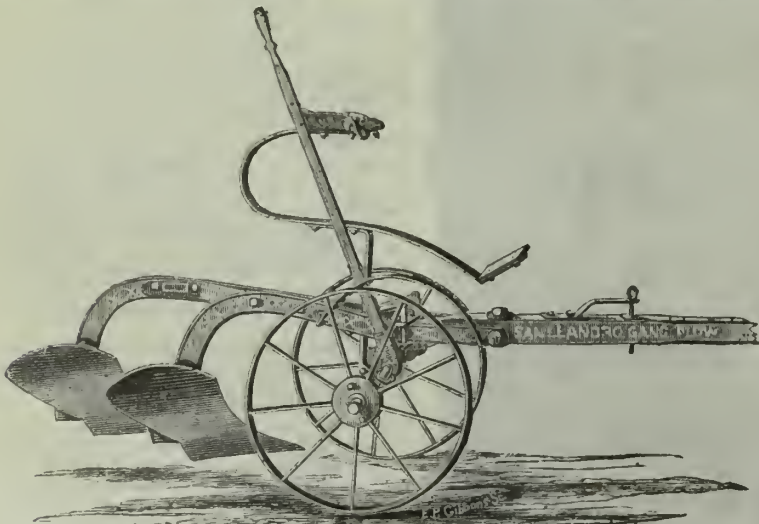
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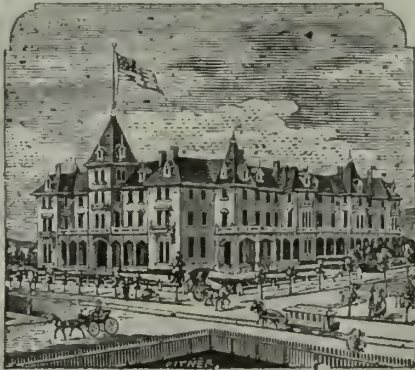
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## The Upper Kern—The Kaweah Group.

[Written for the PRESS by J. W. A. WRIGHT.]

The sketch accompanying your late engraving of "Mt. Whitney as seen from Mt. Young" having been written in our rough and exposed mountain camp in Whitney canyon, near the western base of our great mountain, was necessarily condensed. As it was not certain that the engraving could be made, no explanation was given about the Mt. Young, from which the view was taken, and other points required to properly understand it. With your consent such explanation will now be given, together with other facts collected by our exploring expedition during the three weeks we spent in the almost unknown and very elevated and curious regions of the Upper Kern, its various tributaries, and its numerous lofty and precipitous divides. Some items will also be recorded about the grand Kaweah Buttes and the ascent, perhaps for the first time, of

## Mt. Kaweah.

The taking of its altitude and the approximate heights of adjacent and previously unnamed peaks in the same unexplored group. Our thanks are due the proprietors of the PRESS for the engraving prepared to accompany this sketch, and accurately representing Mts. Kaweah, Henry and Abert, as seen from our camp some four miles south from the summit of the former and at an elevation above sea level of about 10,400 ft. This and the engraving of Mt. Whitney were both from pencil drawings made under great disadvantages by the Rev. F. H. Wales, of Tulare City, who was one of our party of three. Though plain, they have the merit of giving accurately, for the first time, the appearance of these noted mountains from the nearest and best points of view accessible. Now, where is Mt. Young, from whose summit the view of Mt. Whitney was taken? The only route by which Mt. Whitney is at present accessible for pack animals is by the regular trail from the southwest. This first reaches

## Whitney Creek,

In a large cienega, or marshy meadow, at least five miles southwest of the summit of Mt. Whitney, and here the first view of the mountain is obtained by this route. You follow up the creek through its deep canyon, the heavily timbered ridges, and afterwards the bare gray granite ridges, rapidly rising higher and higher on each side, until, a mile or two beyond, you pass the lower of four small clear lakes and come to a grassy meadow, with a half dozen large tamaracks or hackmatacks at the point of entrance. Here, as the short, "curly" grass peculiar to our Alpine meadows was abundant, and there was plenty of wood, we had our camp from September 3d to 8th. The view of this part of the canyon, looking eastward, is exceedingly picturesque and grand, closed entirely at its upper end, as it is, by the bare, craggy precipices of Whitney's immense granite masses, two miles distant, perhaps, in a straight line. On each side of the entrance of this rockiest, wildest, and most glacier-worn part of the canyon, is a long, bare granite ridge, each terminating in a high isolated peak. At the suggestion of Mr. Wales, our party agreed to name the one on the south side

## Mt. Hitchcock.

In honor of Prof. Charles Hitchcock, the well-known geologist of Dartmouth, where Mr. Wales spent his college days, and that on the north Mt. Young, after our distinguished astronomer, formerly of Dartmouth, now of Princeton. The day before we left camp Whitney, to pursue our almost trackless route to the sources of the main Kern, Mr. Wales, with our instruments, made the ascent of Mt. Whitney, found its altitude to be approximately 13,600 ft., built a monument five ft. high, and left in it the record of the naming of the two mountains. At 1:30 p. m., he found the temperature was 48° in shade, and 66° in sun; and our aneroid read 18.60. We may as well record in this connection, that the day before (Sept. 6th), at 12:45 p. m., on the summit of Mt. Whitney, the same instruments indicated as follows: Barometer, 17.60; thermometer 42° in shade. Also, in our camp Whitney at midnight, Sept. 7th, our barometer stood 20.30, and thermometer 38°. The water of Whitney creek, clear and pure as can be, varied in temperature at night from 36° to 40°, and some mornings thin ice was formed along its edges. Between 1 and 2 p. m., Sept. 7th, its water was 46°, with the atmosphere at 60°, and your correspondent enjoyed the luxury of an air bath and

## A Plunge Bath

In that calm, sunny atmosphere, and in the rushing waters of that icy mountain stream. If

any of your readers don't think that water felt cold enough for this to be fairly termed an Arctic bath, or don't believe that our party found considerable genuine "red snow" at several points, from 10,500 to 12,500 ft. in altitude, I only wish I had had him there to "duck" him. That is all. He would probably have been convinced then.

This beautiful stream that is fed by the perennial snow masses and lakes along Mt. Whitney's western, northwestern and southern slopes, ran—from 10 to 15 ft. wide, and 2 to 3 ft. deep—within 20 steps of our picturesque camp, and, rushing in many a rapid and cascade in a south-westerly course, empties into the main Kern, not very far above where the "Fourth Standard Line South" intersects it—possibly two or three miles. In this and other streams, at great altitudes, we not only

## Found no Fish.

But the only living things we saw in them and the higher lakes were frogs, tadpoles and the ubiquitous and curious water insect called the *Notonecta* or "water-boatman."

This insect, a species of water beetle, is really amphibious. Hence, no doubt, its ability to reach these high altitudes. It is the insect which, while in the water, swims on its back, and from this gets its systematic name, *notonecta*, meaning literally back-swimmer. By means of a bubble of air, which nature enables it to form, it frequently rises to the surface, thence quickly darts to the bottom again, using its feather-like legs for oars. Take it from the water and dry it in the sun, and it soon spreads its wings like any beetle and flies away, generally to the water. Handle it with great care, if at



MTS. KAWEAH, HENRY AND ABERT LOOKING NORTHWARD FROM HIGH TABLE LAND.

all, for though it has no sting, it has a sharp peak or snout with which it can easily pierce the hand. This it is sure to do, if you give it a fair chance, and you will imagine yourself stung. In fact, you might as well be. Yet the puncture is not poisonous. I here describe this insect that your readers may recognize it, and may at some time examine it, for it abounds in our springs, streams and ponds, at almost all altitudes, as our late mountain trip proved. Strange as it may seem, this is one of the many insects which in San Joaquin valley and other parts of California, flits around our lamps and candles on summer evenings, leaving its watery home for its excursions by night. In future, I shall hope to record in your columns more about

## The Animal and Vegetable Forms

Found in the high Sierras of Tulare county. We have specimens of all the higher flora of these regions for future use. Of all insects found in our alpine regions the most interesting and useful is the "salmon fly" and its larva. It belongs to the kingdom of the dragon fly. Its grub and the perfect fly are the very best bait for the "golden trout." In July and August these grubs are found under and adhering to rocks and logs, in the edges of streams and lakes, or crawling on the bottom in shallow water and dragging with them their long, flat, sand-covered cases or cocoons. During the first two weeks in September the grubs are transformed to the perfect insect. While we were camped on the main Kern, at altitudes between 8,000 and 9,000 ft., these "salmon flies" darted around our camp fires at night in large numbers, and we found them and "blue tail flies" about as good trout bait as their larva or grubs. Wherever trout abound these do. We found them in streams at heights of 10,500 ft., the highest points where we caught

## The Golden Trout

Being about 9,500 ft. in altitude. It is to be hoped that all these higher streams and lakes above falls and cascades impassable for fish will some day be stocked with these splendid trout, just as the two "Monarch lakes" in Monarch canyon, of the Mineral King district, have been stocked this summer by private enterprise. The altitude of Lower Monarch lake is 10,500 ft.; the upper one, 10,800 ft. On the 21st of

September the 200 trout put in them about a month before by Messrs. Lavelle, Ward and Wren were doing well.

Before we take your readers to Mt. Kaweah, we must tell of two more conspicuous mountains to which our exploring party gave names, before we reached Whitney canyon. The night before our arrival there we camped about 10,500 ft. above sea level, in Loomis' canyon on Loomis' creek, so named from one of the first men who took sheep that high up in these mountains. Meeting there Mr. D. Durward, of Kern county, with his sheep, we soon learned that we were surrounded by bold mountain peaks, nameless and but little known. Next morning after a tedious and difficult ascent of some 1,500 ft. in a distance of about two miles, we found ourselves in a high, well wooded pass at an elevation of nearly 12,000 ft., with a commanding view in every direction. West of us was a bare pyramidal granite peak, and to the eastward a long high ridge and peak. By my special request these were named.

## Mts. Guyot and Agassiz.

Mt. Guyot to the westward. We also called this gap Guyot pass, in honor of our eminent geographer and geologist, whose instructive lectures at Princeton, New Jersey, will ever be among my pleasantest recollections of early life. We all thought it suitable that the honored names of Agassiz and Guyot, who were hosom friends at Neufchatel and elsewhere in Switzerland, should be closely associated among our higher Sierras, as they have so long been in the achievements of modern science. Mr. Wm. B. Wallace, our guide and friend, and an expert in mountain climbing, made the ascent of Mt.

per Kings river region. Thence we went due south down the

## Canyon of the Main Kern

To Junction camp eight miles, altitude 8,400 ft.; thence south to Fern camp, just above the junction of Crabtree creek with the main Kern, 10 miles, altitude about 6,800 ft. At Milestone camp and as we passed down the upper part of Kern canyon—one of the deepest, longest, and grandest gorges of the Sierra Nevada—we had a fine view of Mt. Guyot, which was nearly due south of us, and is a very prominent landmark for all that region. Up to this point we had been so fortunate as to find grass enough at each camping spot for our faithful animals. At the latter camp, however, in a dense forest, the only one we ventured to reach after dark, there was nothing but ferns in the way of horse feed, and of these they eat sparingly as you may suppose. The thought often occurred to us, on this long muscle-testing and lung-testing mountain journey, when our horses, panting and jaded, had at different times taken us to heights of 10,000, 11,000, 12,000 and even 12,500 ft., that the faithful brutes were as near horse-heaven as they would ever be; but you may rest assured, after that night's experience on ferns, they looked next morning a good deal as if they thought they had been in

## The Infernal Regions.

When informed that in the next 10 miles from Fern camp to the summit of Mt. Kaweah we had to climb at least 7,200 ft. in altitude, you can understand that it was one of the toughest and most trying parts of our mountain experience, and that we found it necessary to travel but a short distance each day.

Sept. 14th, we went northwest and ascended a very steep trail 1,800 ft. to Island camp, a pretty grassy spot, on the lower one of four small streams, which, dashing over the very high, perpendicular western wall of Kern canyon, form some of the highest, if not the very highest waterfalls in California, or, indeed, in the world. Having an opportunity to take the altitude of the fall from this first stream, by having our aneroid at the base and afterwards at the point where the wild waters leap over the bluff into the canyons, we found it was 1,500 ft. The highest fall, some distance above this, which we named, at Mr. Wallace's suggestion

## Sha-goo-bah Falls,

From the Indian name of Mount Williamson, must be in its entire descent, at least 3,000 ft. high. Even so late as September 13th, it was a grand and beautiful waterfall, and the towering cliffs on each side of it were very much like El Capitan, in Yosemite valley. By a ride of three miles September 15th, we ascended 1,800 ft. more, and camped at the point from which the

## View of Mt. Kaweah

Here given, was sketched by Mr. Wales. Here we pitched our tent, for the second time on the trip, and called it Camp Kaweah, altitude, 10,400 ft. There is but one route known or probable for a pack train over the great western wall of Kern canyon to this point, and but one westward to the deep and picturesque gorge known as Jenny Lind canyon, through which runs Crabtree creek, the chief western tributary of the Main Kern, north of the Little Kern river. These passes lie near the fourth standard line south of the United States Survey, the only Government line that has ever yet been surveyed through that country, and it runs only to the western verge of Kern canyon. Our camp, in the edge of a tamarack or hackmatack forest, just south of Mt. Kaweah, was near this line.

At 9 A. M., September 16th, after a solid mountain breakfast, our party started, well mounted, provided with our instruments, lunch and a canteen of water,

## The Ascent of Mt. Kaweah

By a route we had partly traced the afternoon before. The temperature at 10 p. m. the 15th was 34°; at 6:30 A. M. the 16th was 38°, while the water in the purling, limped brook near our camp was 43°. By noon we had passed through the dense forest that skirts all the southern base of this grand old mountain to an altitude of nearly 12,000 ft., had ridden over the rocky debris up, up, up above the last stunted *pinus contorta*, and tethered our horses to the rocks in what we called "Quartz Nich," because of quantities of glassy, barren quartz found there, some of it smoky quartz. The elevation here was 12,500 ft., the highest point to which we rode our horses at any time on the excursion. As there was a southern exposure, the temperature was very pleasant—72° in the shade. At 3 p. m., after climbing over at least a mile of the roughest rocks, the top of the lowest peak was reached. Its height was found to be not far from 13,550 ft. Temperature in

Guyot for me, took its height, erected a monument, and left a record of the new names. At noon the temperature on the summit was, in the shade, 43°, in the sun, 49°, and the altitude about 13,500 ft. There were large snow patches (September 3d) on the north and east slope of Mt. Guyot and on the western slope of Mt. Agassiz. During the ascent Mr. Wallace saw many traces of the

## Big Horn, or Mountain Sheep.

And we found them afterwards on other high points, including Miner's peak, near Mineral King, but never once could we get a sight of these shy and cunning denizens of our highest mountains. It may be well to mention here that Mr. Wales found some red snow on one of the ridges of Mt. Young. He learned also, from conversation with an Indian from Lone Pine, who was in Capt. Michaelis' camp, that he had found red snow while coming up Lone Pine canyon to Mt. Whitney. Our party afterwards found it in large quantities at a height of 12,000 ft., near the head of Jenny Lind canyon, just north of the Kaweah group of peaks.

## But how did we reach

## Mt. Kaweah,

And succeed in making the ascent, which has long been deemed so difficult, and by some, almost impossible? From Camp Whitney we traveled with our seven animals—two of them well packed—for at least 30 miles before we began to ascend towards the vast and heavily timbered table-land from which the Kaweah group of mountains rises like so many isolated buttes. To be brief, our stages were as follows, over the roughest route imaginable, and without any trail at all most of the distance: To Moraine camp seven miles, general direction northwest, elevation 11,400 ft., crossed large eastern branch of Kern river, which we call Moraine creek; altitude of the ford 10,800 ft. To Milestone camp, just east of Milestone mountain, five miles, altitude 11,400 ft. This was about three miles below the extreme sources of the main Kern; crossed another large eastern branch of the Kern, at height of 11,200 ft., call it Tyndall creek. This was our farthest point north, and was near the base of the precipitous divide between Kern and Kings river. From this camp Mr. Wales ascended the divide and made an observation of the up-



shade, 60°. Between this and the highest point a peculiar snow patch was found like one near the summit of Mt. Whitney. We could think of no more descriptive name for it than

#### Serrated Snow.

The places named are the only two where we ever saw anything like it. It is similar to some of the upper surfaces of the glacial formations of the Alps, as represented by engravings. The whole surface, of the most dazzling whiteness, stands up in small cones from three to six ft. high, like miniature Sierra. Unlike other snow, it had the appearance of huge skeins of satin fluff drawn to a point. Yet there was no other semblance to a glacial formation, nor did we discover anything like a living glacier on this journey of fully 200 miles in our highest and most unfrequented Sierra, and in some of their most inaccessible gorges, vast fields of granite, thoroughly polished by glacial action in the remote past, were found in Whitney canyon, at the head of Jenny Lind canyon, just north of Mt. Abert, and afterwards at the head of Monarch canyon, in the Mineral King district, on the southern slope of Miner's peak.

At 4:10 P. M., our party had the satisfaction to be united

#### On the Summit of Mt. Kaweah.

We found not the slightest evidence that any human being had ever been there before us. Friends Wallace and Wales built a neat monument about four ft. high, and in a small tin case we left a record of the ascent. Our barometer stood at 18,225 or about 800 ft. less than it indicated on the summit of Whitney. Hence, to call the altitude 14,000 ft. cannot be far wrong, yet 14,200 ft. may not be too much. The high reddish cone in the group about two miles northwest of Mt. Kaweah we found by careful leveling is perhaps 100 ft. higher than Kaweah itself. We named it in honor of Prof. Joseph Henry, so long in charge of the Smithsonian Institute. The similar dark peak about a mile farther northwest, and the extreme northern peak of the Kaweah group, we named for Col. J. J. Abert, who, as one of the earliest graduates of West Point, was for more than 30 years chief of the Topographical Engineers U. S. A., and under whose direction Fremont made his first noted expedition to this coast. We hope

#### Mts. Henry and Abert.

Will be permanently known by these worthy names. Mt. Abert is slightly lower than Kaweah; perhaps 50 or 100 ft. From the Tulare and Fresno county plains these are the three highest, barest points seen in the clear days of winter; Mt. Abert the cone farthest north, Mt. Henry, the cone next to the south, and Mt. Kaweah, the long dome just south of them. The perspective in the accompanying engraving from a point nearly 4,000 ft. below their summits, makes Mt. Abert, to the left, and Mt. Henry, in the middle, look much lower than Kaweah's great mass, which is nearest to the point of view. But a side view from east or west makes the three appear of about the same height.

Want of space forbids an attempt to describe the magnificent array of our highest mountains that surround Mt. Kaweah's grand old dome. The latter is about the center of a great circle of ridges and peaks, whose radius is about 10 miles. About a dozen fine lakes were in sight, one of which, a mile south of our camp, and formerly visited by Mr. Wallace, covers at least 160 acres.

We will close this sketch with the meaning of the Indian name Kaweah, which I had the pleasure to learn from Mr. Joe Palmer, a noted mountaineer. The true word is Kah-wah, accented on the last syllable. Its literal meaning is "I sit here," or, more freely rendered, "Here I rest" or "Here I dwell."

#### Sauce Historical for Thanksgiving.

EDITORS PRESS:—Your "devils" make some odd blunders occasionally in printing communications; but please don't let them head this "Sauce *Hysterical*," in place of "historical."

I have headed my paper "Sauce" for a variety of reasons. One is, that there is very little of it. Another is, that I think the American appetite for Thanksgiving wants whetting. I don't refer to the appetite for the turkey or the mince pie. I regard the cranberry sauce in this connection as quite a superfluity. But we have so long lived in the enjoyment of our national privileges that we have almost ceased to regard them as things to be grateful for. Grateful to those through whose privations and sufferings we have obtained our glad inheritance, and grateful to that overruling world Father, through whose loving kindness we are the happy heritors of rights and privileges, won by the race in a toilsome and blood-stained past. Let any whose sense of gratitude has become a little dulled, not from use, but from disuse, wet it a little on such a very hard fact as this:

Forty thousand living souls slain—*Slain by the common hangman*—in one small country (the Netherlands), during the governorship of one man (the Duke of Alva), merely for a difference in opinion! EDW. BERWICK

Carmel Valley, Nov. 16, 1881.

TO DETECT A FLAW IN IRON.—If a piece of iron appears to have an unsound weld, or if it has a crack apparent upon the surface and it is desirous to know how deep it penetrates, heat the part to be tested to a red heat and pour a fine stream of water on the faulty spot, but mainly on one side of it, and the iron on that side will lose its redness more rapidly than the other side, and plainly indicate how deeply the defect extends.

#### Thanksgiving.

(Written for the RURAL PRESS by JOHN TAYLOR.)

You invite your many correspondents to take a tour through the labyrinths of sermons, essays, poems, or flitting notes, so as to create instruction, amusement, and variety for your many readers. Now, suppose I give you a mixed jumble of all combined, commencing with a strain of song as a Thanksgiving offering for all mercies vouchsafed throughout this memorable year, and for the hopes built on the faith of a grand and prosperous future. God is ever true to the wants of his earthly children. Seed time and harvest fail not. Our bodily wants are royally supplied, but only by endeavor. Nature requires man to perform his share of the contract to ensure success, all of which give us blessings worthy of public and individual expressions of gratitude. Sweet the ascending incense on such a day to the giver of all good gifts. But, while we are filled with gratitude to the sources of all good for material blessings, let us not forget to feed the spirit with immortal food, lest the spirit starve amidst blessings, spiritual as well as temporal. How great and grand are the possibilities of the undying spirit! Let the lamps of life be trimmed and well filled, so they may give a brilliant light when called upon to pass through the dark valley.

The good seed sown in earthly life  
Shall yield a fruit divine;  
And far above the present strife  
Thanksgiving shall be thine.

Many a sad sigh and tear of sorrow has agonized the American heart the past year. Death has removed the honored and loved of the land, but amidst all our griefs, the law of compensation has enriched the world's family. Sympathy has united the heart, creating "the fatherhood of God and the brotherhood of man." It is from sorrow sympathy springs. It is by misfortune we learn wisdom. It is a grand spectacle to see the intelligent world united in one spontaneous burst of sorrow and sympathy for individual or national misfortunes. By common consent the heart in anguish calls upon God, "So, let this cup pass away;" adding that sublime sentiment of resignation to the decrees of heaven, "Not my will, but thine, be done."

If I were capable of preaching a sermon, I should choose that beautiful of all beautiful sentiments for a text, "Misfortunes are often blessings in disguise." The good of all lands and all ages is taken away, when heaven so wills it. And for all of which let us give thanks.

In our agricultural and horticultural thanksgiving, we ought to raise a joyful sound. Plenty is stored for man and beast. The latter should not be forgotten on this festive occasion. While turkey and tender meats grace our board, an extra supply of provender should be meted out to Dick and Sal. Have they not performed labors intelligently and faithfully, success depending on their daily routine of duties? The horse knows full well what the law of kindness means, and repays with double interest all favors bestowed.

We are still thankful for the weekly return of the RURAL with its varied information regarding the earth's production. Progressive thought begets progressive action. Who can comprehend the results which flow from the intelligent publication of such a paper? It inspires ambition to excel in the different spheres of agriculture and horticulture. No family who receives it weekly but which is benefited less or more. It wisely keeps its pages free from vitating articles of questionable morality. Long may it issue its Thanksgiving invitation, and may correspondents heartily respond.

Baked turkey and Thanksgiving seems to be closely associated together. In spirit we retrace our steps a few months, while a smile the while illuminates our almost wrinkled visage, and we find ourselves at "Idlewild" reviewing a grand entertainment, presided over by "Aunt Jerusha" and friend "Mary," and I almost enjoy the fun and frolic. Keep the pot boiling. We may soon call for a corner at the Thanksgiving table. And that "other old maid" at Antioch. I wonder if that turkey is still alive, or will it grace that table, consecrated to single blessedness, on this memorable Thanksgiving morn. Memories are golden. How small incidents in life are treasured, and how careful we should be to allow nothing to take a seat on the tablets of our soul but what will create pleasure and sunshine. So we can offer our thanksgivings from a life filled from the multitude of good things which the great spirit has so generously scattered through all his infinite domain.

Let us eat of the food which Eden doth yield,  
By helping our sister and brother!  
Give freely your love and the fruits of the fields,  
The gifts of dame nature—*Our Mother*.

And our Thanksgiving will be acceptable to the giver of "every good and perfect gift." Chinese Camp, Cal., Nov. 13, 1881.

RESISTANCE OF STEEL TO FRACTURE.—Experiments have frequently been made, and numberless speculations have been indulged in, with reference to the influence of temperature on the resistance of steel to fracture. The *Moniteur Industriel* states that the chief cause of variation in strength is the presence of sulphur; steel or iron containing no sulphur maintain the same breaking strain at all observed temperatures, the only change being a trifling variation of the limit of elasticity.

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# YOUTH'S COMPANION.

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Any stock upon which this assessment shall remain unpaid on the 26th day of December, A. D. 1881, will be delinquent, and advertised for sale at public auction, and unless paid thereon, will be sold on Monday, the 17th day of January A. D. 1882, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

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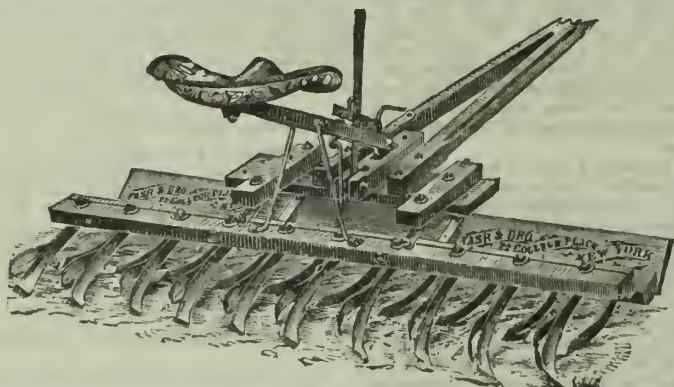
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Will make your Hens Lay, keep them in the best possible condition and ward off disease. When fed according to directions, sick and drooping fowls are never seen. It furnishes the needed material for forming bone, muscle and feathers, and is

—The—  
Eclipse Self-Regulating Incubator  
Regulating Incubators are now in actual use in most parts of this State, and giving general satisfaction. They are a success, and being such are invaluable to all who attempt to raise chickens; are easy to manage, and cost merely a trifle to keep in operation, and will do much better work than can be

Invaluable for Young Chicks and Moulting Fowls. It comes packed in various sized packages, and being a powder, is easily mixed with the customary feed. Give it a trial. Send Stamp for Circular and Testimonials.

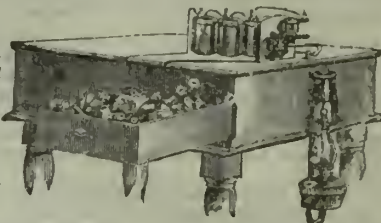
Price.—Single pound, 50 cents; Two and a half pounds, \$1.00; Six pounds, \$2.00; 25 pound keg \$6.25. Address,

G. G. WICKSON,

General Pacific Coast Agt.  
No. 319 Market St.,  
San Francisco,  
California.

done with  
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small portion of  
the labor and risk.

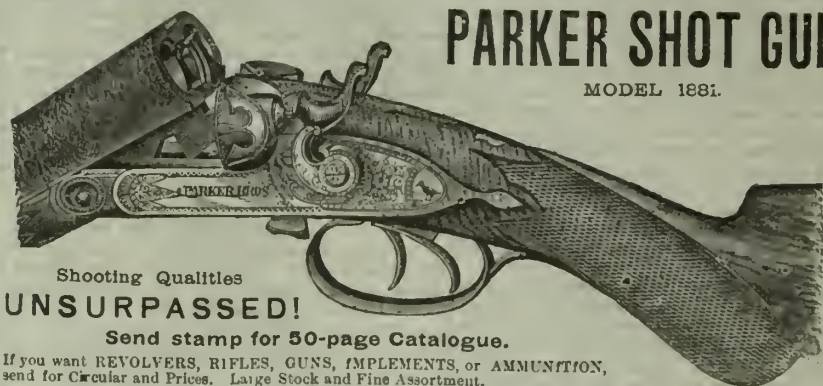
The "ECLIPSE" is the only entirely self-regulating incubator known; is the only one that will bear investigating, so it is the only safe one to purchase. Send stamp for Circular of California Testimonials (not Eastern.)



The Eclipse Self-Regulating Incubator.

## PARKER SHOT GUN.

MODEL 1881.



Shooting Qualities

UNSURPASSED!

Send stamp for 50-page Catalogue.

If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION, send for Circular and Prices. Large Stock and Fine Assortment.

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## MUSICAL BOXES.

## M. J. PAILLARD & CO.,

Manufacturers and Importers of all Kinds of

## MUSICAL BOXES

Of Standard Reputation. The largest and finest assortment in the city. Musical Boxes with changeable cylinders always on hand at low figures. The latest style patented, "THE INTERCHANGEABLE," patented February 11, 1879.

Repairing Musical Boxes and Furnishing Material a Specialty.

23 DUPONT STREET, SAN FRANCISCO.

A. E. JULLERAT, Sole Agent for Pacific Coast. (Branch House of 680 Broadway, N. Y.)

## GEO. BULL & CO.,

IMPORTERS OF AND DEALERS IN

## Agricultural Implements.

AND SOLE AGENTS FOR THE

J. I. CASE PLOW CO.

We have in stock the Center Draft Riding, Walking, Wood beam and Steel beam Standard, Racine Chilled, Breaking, Brush, Timber Land, Orchard, Vineyard and Farmers' Friend Gang Plows. Cultivators, Flexible, Vibrating and Spring Tooth Agitating Harrows. Also The Little Chert Fanning Mills, and a full line of Agricultural goods.

We offer special inducements to Farmers, Ranchers and Dealers.

Call and examine our stock, and get list of prices, or send for illustrated catalogue.

No. 37 Market St., S. F.

BRANCH HOUSE,

332 Market St., San Jose, Cal.

## ST. DAVID'S,

A FIRST-CLASS LODGING HOUSE  
CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

## GUNS

Lowest prices ever known on

Breech-Loaders,

Rifles, and Revolvers.

OUR \$15 SHOT-GUN

at greatly reduced price.

Send stamp for our New

Illustrated Catalogue (B)

P. POWELL & SON, 239 Main Street, CINCINNATI, O.

## Moore's Prepared

SQUIRREL



POISON.

The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO, Proprietors,  
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in sheep.

## REMOVAL NOTICE.

The Sweepstake Plow Company's Works have been removed to

Benicia from San Leandro.

ADDRESS IN FUTURE:

BENICIA AGRICULTURAL WORKS,  
Benicia, Solano County Cal.

## F. MANSELL & CO.,

Sign and Ornamental Painters,

NO. 434 PINE ST., SAN FRANCISCO.

(Opposite their old stand.)

Fancy Glass Work, Gold Block Letters, Etc.

## THE ONLY PURE GILT EDGE

## YEAST POWDER,

Is Positively Guaranteed,

To be the Best, Cheapest, Most Reliable and Wholesome Article ever offered to the Public. This is the ONLY Yeast or Baking Powder GUARANTEED free from adulterations. Try it. Manufactured by

H. G. BOISSELIER, Stockton, Cal.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

COL. C. YOUNGER, Forest Home Herd, San Jose, Cal. Breeder of Short-Horn Durhams, and pure bred Cotswold Sheep. Young Bulls and Bucks always for sale. Herd took Gold Medal, 1881.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

HENRY PIERCE, 728 Montgomery Street, S. F. Jersey Cattle, bred from Importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted butter strains on the island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound butter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn cattle and Berkshire hogs. A choice lot of young stock for sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Short-Horn Durhams and Norman-Percheron horses.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Held took Six Premiums of the eleven offered at State Fair, 1881.

R. NOELL, Grass Valley, Nevada Co., Cal. Breeder and Importer of Thoroughbred Jerseys.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

## HORSES.

HENRY MILLER, San Francisco, Cal. Breeder of Thoroughbred Norman Horses of the Stock Imported by Mr. Perry, of Illinois, took First Premium at San Jose Fair, 1880.

P. J. SHAFTER, Olema, Marin Co., Cal. Breeder of choice Jerseys, bred from butter strains. Hambletonian horses by the Silver Gray Stallion, "Rustic," remarkable for size, speed, and kind disposition.

J. R. ROSE, Lakeville, Sonoma Co., Cal. Breeder of Thoroughbred Devons, roadster horses and Percheron draft horses.

E. A. SACKRIDER, 325 Eleventh St., Oakland, Cal. Importer of Norman-Percheron horses. Horses on hand and for sale at reasonable terms.

WM. FARRINGTON, Santa Clara, Cal. Breeder of Norman horses; owner of the horse "Cunard," of stock of Perry's importation.

W. A. MUNNION, Dixon, Solano Co., Cal. Owner and Breeder of the celebrated Jack, "John Henry." Took First Premium State Fair, 1881, also Percheron Half-breeds.

J. W. BRYAN, Santa Clara, Cal. Breeder of Norman-Percherons from the celebrated Hercules Stock.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

F. RULLARD, Woodland, Yolo Co., Cal. Breeder of Thoroughbred Spanish Merino Sheep.

## POULTRY.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rock, Pekin Ducks.

HALSTED'S NEW INCUBATOR. Price \$30. 1011 Broadway, Oakland. Send for circular.

## SWINE.

ALFRED PARKER, Belleta, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. WAITE, Brighton, Sacramento Co. Breeder of Thoroughbred Berkshire Hogs and choice Imported Poultry. Took Premium State Fair, 1880 and 1881 of Leghorns (brown and white), Speckled Hamburgs, Plymouth Rocks and Pekin Ducks.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

ELIAS GALLUP, Hanford, Cal., Breeder of Poland China Swine. Stock recorded in American Poland China Record. Are descendants of the celebrated McCrory-Bismarck, bred by D. M. Magie, Oxford, Ohio. Took five First Premiums at State Fair in 1880.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by L. Stanford.

## BEES.

J. D. ENAS, Sunnyside, Napa, Cal. Breeds Pure Italian Queen Bees. Comb Foundation.

## JOS. FREDERICKS &amp; CO.,

IMPORTERS AND DEALERS IN

## CARPETS, FURNITURE, BEDDING,

Rugs, Mats, Linoleum, Oilcloths, Upholstery Goods, Etc.

Lace Curtains, Window Shades and Draperies,

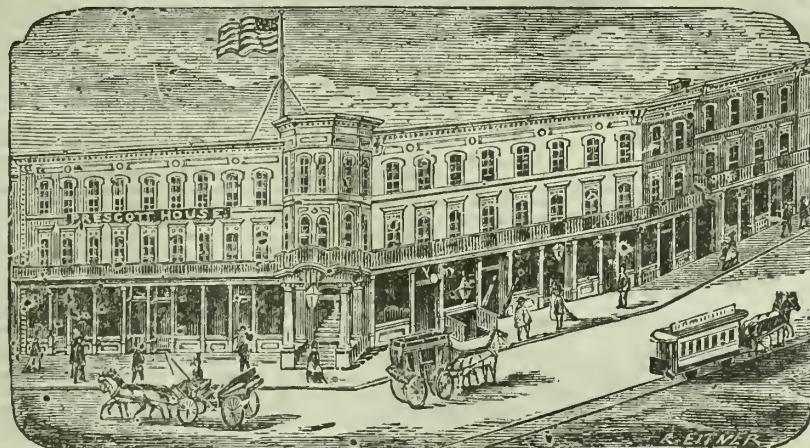
649 and 651 Market St., Opposite Kearny, S. F.

## The Fresno Colony,

On the line of the Southern Pacific Railroad and adjoining Fresno City and the Central Colony. Has the most favorable location of any Colony, as well as other superior advantages. Abundant water secured. Land unsurpassed for Vine Raising and Fruit Culture. Send for Map and Circular, or come and examine. Address

THOMAS E. HUGHES &amp; SONS, Fresno City, Cal.

## PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House.

O. F. BECKER, Proprietor

## IMPORTANT TO THE FARMER.

—USE—

## Larroe's Fertilizer.

It is manufactured solely of Bones and residues of Meats dried and pulverized in such manner that all the Calcium, Phosphates, Carbonates, Nitrates and Potassium, which are the main assimilators to plants, are entirely preserved in the Fertilizer and render it most valuable to the cultivators of the soil.

Stable manures require frequent irrigation in order to develop its properties; it is expensive, voluminous, and requires great labor to spread and subsoil it; it propagates weeds, worms, snails and destructive animals, the pests of the farmer. On the other hand, Bone Powder can be easily handled, transported at low rates of freight, in bags. It checks the propagation of insects and luxuriates the growth of hops, vices, fruit trees, etc.; can easily be spread under the plants and is most efficacious as an impediment to the rapid and terrible encroachment of the PHYLLOXERA. The Fertilizer should be sown by hand on the ground when it is moist like seed, and then harrowed. About 400 pounds is the quantity for an acre. Price, \$40 per ton. For further information apply or address to,

F. LARROCHE.

Stall 21, San Francisco Market, San Francisco, Cal.

—OR—

SEVIN VINCENT &amp; CO., Seedsmen.

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The Great Family Remedy.

No Compound but a Pure Distillation of a Peculiar kind of Fir Balsam found in a certain locality of the Sierras of California. It is used both Internally and Externally.

W. W. Haney, 221 Sacramento St., S. F., says: Abietene cured me of Rheumatism after other remedies had failed. Also relieved me of Dyspepsia and Kidney Troubles.

B. P. Baird, late City Assessor, Stockton, says: It cured me of Lame Back and Kidney Troubles after all other remedies failed.

W. L. Leadbetter, Ex-Member of the Legislature, says: We use Abietene for Coughs, Colds, Sore Throat, Hoarseness, also as a Liniment for Rheumatism, Sprains, Bruises, etc. It is also my wife's specific for Croup. We are never without it.

John E. Moore, Rancher near Stockton, says: Abietene is a General Remedy on my ranch. Use it for both Man and Beast. It is the Best Remedy ever used for inflamed eyes. It is a splendid Liniment. Have cured Sweeney with it. Am never without it on my ranch.

Those to whom its value and mode of application are known are never without it, at home or traveling.

Is a Sure Cure for Poison Oak, Headache, Skin Diseases, Etc.

None Genuine without the name of WM. M. HICKMAN, Druggist, Stockton, Cal., on the Label. For Sale by

DRUGGISTS AND DEALERS GENERALLY.

Price, 10 cents and \$1 per bottle

## CAMPTON'S PATENT SINGLE FARM GATE.

Iron or Wood self-opening and shutting. No stock can unlatch. This gate always opens from you. Iron, \$40; Iron and Wood, \$30; Wood, \$20. Send for circulars to A. P. CAMPTON, Rohnerville, Humboldt Co. Fa'm, County and State rights for sale. Took First Premium State Fair, 1881. Illustrated in RURAL Nov. 5, '81.

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Makes to order Gents' Floe French Calf Boots from \$5 to \$10; Gaiters from \$3 to \$5; Alexia from \$3.50 to \$5; Mens' Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12.1 pay the express charges. I sell nothing but my own manufacture.

50 All Gold, Chromo and Lithograph Cards. (No 2 alike). Name on 10c. Clinton Bros., Clintonville, Con.

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Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000, In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

Reserve Fund and Paid up Stock, 25,760.

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JOHN LEWELLING, Vice-President  
ALBERT MONTPELLIER, Cashier and Manager  
FRANK MCMULLEN, Secretary

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J. H. GARDNER, Stanislaus Co  
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LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

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TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 3 months; 5% per annum if left for 6 months; 6% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

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Cashier and Manager.

San Francisco, Jan. 15, 1881.



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TANKS AND ALL KINDS OF PUMPING MACHINERY BUILT TO ORDER.

No. 51 Beale Street, S. F.

Send for Circulars.

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(Successors to W. I. TUSTIN.)

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MANUFACTURERS OF

## TOILET &amp; LAUNDRY SOAP

OF EVERY DESCRIPTION.

Office and Factory 109 &amp; 111 Oregon St., below Front, between Washington &amp; Jackson, S. F.

## California Washer.

This machine is an improvement on the celebrated "Humboldt." For Families or Hotels it will pay for itself in less than six months. Lace curtains and other delicate fabrics can be washed without injury. Price \$15. Manufacture, 431 Fourth St., S. F. Local or traveling Agents wanted. G. M. PURSELL, Patentee.

## California Improved Rotary Churn,

PATENTED AUGUST, 1881.

A Box Churn with dashers, or can be used without dashers. Can be run with reverse motion with one man or two. A trial will convince that this is the best Churn in use. For Churns and Agencies, apply to

E. L. PRIEST &amp; CO., 629 Market St., Oakland.

## STILES' GRAIN MILL.

This Mill grinds by corrugated friction rollers. It will grind eight tons to one-horse power per day, and one-half-horse power will run it and do work in proportion. It can be run by a common windmill. Any orders received by W. C. STILES, Nevada City, will be filled at once.

## GOLDEN GATE WASHING MACHINES.

The principle used attacks every spot and place in the fabric with force, and will cleanse the most delicate fabrics without injury. The rocking motion used takes but small power, so that a youth can do a washing. Strong, Durable and Ornamental. Agents Wanted on Liberal Terms. Address JOHN D. WINTERS, Davisville, Cal.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



M. P. HENDERSON Carriage Manufactory.

ALL KINDS OF CARRIAGES AND WAGONS FOR SALE.

Cor. Main &amp; American Sts., Stockton, Cal.

Makes to order all kinds of Carriage and Buggy Work, Express and Thoroughbred Wagons and Stage Work. Painting and Trimming done to order.

Jobbing done with Neatness and Dispatch.

## Agricultural Articles.

MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to

MATTESON &amp; WILLIAMSON,

Stockton, Cal.

## LAUREL RANCH!

Thoroughbred

Spanish Merino

## SHEEP.

We offer for sale 400 HEAD OF YOUNG EWES AND RAMS. Prices always reasonable and terms liberal. Quality and condition superior to any flock in this State.

J. H. STROBRIDGE, Haywards, Alameda Co.

E. W. PEET, Agent.

## Harvey's Hot-Water Radiator

For Warming and Ventilating Private Residences and Public Buildings.

Introduced into TEN PUBLIC BUILDINGS and over FORTY PRIVATE RESIDENCES the past year with satisfactory results. Less attention and less fuel required to heat 4 rooms with this system than would warm 1 room with the open grate. Highest testimonials. Address

C. D. HARVEY,

213 Mission St., bet. Main and Beale, S. F. Residence, 1227 Eleventh Avenue, East Oakland.

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GRAY &amp; HAVEN,

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530 California St., SAN FRANCISCO.

THE NEW IMPROVED VANELESS

## ALTHOUSE WINDMILL AGENCY.

S. H. KILER, of San Rafael, has the Agency for all Counties North of the Bay. Having them in stock orders for any size can be filled at once.

Colonies of Pure Italian Bees,

In movable (10) frame hives prepared for shipping, \$12.50 each. J. D. ENAS, Sunnyside, Napa P. O., Cal.



PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, No. 252 Market St., S. F.

FOR THE WEEK ENDING NOVEMBER 8, 1881

243,390.—CABLE-WAY—H. Casbolt, S. F.  
249,398.—CHINSEY—L. E. Clawson, S. F.  
249,185.—PANTS AND OVERALLS—Felix Kivi, S. F.  
249,186.—SHIRTS—Felix Kivi, S. F.  
249,187.—OVERALLS—Felix Kivi, S. F.  
249,195.—FAUCET FOR SHIPPING CANS—John Marshall, S. F.  
249,262.—TELEPHONE EXCHANGER SYSTEM AND APPARATUS THEREFOR—John I. Sablin, S. F.  
249,297.—VELOCIPED—Budd Smith, S. F.  
249,275.—DRIVING NITRATES—Thos. Varney, Oakland, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

TRICYCLE.—Henry C. Bridgman, Milpitas. Dated Sept. 20, 1881. No. 247,156. This improvement in tricycles consists of a peculiar frame, the end of which is supported by a steering or guiding wheel, and the forward end by two large wheels, which are propelled by cranks operated by the hands, the seat hung or placed as to render this possible. The steering is accomplished by the feet, which are fitted to stirrups connected with the guiding wheel by means of cords, and operated in the same way racing boats are guided. The novelty in the invention consists in so journaling the large driving wheels so as to be independent of each other, so that each can be operated separately to turn corners and in adapting them to be revolved by hand.

EXCAVATOR FOR EMBANKING MACHINE.—John G. Dawes, Fresno, Cal. Dated Sept. 20, 1881. No. 247,176. This invention relates to the class of excavating and embanking machines, and it consists of a peculiarly formed revolving cylinder provided with spiral or screw flanges on its several sections, extending from end to end inside, said flanges forming a continual spiral flange through the cylinder, the cylinder having attached to itself, and receiving the earth from, a plow on one side, and being adapted to be added to and extended as the width of the excavation demands.

MAKING PAPER PULP FROM WOOD.—Rufus B. Lane, Stockton. No. 247,072. Dated Sept. 13, 1881. This invention relates to certain improvements for pulping the fiber of wood to be employed as in paper stock, or for other purposes; and it is an improvement on an apparatus previously patented by the same inventor. The present invention consists of a mechanism by which the blocks of wood to be pulped are moved backward and forward across the cutting pins, and at, or nearly at, right angles with the line of action of the cutters.

GRAIN SEPARATOR.—James Root, Black's Station, Cal. Dated, Sept. 20, 1881. No. 247,274. The operation of this machine is in the main similar to implements of this class. The action of the fan blower is the same, and the passage of the stuff through the sieves and final separation of the chaff from the wheat and discharge of the latter present generally no new features. The particular combination, however, contributes to an improved result.

GLENWOOD COTTAGE, at Riverside, San Bernardino county, is one of the very pleasant places for winter resort in southern California. Its climate is remarkably healthy. Centrally located in town, the "Cottage" is handsomely embowered in shrubbery. Miss Miller is much complimented by guests for the popular manner in which she conducts the place for her brother. Since the editorial excursion party made headquarters there last spring, we understand improvements have been added in order to meet the popular demand for accommodations.

THE RURAL PRESS.—The PACIFIC RURAL PRESS should be in every house—especially in the family of every farmer. It is a highly respectable and useful paper. The cost of subscription—\$3 for a weekly journal of its size and ability—only stands for a small part of the valuable hints and teachings it contains. Address, Dewey & Co., 252 Market street, San Francisco. —Santa Rosa Republican.

A SPECIAL CORRESPONDENT.—The well-known author, Mrs. A. H. Leonowens, has been sent to Russia by the *Youth's Companion*, and will soon contribute a striking series of articles on "Life in the Out-of-the-way Nooks and Corners of Russia."

ARIZONA has 150,000 head of sheep. The wool industry of northern Arizona is taking an important place.

Removal of Patent Agency and Newspaper Offices.

October 29th the patent agency and newspaper office of Dewey & Co., were removed to the northeast corner of Front and Market Sts., occupying a large space on the upper floor, where we have spacious and pleasant rooms for the accommodation of our increasing business. Our apartments will have two entrances as shown in the following engraving: Our stairway, No. 252 Market St., and our elevator, No. 12 Front St.

Take the Elevator at No. 12 Front St.

Visitors will find it better to step around the corner from Market St., to the elevator rather than ascend the stairs. Old and new friends are cordially invited to give us an early call in our new quarters.

The Pacific Rural Press.

[Established in San Francisco in 1870.]

This is the leading farming journal on the western half of the continent, and second to none in America. It is well printed and illustrated weekly. Contains an unusual amount of fresh, original farm, household and family circle literature. Careful attention is paid to giving full and reliable weekly market reports. The following are among its ably conducted departments: Editorials on agricultural and other timely and important subjects of live interest to farmers and their families; agricultural and other useful and ornamental illustrations; correspondence from various quarters of our new and rich developing fields of agriculture on the Pacific coast, embracing new hints and ideas from progressive men and women in all branches of rural industry; Horticulture; Floriculture; The Garden; The Home Circle; The Grange; Young Folks; Domestic Economy; Good Health; Entomology; Sheep and Wool; The Dairy; The Stock Yard; Poultry Yard; The Swine Yard; The Apiary; The Vineyard; Queries and Replies; New Inventions (and illustrations of new and improved machinery); Agricultural Notes; Items of General News, etc. Its columns are studiously filled with concise, interesting, fresh and useful reading, devoid of questionable literature for old or young and fancifully alluring clap-trap advertisements. Send for sample copies.

Subscriptions, in advance, \$3 a year. Agents wanted, on liberal plan. DEWEY & CO., Publishers. No. 252 Market St., S. F., Cal.

Cylinder Printing Press for Sale.

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S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Tuesday, Nov. 22, 1881.

Trade in the leading cereal has gone through another week and shippers are said to show no immediate interest. The best use possible is being made of the temporary dullness abroad to press down the price of Wheat here and get as much on the rate for charters as possible. The lesser grains, Barley, Oats and Corn, have been more active than usual, and have gained in value. The latest from abroad is as follows:

LIVERPOOL, November 21.—Wheat, Spot, Fair Average to choice California, including Club, 11s 1d to 11s 5d, quiet;

cargoes off coast, 54s; nearly due, 53s 6d; just shipped, 51s 6d; floating cargoes, quiet; on passage and for shipment, quiet. Red American Spring, No. 2 to No. 1, 10s 7d. No. 3 Red Winter Wheat for prompt shipment, 53s; No. 3 Red Winter Wheat for November and December shipment, 53s. Market Lane Wheat, quiet but steady. English country markets, steady. French country markets, quiet. Farmers' deliveries of Wheat during the past week, 40,45,000 qrs. Wheat and Flour in Paris, steady.

Freights and Charters.

Charters on Saturday were the ship *Isaac Reed*, 1,651 tons, Wheat to Liverpool direct, £3 7s 6d, and ship *St. John Smith*, 2,220 tons, Wheat to Liverpool direct, £3 5s 6d.

The Foreign Review.

LONDON, Nov. 21st.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The weather was abnormally warm, and the young Wheat consequently made rapid progress. Farmers' deliveries decreased both in quantity and quality. The weather is favorable for threshing. Good samples of native Wheat are growing scarce, and all but a very few sell with increased difficulty. Most samples are rejected. There are no favorable changes in values of Wheat and Flour. The foreign spot trade is unchanged. Some concession is necessary to effect sales. American Red Winter and Spring Wheats are in large supply. The supply in London is large. Receipts of foreign Flour were small, half being from New York. The steadiness is due to the restricted supply. Rates are unchanged. Fourteen Wheat cargoes arrived off the coast, of which 13 were sold. The floating bulk has increased. Good Barley is scarce, but inferior is more plentiful. Maize is unchanged, but sellers of mixed American are firmer in their demands. Sales of English Wheat during the week were 41,911 quarters, at 45s 4d per quarter, against 40,982 quarters, at 44s 1d per quarter, for the corresponding week of last year.

Eastern Wool Markets.

BOSTON, N. V. 18th.—The Wool market is not so firm for fine fleeces. Slight concessions have resulted in considerable sales. The business of the week has been good, sales amounting to 2,800,000 lbs of all kinds. Transactions in fine Ohio and Pennsylvania fleeces have been 35,000 lbs, at 43¢ to 45¢, mostly 44¢ to 45¢, and some very choice lots were taken at the latter rate. Michigan and Wisconsin fleeces have been sold at 41¢ to 42¢ for X, and are in moderate demand, as stock is held mostly above the views of buyers. Unwashed fleeces are in demand. Medium Wools have been more sought after. Sales of all kinds amount almost to 1,000,000 lbs, including considerable coarse and carpet, at 17¢ to 20¢; fine at 24¢ to 30¢, medium, 25¢ to 35¢ per lb. Large lots of Missouri are being selling at 25¢ to 30¢; good and choice western medium at 30¢ to 34¢. Combings and Delaware fleeces are steady; sales of fine Delaware at 45¢ to 49¢, and Missouri, Kentucky and Illinois combing at 30¢ to 32¢. California Wool is selling more slowly, and Fall is selling at very low prices. Some 336,000 lbs have been sold at 12¢ to 15¢, mostly 12¢ to 14¢. Pulled Wools are in demand and firm, with sales as low as 30¢ to 37¢, good do 40¢ to 44¢, and choice Eastern and Maine and super 45¢ to 55¢. In Cape, sales have been made at 18¢ in bond, 32¢ to 33¢ duty paid, and Australia 40¢ to 42¢ per lb.

NEW YORK, Nov. 19th.—Wool lacks animation and prices are unsettled; the sales of California include 6,500 lbs of Spring at 22¢ to 30¢, and 1,300 lbs Fall at 22¢ to 23¢.

New York Dried Fruit Markets.

NEW YORK, Nov. 19th.—Foreign fruits are quiet. Raisins are moving with little more freedom, but prices are easier with the most business in Malaga; at 5¢ decline. Prunes are slow at 8¢ to 9¢ for old. Figs are steady, but quiet. Dried apples are a little irregular and the demand is slow. California Canned fruits are dull, but prices are unchanged.

Eastern Grain and Provision Markets.

CHICAGO, Nov. 19th.—Wheat opened very strong and advanced for awhile on Monday, but there was a drop of nearly four cents on Tuesday, and the decline continued throughout the week, reaching the lowest point. Corn was exceptionally firm, because of the knowledge of the shortness of the crop. It declined, however, steadily. Oats were less demoralized than the other, but suffered a small drop. Provisions opened strong and higher, and declined considerably, but reached to pretty near the highest prices again and dropped to-day. Whiskey remained steady at \$1.14. The sales of the January option for the week were: Wheat, \$1.23 1/2 to \$1.34; Corn, 50¢ to 62¢; Oats, 42¢ to 44¢; Pork, \$17 to \$17.67; Lard, \$11.25 to \$11.75.

CHICAGO, November 19th.—Wheat weak and decidedly lower, \$1.27 cash, \$1.27 1/2 December. Corn weak and lower at 50 1/2 to 50 3/4 cash, 50 1/2 December. Pork, weak at \$16 to \$16.40 cash, 17 1/2 January. Lard, weak and lower, at \$11 bid; cash \$12.25 January. Short ribs, \$8.65 to \$8.70 cash \$8.75 to \$8.80 January.

NEW YORK, November 19th.—The volume of trade is gradually sinking, although still quite large for the season. Wheat is irregular, and fluctuations on the market are frequent; exporters continue to take only small supplies. H. M. is moderately active, No. 1 Canada, \$1.15. Pork is dull, but held firmly; Mess, \$7.75. Lard is firmer with a moderate demand.

BAGS—Grain bags are quoted 1/2¢ higher, ruling now at 8 1/2 to 9¢ wholesale.

BARLEY—Barley has still continued in request, and Feed Barley has gained another advance. We note sales: 742 sds choice Brewing, \$1.62 1/2; 275 and 400 sds fair do, \$1.57 1/2; 800 sds choice Bay Feed, \$1.52 1/2; and 1,500 sds coast Cavalry, \$1.45.

BEANS—Limas have dropped off about 75¢ per ctl. Pea and Small White have dropped 30¢. Castor Beans are now at an advance, being 35¢ to 40¢ per ctl.

CORN—Corn is higher, but there is a difference of 5¢ per ctl between buyers' and sellers' figures; bids being \$1.45 on Corn held at \$1.50. All sorts of Corn rule about alike.

DAIRY PRODUCE—Butter is still selling at 1st week's decline, and the situation seems about the same in all respects. Cheese is unchanged.

EGGS—Fresh California Eggs sell at 48 to 52¢ according to selection. Utah and Eastern Eggs have advanced, but new supplies are now arriving.

FEED.—Bran and Middlings are lower. Hay and other materials are unchanged.

FRESH MEAT.—There is no change, except a reduction of 1/2¢ per lb on live Hogs.

FRUIT—Strawberries are getting few; only 1/2 chest came in on Monday, and sold at 50¢ per drawer. Oranges and other Citrus Fruits have sold moderately at last week's prices.

HOPS—Hops are about the same in this market, the price ranging from 24 to 30¢, according to quality. The latest by mail from New York is *Harriet Wells' Circular* of Nov. 11th, as follows:

The receipts, as compared with last week, show a fall-off of 1,600 bales, while some 600 bales less go out to Europe. The demand from brewers has also been comparatively light, and on the whole we must write the market as dull. Quotations for the time being are more or less nominal, especially those of 25 to 30¢ for choice State; for most of the operations have been on a basis of 25 to 27¢. If we are to have any improvement in the market, it must come within the next 30 days, for then the holiday season will be near at hand, when dullness is almost sure to rule for 60 days or more following.

Quotations: New York, crop 1881, choice, 23 to 30¢; New York, crop 1881, medium, 15 to 27¢; New York,

crop 1881, low to fair, 22 to 24¢; Eastern, crop 1881, 22 to 27¢; Wisconsin, crop 1881, 22 to 27¢; Yearling, crop 1880, 12 to 22¢; Olds, all growths, 5 to 15¢; Pacific Coast, new, 28 to 30¢; Bavarians, 40 to 45¢; Bohemians, 43 to 50¢.

OATS—Oats have experienced unusual activity and sales of choice Surprise have been reported up to \$2 per ctl. The general advance has been about 7 1/2¢ per ctl for Feed Oats. We note sales: 3,000, 2nd and 108 sds good, \$1.69; 127 sds Hubbard, \$1.62 1/2; 900 sds do, \$1.52 1/2, and 375 sds Stained Washington Territory, \$1.50.

ONIONS—Onions have advanced about 30¢ per ctl and the best Silverskins are selling at \$1 per ctl.

POTATOES—The market has a better tone than last week, although prices have as yet advanced but little on choice kinds, and on others are unchanged from last week.

PROVISIONS—California Bacon of all grades is 1/2¢ per lb lower than last week.

POULTRY AND GAME—Dressed Turkeys are being worked off fast. We saw one lot of 6 or 8 large cases sold at 15¢ per lb. Fowls are lower than last week. The market this week bid fair to be well supplied with all kinds of birds.

VEGETABLES—Marrows: Squash has dropped to \$10 per 100 lb ton.

WHEAT—Sales are few and the prevailing dullness has led to a slight reduction in rates; \$1.75 being now as high as dealers will name for No. 1.

WOOL—There is no change.

Domestic Produce.

WHOLESALE.

TUESDAY M., November 22, 1881.

BEANS & PEAS.

Bayo, cts., 2.00 to 2.25  
Butter, 3.00 to 3.50  
Castor, 3.50 to 4.00  
Pea, 1.75 to 1.85  
Pink, 1.75 to 1.85  
Large White, 3.00 to 3.25  
Small White, 3.00 to 3.25  
Lima, 4.75 to 5.00  
Field Peas, 2.60 to 2.75  
do, green, 2.60 to 2.75

BROOM CORN.

Southern, 3.00 to 3.25  
Northern, 4.00 to 4.25

CHICKEN.

California, 6.00 to 6.25  
German, 6.00 to 6.25

DAIRY PRODUCE, ETC.

Cal. Fresh Roll, lb., 32¢ to 35¢  
do, Fancy Braids, 32¢ to 35¢  
Pickle Roll, 34¢ to 35¢  
Pork, new, 32¢ to 35¢  
Eastern, 20¢ to 25¢  
New York, 20¢ to 25¢

CHEESE.

Chesse, Cal., lb., 13¢ to 15¢

EGGS.

Cal. Fresh, doz., 48¢ to 52¢  
Ducks, 45¢ to 50¢  
Oregon, 35¢ to 40¢  
Eastern, by express, 37¢ to 40¢  
Picked, 40¢ to 45¢

FEED.

Bran, ton, 21.00 to 22.00  
Corn Meal, 42.00 to 43.00  
Hay, 9.00 to 10.00  
Middlings, 22.00 to 23.00  
Oil Cake Meal, 22.00 to 23.00  
Straw, bale, 42.00 to 43.00

FLOUR.

Extra, City Mills, 25¢ to 28¢  
do, Country Mills, 25¢ to 28¢  
do, Oregon, 25¢ to 28¢  
do, Walla Walla, 25¢ to 28¢  
Superfine, 25¢ to 28¢

FRESH MEAT.

Beef, 1st quality, lb., 5¢ to 6¢  
Second, 4¢ to 5¢  
Third, 3¢ to 4¢  
Mutton, 4¢ to 5¢  
Spring Lamb, 5¢ to 6¢  
Pork, undressed, 8¢ to 9¢  
Dressed, 8¢ to 9¢  
Veal, 8¢ to 9¢  
Milk Calves, 7¢ to 8¢  
do, choice, 8¢ to 9¢

GRAIN, ETC.

Barley, feed, cts., 45¢ to 52¢  
do, Brewing, 55¢ to 60¢  
Chevalier, 55¢ to 60¢  
do, 42¢ to 45¢  
Buckwheat, 45¢ to 50¢  
Corn, White, 45¢ to 50¢  
Yellow, 45¢ to 50¢  
Small Round, 45¢ to 50¢  
Oats, 45¢ to 50¢  
Milling, 75¢ to 80¢  
Rye, 45¢ to 50¢  
Wheat, No. 1, 72¢ to 75¢  
do, No. 2, 67¢ to 70¢  
do, No. 3, 45¢ to 48¢  
Choice Milling, 72¢ to 75¢

HOPS.

Hides, dry, 18¢ to 19¢  
Wet salted, 9¢ to 10¢

HONEY, ETC.

Beeswax, lb., 23¢ to 25¢  
Honey in comb, 15¢ to 20¢  
Extracted, 9¢ to 10¢  
do, dark, 7¢ to 9¢

HOPS.

Oregon, 24¢ to 25¢  
California, new, 26¢ to 28¢  
Wash. Ter., 25¢ to 26¢  
Old Hops, 24¢ to 25¢

WALNUTS.

Walnuts, Cal., 8¢ to 9¢  
do, Chile, 7¢ to 8¢  
Almonds, dhali, 8¢ to 10¢  
Soft shell, 14¢ to 15¢  
Brazil, 10¢ to 12¢  
Pecans, 13¢ to 15¢

PEANUTS.

Peanuts, 6¢ to 6 1/2¢  
Filberts, 14¢ to 15¢

ONIONS.

Red, 10¢ to 12¢  
Silver Skin, 90¢ to 95¢  
Oregon, 8¢ to 10¢

POTATOES.

Early Rose, 75¢ to 85¢  
Petaluma, cts., 1.05 to 1.20  
Tomatoes, 1.15 to 1.25  
Humboldt, 1.00 to 1.20  
do, Kidney, 1.00 to 1.20  
do, Peach Blow, 1.00 to 1.20

POULTRY & GAME.

Hens, doz., 5.00 to 6.50  
Roosters, 4.00 to 5.00  
Broilers, 3.00 to 4.25  
Ducks, tams, doz., 4.50 to 5.50  
Mallard, 2.00 to 2.25  
Sprig, 1.00 to 1.25  
Teal, 1.00 to 1.25  
Widgeon, 1.00 to 1.25  
Geese, pair, 1.50 to 2.00  
Wild Gray, doz., 50¢ to 60¢  
White, do, 50¢ to 60¢  
Turkeys, 13¢ to 15¢  
do, Dressed, 14¢ to 17¢  
Turkey Feathers, 10¢ to 20¢  
tail and wing, lb., 10¢ to 20¢  
Salp., Eng., 60¢ to 80¢  
Common, 60¢ to 80¢  
Quail, doz., 75¢ to 87 1/2¢  
Rabbits, 1.00 to 1.50  
Hare, 2.00 to 2.25  
Venison, 5¢ to 7¢

PROVISIONS.

Cal. Bacon, extra, 14¢ to 15¢  
do, choice, 13¢ to 14¢  
Medium, 13¢ to 14¢  
Light, 14¢ to 15¢  
Lard, 13¢ to 17¢  
Cal. Smoked Beef, 11¢ to 12¢  
Shoulders, 13¢ to 14¢  
Hams, 13¢ to 14¢  
Ducks, 16¢ to 17¢  
Whittaker, 16¢ to 17¢  
Royal, 16¢ to 17¢  
Stewart, 16¢ to 17¢  
Eastlake, 16¢ to 17¢

SEEDS.

Alfalfa, 12¢ to 13¢  
do, Chile, 12¢ to 13¢  
Canary, 34¢ to 4¢  
Clover, Red, 14¢ to 15¢  
White, 45¢ to 50¢  
Cotton, 25¢ to 30¢  
Flaxseed, 21¢ to 25¢  
Hemp, 25¢ to 30¢  
Italian Ryegrass, 25¢ to 30¢  
Perennial, 25¢ to 30¢  
Millet, German, 10¢ to 12¢  
do, Common, 7¢ to 10¢  
do, Quarters, 10¢ to 12¢  
do, Lambs, 13¢ to 14¢  
do, Northern, 17¢ to 20¢  
do, defective, 14¢ to 16¢  
Mountain, free, 16¢ to 18¢  
do, slightly seeded, 13¢ to 15¢  
Humboldt & Mendocino, 18¢ to 21¢

TALLOW.

Crude, lb., 71¢ to 74¢  
Refined, 91¢ to 100¢

WOOL, ETC.

FALL—1881.

San Joaquin, 11¢ to 13¢  
do, Lamb, 13¢ to 15¢  
Southern, 13¢ to 15¢  
do, Lambs, 13¢ to 14¢  
do, Northern, 17¢ to 20¢  
do, defective, 14¢ to 16¢  
Mountain, free, 16¢ to 18¢  
do, slightly seeded, 13¢ to 15¢  
Humboldt & Mendocino, 18¢ to 21¢

Fruits and Vegetables.

WHOLESALE.

TUESDAY M., November 22, 1881.

FRUIT MARKET.

Apples, lb., 1.25 to 1.50  
Bananas, bunch, 2.50 to 4.00  
Cocoanuts, 100, 6.00 to 7.00  
Cranberries, 100, 10¢ to 14¢  
Figs, bx., 50¢ to 75¢  
Grapes, 85¢ to 1.50  
Limes, Mex., 1.00 to 1.50  
do, Cal. box, 1.50 to 2.00  
Lemons, Cal. box, 2.50 to 3.50  
Sicily, box, 7.00 to 8.00  
Australian, 7.00 to 8.00  
Oranges, Cal. box, 2.50 to 4.00  
do, Tahiti, 2.50 to 4.00  
do, Mexican, 2.50 to 4.00  
do, Loreto, 2.50 to 4.00  
Pears, bx., 75¢ to 1.50  
Pineapples, doz, 7.00 to 8.00  
Plums, bx., 50¢ to 75¢  
Strawberries, cts., 9.00 to 13.00

DRIED FRUIT.

Apples, sliced, 7¢ to 7 1/2¢  
do, quartered, 6¢ to 6 1/2¢  
Apricots, 15¢ to 16¢  
Blackberries, 12¢ to 14¢  
Citron, 25¢ to 30¢  
Dates, 9¢ to 10¢  
Figs, pressed, 4¢ to 6¢  
do, loose, 3¢ to 4¢  
Nectarines, 14¢ to 15¢  
Peaches, 11¢ to 12¢  
do, pared, 15¢ to 17¢

Pears, sliced, 9¢ to 9 1/2¢  
do, whole, 7¢ to 8¢  
Plums, 5¢ to 6¢  
Pitted, 13¢ to 14¢  
Prunes, 9¢ to 12¢  
Raisins, Cal. bx., 2¢ to 2 1/2¢  
do, halves, 3¢ to 3 1/2¢  
do, Quarters, 3¢ to 3 1/2¢  
Eighths, 3¢ to 3 1/2¢  
Zante Currants, 4¢ to 5¢

VEGETABLES.

Artichokes, doz., 25¢ to 30¢  
Beets, cts., 10¢ to 15¢  
Beans, Lima, lb., 5¢ to 6¢  
do, String, 7¢ to 10¢  
Cabbage, 100 lbs, 75¢ to 1.00  
Carrots, 30¢ to 40¢  
Cauliflower, doz., 85¢ to 1.00  
Cucumbers, doz., 1.00 to 1.20  
Garlic, lb., 14¢ to 15¢  
Green Peas, lb., 10¢ to 12¢  
do, Sweet, 5¢ to 6¢  
Gr'n Peppers, bx., 50¢ to 75¢  
do, Chile, 50¢ to 75¢  
Lettuce, doz., 10¢ to 12¢  
Mushrooms, lb., 3¢ to 5¢  
Onions, 5¢ to 8¢  
Parsnips, lb., 5¢ to 6¢  
do, Horse radish, 5¢ to 6¢  
Squash, Marrow, 10¢ to 12¢  
fat, ton, 10.00 to 12.00  
Tomatoes, 90¢ to 1.00  
Turnips, cts., 1¢ to 1 1/2¢



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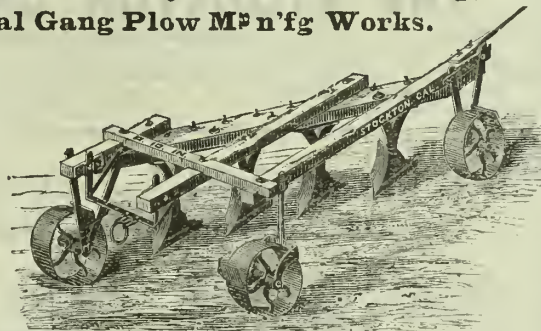
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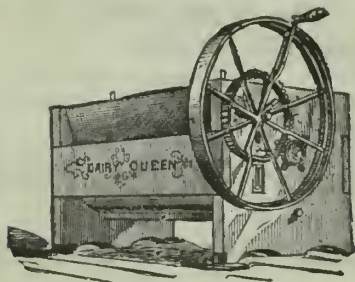
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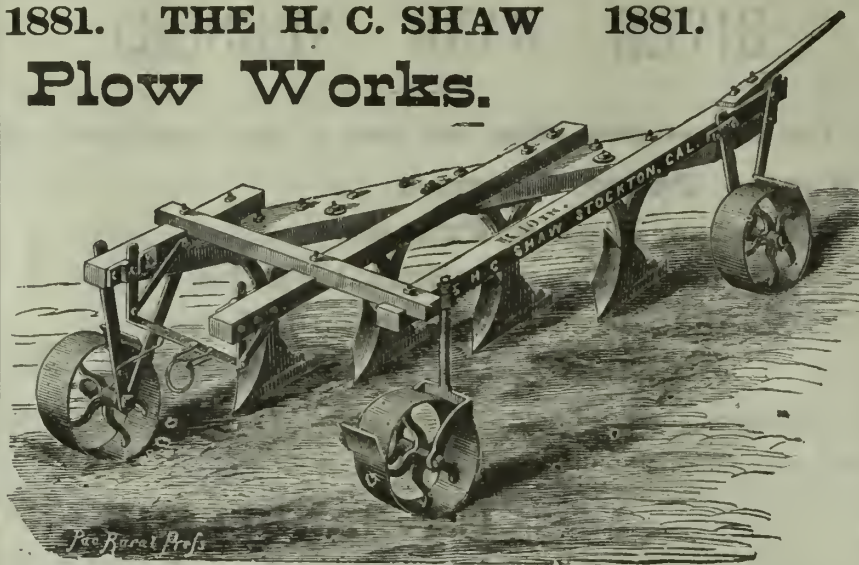
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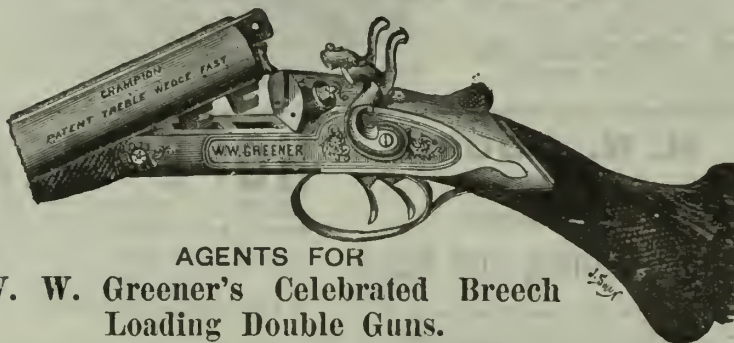
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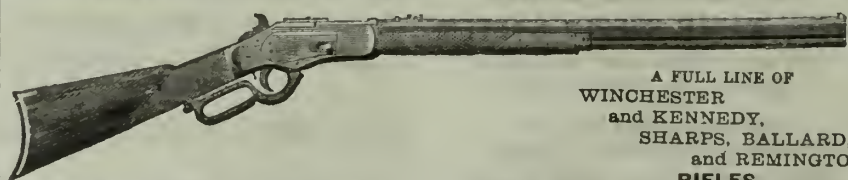
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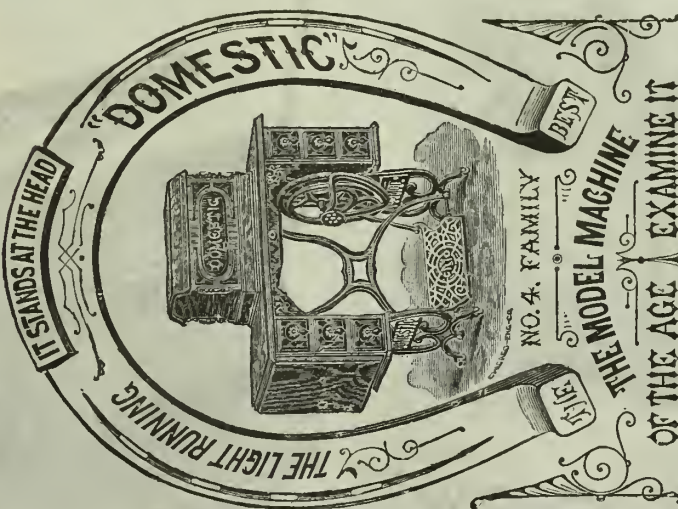
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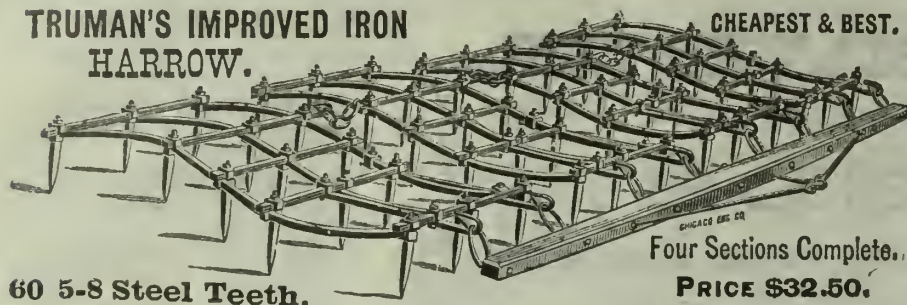
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BYRON JACKSON.

**JACKSON & TRUMAN,****TRUMAN'S IMPROVED IRON HARROW.****60 5-8 Steel Teeth.****TRUMAN'S IMPROVED IRON HARROW.**

The cut represents a Harrow Frame that is indestructible; made entirely of iron, and locked firmly together by the teeth passing through malleable iron clamps and having screw-threaded shanks on their upper ends, which bolts the framework securely together. This mode of constructing a Harrow Frame dispenses with drilling or punching holes through the bars of the frame, thereby giving greater strength and durability to the frame of the Harrow. Iron is continually more and more taking the place of wood in the manufacture of all kinds of farm machinery, and there is no implement used on the farm where it is employed with more profit and advantage than in the construction of the Harrow.

In handing you this description of our improved Iron Harrow, we desire to call your attention to its merits and advantages over all other implements of its class:

**CHEAPEST & BEST.****Four Sections Complete.****PRICE \$32.50.****JACKSON'S CALIFORNIA WINDMILL.****JACKSON'S****CALIFORNIA WINDMILL****Best and Cheapest.**

10 foot..... \$75  
12 " ..... \$85  
14 " ..... \$100

**MADE BY JACKSON & TRUMAN, San Francisco.**

This Mill was first introduced in the West, and is now known there as the INGALLS Mill. We purchased the patent for this coast, and have made a complete new design and new patterns throughout, greatly simplifying its construction. Making Large wearing Surfaces; Oil Reservoirs, ample and convenient; Boxes are all lined with habit; Steel Pins for Connecting Rods; the Stroke is Adjustable; the Castings are Heavy, Strong and Smooth; the Wheel is Solid, and dished like a Wagon Wheel; Thoroughly Braced in every direction.

The Sections are so framed, with a special machine for that purpose only, that when simply stuck together without a nail they cannot be racked the least without breaking.

The whole circle is regularly filled with wings and no place left out for spokes, they being behind, out of the wind.

The Turn Table is small and the Vane large, insuring it to turn face to the fit available wind.

It is thrown out of the wind by a Hand Lever at the base of the tower, or by a severe gale, presenting a wind surface of less than five inches and defying the fury of the storm.

A Float may be placed in the tank, so attached to the shipping gear as to automatically stop the mill when the tank is full and resume work before the water is drawn out.

It is neatly painted with two coats and varnished.

Duplicates of every part.

In designing this Mill, we have aimed to make one that will bear us out in applying all of the qualifying adjectives usually employed by the descriptive ingenuity of windmill inventors and manufacturers. The following is a brief extract of those common to all windmill catalogues: Cheap, Simple, Compact, Strong, Durable, Powerful, Adjustable, Automatic, Anti-Friction, Self-Regulating, Noiseless, Ornamental, and fully warranted not to run unless the wind blows.

We challenge competition in any or all of the above enumerated qualities of a Wind Engine for Pumping.

**PRICE OF MILLS:** Twenty five per cent less than any other first-class mill. Ten-Foot Wheel, \$75; Twelve-Foot Wheel, \$85; Fourteen-Foot Wheel, \$100. These prices include Actuating pump Rod and Connection for Pump at the works in San Francisco.

The Tower, Pumps, Pipe, Etc., are extra. The cost of Tower and setting Mill is from \$25 to \$50, or \$1 per foot in height.

We can furnish Tanks of any required size; also Frames of any required height. On receipt of size of Tank, height of Frame, and a diagram showing length of pipe, number of elbows and faucets, we can send the whole properly fitted. If desired, we will send a competent man, at reasonable rates. Instructions for setting up sent with each Mill.

**PRICE LIST.**

**No. 1 HARROW** Has three sections, 45 5-8 steel teeth; cuts 9 feet wide. This is a light size for two horses..... **Price \$25 00**

**No. 2** (Represented in the cut) has four sections, 60 5-8 steel teeth; cuts 12 feet. This is our standard style for two horses (generally used)..... **Price \$32 50**

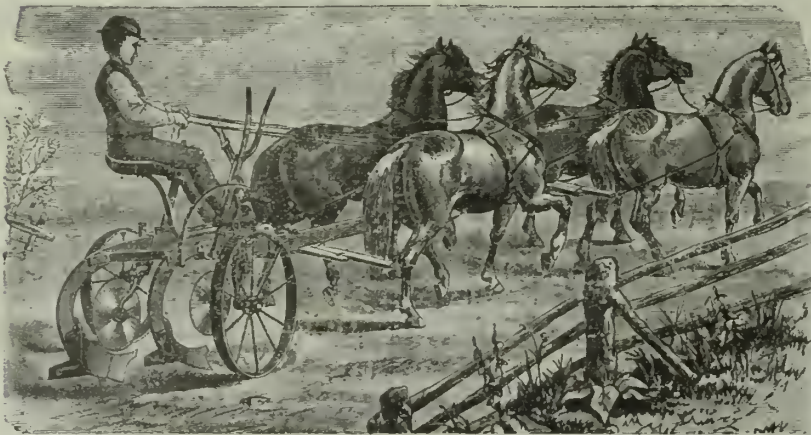
**No. 2 A**—Has three sections, 60 teeth; cuts 12 feet..... **Price \$32 50**

This Harrow can be taken apart and packed very closely for shipment, they can be put together with a wrench; the teeth are five-eighth-inch solid steel. Order the **TRUMAN IRON HARROW**. For sale by all Implement Dealers. Manufactured by

**No. 3**—Has 5 sections, 75 5-8 steel teeth; cuts 15 feet wide. This is our three-horse Harrow; can leave off one section and use two horses with the same draft bar. .... **Price \$37 50**

**No. 4**—Has 6 sections 90 5-8 steel teeth; cuts 18 feet. For this size we use four horses abreast, with two draft-bars coupled together at the ends; for large farms..... **Price \$48 00**

**No. 4 A**—Has four sections, 96 teeth, cuts 18 feet..... **Price \$48 00**

**JACKSON & TRUMAN,****No. 625 Sixth St., San Francisco.****THE GARDEN CITY GANG PLOW.**

**THE ONLY SUCCESSFUL IMPORTED GANG PLOW**  
**Ever Brought to the Pacific Coast.**

**Over 300 Sold in California in 1880.**

We will put this Plow in the Field against any Gang Plow made. No Extra Charge for Leveling Lever or Tongue Shifter.

**SEND FOR OUR NEW ILLUSTRATED PRICE LIST.**

**LIVE AGENTS WANTED** in every Town, City, Village and Hamlet on the Pacific Coast. No Dead Men need apply.

**OUR LIST COMPRISES:**

The Garden City, 10-inch and 12-inch. Two Gang Plows.

The Garden City, 14-inch and 16-inch. Single Sulky Plow.

The Frust & Bradley 14-inch and 16-inch Friction Sulky Plows.

The Garden City Steel, Hand or Walking Plows—all sizes.

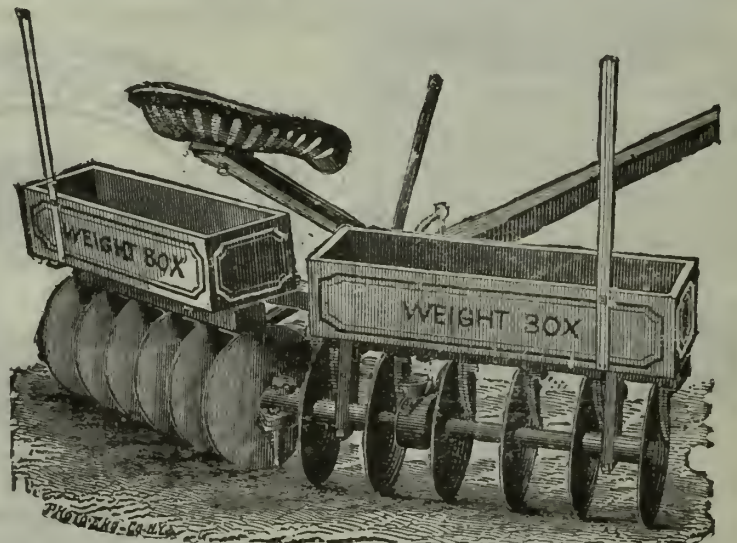
The Garden City Chilled Plows—all sizes

The Diamond Iron Plows—all sizes.

We carry a Greater Variety, and the Largest Stock of Plows on the Coast, Making Ours the

**PLOW HOUSE OF THE PACIFIC COAST.**

Fish Bros' Farm and Spring Wagons—We have all Sizes of Wagons and all Widths of Tires

**LA DOW'S JOINTED PULVERIZING HARROW.**

IS SUPERIOR TO ALL OTHERS, BECAUSE IT IS

**LIGHT, SIMPLE, DURABLE AND FLEXIBLE.**

Thousands in Use, Giving Entire Satisfaction.

**Points of Superiority in which it Excels:**

It will do better Work

It is much easier for the team

It is easier to manage.

It has a lever to change the angle.

It is not heavy on the horses' necks

It has no side draft.

It leaves no ridge at the center.

It has self-feeding oil cups.

It has a wrought iron frame.

Its chilled bearings cause it to wear longer and work easier.

It is easier to ride.

It conforms to uneven surfaces perfectly.

It can be made rigid if desired.

Its journals are protected from dirt.

**REMEMBER**

That this is the only Harrow that has the right to use a LEVER to change the angle, or that has the Axles of the Gangs hinged together, or that has flexible joint bearings On The Axles. Use no other, as you can see at a glance that this Harrow has the Right Principle.

**GEO. A. DAVIS, 327 and 329 Market St., S. F.**



# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, DECEMBER 3, 1881.

Number 23

## A Famous Jersey Cow.

The progress now being made in agriculture in the Southern States is gratifying to every American and the time will come when we shall hear far more of fine plants, trees and animals from south of the Potomac, than we have hitherto. In several States progressive cultures and improvements of all kinds are in progress. Capital is being attracted by the promising field for investment which lies open

scendants of the noted strains of Jerseys imported by the late Wm. C. Wilson, of Maryland, who imported the best animals to be found on the Isle of Jersey, regardless of cost or expense, selecting and breeding them solely for their butter and dairy qualities, regardless of color, instead of breeding for "solid color black points" and ignoring those qualities, as is sometimes the fashion now. But fashion is constantly changing, and the dairy value of the animals is now more generally made the gauge of value than ever before. By attention to the useful qualities, Mr. Wilson built up a herd

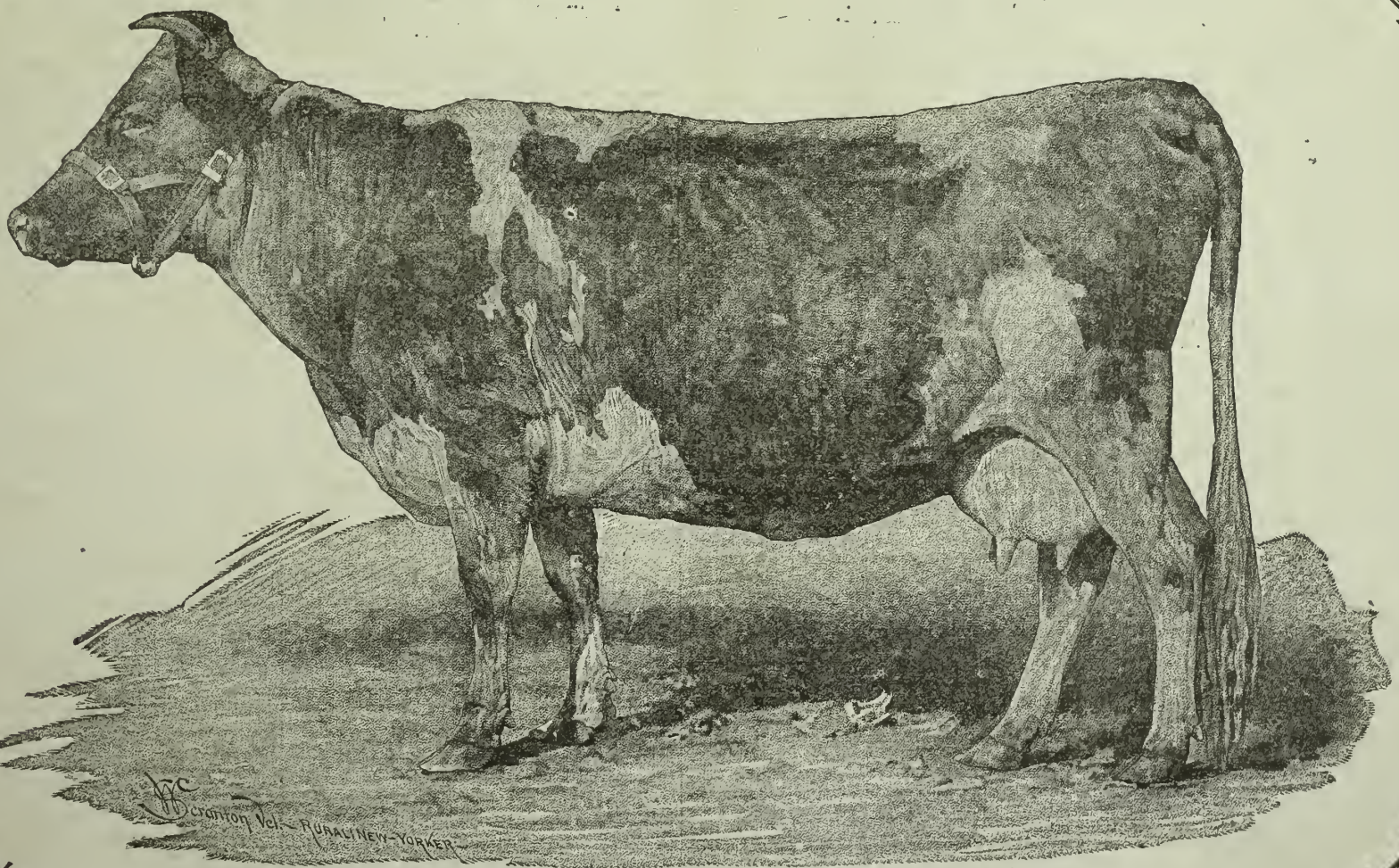
## The Ailantus as a Tree for Shore Sands.

A. B. Allen, the well-known Eastern agricultural expert, writes to the New York *Tribune* his experience with the Ailantus as a tree for covering the sands on the ocean shore. His success is so marked, that it should lead some of our coast farmers to test it here to ornament the shore line, to arrest the drifting sand and to secure a supply of fire wood. Mr. Allen had a few acres of white sandy soil on the New Jersey coast, entirely naked, which he wished to cover

ing to gather them up instantly, to prevent setting fire to whatever they fall on.

There is an objection to the Ailantus because of the odor exhaled by the blossoms, but as planted on our sands the trees would generally be so far from habitations that the odor would not matter, but the tree does not usually blossom until it reaches considerable age. Meantime other more desirable trees might be grown in the shelter of the Ailantus, and the latter cut away if the perfume should become too heavy.

THE NAVEL ORANGE.—E. H. Hart writing



JERSEY COW, "MARTHA OF ROXBURY"

and the increase in free and independent workers is constant.

By way of illustrating a single branch of progress we give a portrait of one of the most famous Jersey cows of the Old Dominion, Martha, of Roxbury, 5,016. The cut, from a photograph, is a true likeness of the animal, an excellent representative of the race, being one of the richest and deepest milking cows of the large Jersey herd on the Messrs. Rowe's Co-operative Stock farms, Fredericksburg, Va. Martha of Roxbury was dropped Jan. 10th, 1872; color, fawn and white; sire, Vanguard 845; dam, Fanny Stanard, 5,015. She and her dam have taken alternately the first and second premiums at the Virginia State fairs, as the best Jersey cows over three years old, with much competition from other States, as well as from Virginia, with home raised and imported stock; they have also taken first and second premiums as "best dairy cows of any age or breed," with many competitors of pure bred and grade cows of other breeds; they are the direct de-

which made its mark, and the Messrs. Rowe, by purchase at Mr. Wilson's sale and since, secured a larger number of cows bred by him than any other breeder in Virginia or Maryland. They have also a bull bred by him, and will endeavor to keep the "Wilson" strain of Jerseys pure. Those cows of the "Wilson" strain, and the celebrated imported Jersey cow, "Rose Harebell," 3,343 (that never failed to take a premium whenever and wherever exhibited), were the foundation Jersey stock of the Co-operative Stock Farm, Fredericksburg, Va., which was increased by selections from the centennial stock exhibition, and purchases of imported cows since, and they now have one of the largest herds of registered Jersey cattle in Virginia, that can always be mated judiciously, as they are kept on different farms.

THERE are over 1,200 corporations which pay tax into the State Treasury of New York on capital stock and gross earnings, which nets the State yearly over \$1,000,000.

with trees. He set out over 20 different kinds to see which would grow most surely and rapidly, selecting quite small ones for this purpose, none of which had a diameter of over half to one inch near the roots or were above three to five ft. high. This was in the spring of 1870. Of the Ailantus scarcely three out of a hundred died, and they have grown more rapidly than any of the other sorts. Desiring to thin out a plantation, he lately cut down a number, which measured from five to seven inches diameter of the trunk a foot or more from the ground, and were 13 to 19 ft. high. Cut up for fire wood, the green logs burn freely, and a single one or two in an open fireplace, or put into a close stove at night, slowly consumes till morning, and it then turns out a bed of coals. This is equal to hickory for lasting; but the Ailantus does not make so hot a fire, yet it possesses this advantage to compensate—it does not snap in burning, which is a great objection to hickory in an open fireplace, for it throws out such large solid coals, as to require constant watch-

to the *Florida Agriculturist*, holds that the navel mark can be communicated to the fruit of other varieties which may commingle their blossoms with the navel bloom. He mentions a case of a tree of the Early Oblong orange which bore between 100 and 200 oranges, all of which had the navel mark in bold style—bolder in fact than the true Navel. He believes that a branch of Navel in a tree of Maltese Blood, will not unlikely make Navels of them all. We are under the impression that similar things have been noticed in this State. Will our orange growers report instances, if any have come under their observation.

A FIRE destroyed the extensive establishment of the American Rubber Company, at East Cambridge, Mass., together with valuable machinery and a large quantity of stock and manufactured garments. The total loss is \$500,000. The insurance is \$150,000. The company gave employment to 600 persons, three-fourths women.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps

### What May be Seen Ten Years Hence.

EDITORS PRESS:—The following open letter from an old Californian to a friend in the East aims to describe what may be expected if hydraulic mining continues as at present conducted.—M. H. D., Oakland, Cal.

DEAR FRIEND:—At last I am seated to give some account of myself after an absence of two months—long when gauged by thoughts of what I left in the East, but short, much too short to allow of a clear comprehension of the many changes, and above all, the scenes of destruction I have witnessed since I parted from you at the depot in L—. The short journey on the cars was enjoyable with one exception; that was when we were crossing the alkaline deserts of Nevada. While crossing this barren waste, a feeling of involuntary repulsion came over me. I thought: "How like a living death life would be in such a locality, and amid such surroundings!" It was a miniature Sahara; no green thing in sight; the white alkaline soil stretching from your feet to the horizon in a boundless sheet of glittering and flying sand. This vision of barrenness filled one's mind with a feeling of loneliness and a sense of aversion and almost of despair, that so fair a country as ours should have its beauty marred by even such a blot as this. It is impossible for me to describe the impression left on my mind by this scene of desolation; and yet I was doomed to witness a scene of destruction far surpassing this in desolation, and in the rapidity and wantonness with which it has been consummated. I speak of the Sacramento valley, once the El Dorado of this "land of the setting sun." Some of the most pleasing reminiscences of my five years sojourn in this State are intimately connected with localities whose natural beauty could rival the dreams of the most poetic artist seeking after idealistic scenes in nature, the imitation of which is to bring him wealth and renown.

Imagine how pained I was to find that these spots of pleasant recollections were comprised in the one general ruin of the whole Sacramento valley, instead of only having changed their virgin beauty for more mature charms, enhanced by the arts of affluent agriculturists who had built up homes, the beauty and fond recollections of which would ever remain green in the minds of absent ones.

I had often anticipated the pleasure I should derive from a visit to, what seemed to me, a paradisa on earth, and yet when the one wish of my life was at last gratified, what a disappointment! Of this many scenes of beauty depicted in my mind's eye, not a semblance of one was to be seen. No more enchanting little valleys surrounded by majestic trees through which miniature rivers rippled over their stony beds; the shady pools alive with speckled beauties, whose shadows were projected on the white pebbles below; the banks lined with tall trees, many of which were covered with immense growths of wild grape vines, whose many colored autumn leaves were interlaced with countless bunches of delicious ripe grapes; ever and anon the sunlight streaming through the glittering sheen of variegated leaves studded with countless pure water gems which rivalled the stones of India in luster, went dancing and rippling down and fell in an inextricable maze of loveliness upon the carpet of green extended below it (which was lured into almost everlasting verdure by the richness of the black alluvial soil) and whose every blade surmounted by a jewel of dazzling purity stood proudly erect enjoying the caresses of the warm sunlight.

Late in the winter we have a somewhat different though a no less interesting scene. The miniature river has grown into a seething torrent, rushing along between its high banks at a marvelous rate of speed. Before leaving the mountains it leaps over innumerable falls, forming translucent cascades, tears madly over rifles and rapids, over which stands the fisherman with his extended spear intent upon robbing the waters of their finny inhabitants.

Emerging from the canyons the river enters the valley; gradually quieting down from the excitement occasioned by the declivity of the mountain bed, it flows demurely along for a score of miles draining a rich expanse of valley land and at last reaches its foster mother, the Sacramento. Here the waters come and losing their identity among many others, they pursue their course to the bay. Before the encroachments of civilization these grass covered valleys formed the winter resort of herds of deer, which were driven out of their mountain fastnesses by the snow. Later on the deer gave way to immense droves of cattle, with their accompaniment of Mexican vaqueros. These in turn were supplanted by the agriculturists, who, recognizing the greatly superior fertility of the valleys, proceeded at once to the cultivation of them; improving and beautifying their farms and homes as much as possible with the limited means at hand.

As years rolled on their worldly goods increased, the country settled up, and the richness of the valley land becoming proverbial, the fortunate owners had just given up their former idea of some day "going back home," and had set to work with a will making, as they thought, a permanent home for themselves and children in this land of the west.

Many had gained an independence, built com-

modious and luxurious homes, brought their land to the highest degree of improvement, and feeling assured of security and plenty for the future, had just settled down to the enjoyment of their property in the declining years of their life, when for the first time they noticed the sedimentary deposits left on their land after the floods of 1857 and 1862. Little did they think that in a few short years their homes would be submerged and irreparably ruined by this innocent looking debris, and themselves and families penniless outcasts and broken down in health, victims of the hydra-headed monster—slickens—with no alternative left, but to begin at beggary to climb the ladder of prosperity, from the summit of which they had, after years of toil and privation spent in gaining it, been cast down by a band of thoughtless men, who have no consideration for anyone or thing except their own restless search for gold, and who utterly regardless of the suffering of those below ruthlessly tore down hills and even mountains, and deposited them in the rivers to be carried by them on to the lands of the people below.

So far I have only spoken of private sufferings, and of small valleys destroyed, but these form hardly an iota in comparison with a greater wrong, the destruction of the whole Sacramento valley. There were more than private and local interests wronged when the natural waterway for a third of the State was destroyed, and when its valleys which comprised the choicest land of the whole State were submerged with sand. An irreparable wrong has been done to the farmer, the community, the State and the United States; in fact Nature herself has been foully dealt with.

Words cannot describe the completeness of this destruction. The inefficiency of thought is painfully evident when viewing this irreclaimable unnatural desert. It is only by the use of the highest of all senses, sight, that one can get even a vague idea of the unexampled wrongs forced upon the inhabitants of this valley. I will endeavor in a few words as possible to describe a trip down what is yet called the Sacramento river.

After a tiresome journey of a week, mostly through what seemed to be an illimitable expanse of sand, in some places covered with a thick growth of willows, we arrived at what was left of the once prosperous city of Marysville. Here we hoped to meet at least a few human beings, but for a time our search was fruitless. It seemed to be a city of the dead undergoing the process of burial. Such was not literally the case, yet we stumbled upon a true city of the dead. Some of the tallest of the gravestones were still a few feet above the surface, the majority, however, were doomed never to see the light again. There were numerous excavations from which relatives had taken the remains of their loved ones to be buried in some more accessible and inviting places.

Leaving this unpleasant locality we wandered further in search of some living thing. It was almost weird, for the sun declined to show his face, as we picked our way over the deserted streets, many of which could be traced by the skeletons of the trees which formerly grew along the sidewalk and the dead branches of which still protruded from the sand. The scene was one of desolation in the extreme; most of the houses had been torn down, yet enough remained to shelter a small army of tramps had they come that way; but these gentry, with unlooked for magnanimity, ceased their visits after the equally considerate hydraulic miners had made their donation of sand. Of these houses, the roofs of some were in view, others showed a whole story, and again in others you could step in at the gable windows.

The place seemed literally deserted with the exception of a vagrant hare which we scared from a pile of brush. In one place we came up to a flagstaff which I suppose stood on the plaza, it was bleached and bare, and a fitting accompaniment to its ghastly surroundings. After some little time spent in wandering aimlessly around, we were fortunate enough to run across a camp of Italian basket makers. They were busy at work stripping the willows and seemed perfectly contented; the pithy remark was volunteered by one of our party that "it was heaven for the basket makers, but—for the farmers." After a good deal of talking and haggaining, we induced one of them to take us down the river in his boat, a flat, raft-like affair drawing about eight inches of water. This shape we found to be absolutely necessary, for in most places the water was only about one ft. deep, and often our boat scraped on the slimy bottom. It seemed like mockery to call the stream Feather river; it consisted of a shallow stream of liquid mud moving slowly along on the surface of an immense plane of sand and slickens, and following a faintly defined and extremely crooked channel. After following this devious current for a few hours, a spot on the left side of the river was pointed out to us as Gon. Sutter's old place. We looked, but there was nothing to distinguish it from the numerous other abandoned places we passed. A few miles further down and we saw more house tops. This was the relic of Nicolaus, which was formerly a thriving town standing almost at the junction of the Feather and Bear rivers. This last insignificant looking stream has also succeeded in destroying every acre of ground on its banks. Continuing our journey, we soon arrived at the confluence of the Sacramento and Feather rivers. Here we had a little larger stream than before, but the surroundings dif-

fered in no way, except that the destruction was on a larger scale. Passing numerous other abandoned villages, we arrived at last at Sacramento, which used to be the capital of the State, but is now transformed into a fitting metropolis for the ruined Sacramento valley. Like Marysville, Sacramento was deserted; almost everything movable had been taken away and the site was covered with a 10-ft. layer of sand, leaving the view unbroken in its desolate monotony, except by a few clumps of trees which had not yet succumbed, but which showed many signs of coming dissolution. At a distance of about a half mile from the channel, as if in mockery, stood the ruins of California's capitol building; it had been partly torn down, but a huge mass of it yet stood, almost leaning at us as we passed, and seeming to be bidding defiance to its persecutor, slickens. Sacramento, once the distributing center for the whole northern half of the State and capital of this empress of States, was blotted out completely and eternally from the sisterhood of cities in three short years after the levees succumbed to the waters. In another quarter of a century even the site will not be recognizable, but the name will ever remain as the reminder of destructive power of gold when wielded by callous and unprincipled men.

We continued our journey the next day and were met at every point by the same scenes of destruction. The expanse of desolation seemed to be bounded on oneside by the Coast Range mountains and on the other by the horizon; there was not a green plot of ground to be seen, and nothing to indicate animal life. Toward evening we passed the deserted Navy yard and barracks at Benicia. It is only of late years that the Government was willing to entertain the idea that slickens could fill up the bay to any appreciable extent, but their eyes were opened too late, for now a tug and lighter cannot get up to wharves where once the largest sloops of war used to moor. Here we were first made aware of the proximity of the bay by a slight manifestation of the tidal current. We soon fell in with a flat-bottomed sternwheeler bound for San Francisco, and dismissing our boatman we gladly took passage for the city, where we anticipated at least a sight of some human beings. Business in the city seemed to be extremely dull, and the business men were just becoming aware of the fact that the depression was owing to the operations of the hydraulic miners. They were in a great quandry whether to request these gentlemen of the hills to desist from sending down any more of their sand, or whether to move the city of San Francisco up to Puget Sound where as yet there was no hydraulic mining. From what I could hear the majority were in favor of vacating the premises rather than to try to interfere with the miners.

Thus ended my long anticipated trip. I was almost dazed by the changes I had seen. One of the most beautiful valleys on the face of the earth had in 30 years been transformed into a sterile desert of sand and willows. A once magnificent river filled brimming full of slimy mud had deposited sufficient of its refuse into the bay so as to make it evident to all that a few more years would complete the work of destruction. After a few days spent in San Francisco hunting up old acquaintances, I will begin my trip home, only too glad to get out of a State where every law of justice and equity has been subjugated by the cunning of a handful of avaricious capitalists. Truly yours,

JOHN JONES.

San Francisco, May 1, 1891.

### Jute Culture in California.

EDITORS PRESS:—In view of recent remarks in the public press on the subject of jute culture in this State, it may be desirable to make a statement of the results so far obtained in the matter, if only to avoid more hasty legislation in the premises.

Reference has been made to an act passed at the legislative session previous to the last, requiring a large-scale experiment ("not more than four nor less than one acre") in jute culture to be made on the agricultural grounds of the University. Now, jute has been sown in small plots on the University grounds, annually, from 1877 to this year, when the seed failed to germinate. The experience of the three preceding years, however, had definitely settled the fact that jute will not grow to any useful size in the climate of Berkeley; about 18 inches having been the greatest height attained, and in one season only eight inches. The acre experiment would therefore have been a perfectly useless expenditure certainly not contemplated by the Legislature. These facts were communicated by me to the chairman of the Committee on Agriculture at the last session of the Legislature.

Those acquainted with the climatic conditions under which jute culture is pursued in India, would scarcely think it needful to make such an experiment on the west slope of the Coast Range. In the great valley, however, the climate is more nearly in accord with that in which the jute supply of the world is grown, and a large-scale experiment was justified. Had the University possessed the proper facilities in the way of outlying experiment stations in the various climatic regions of the State, the question could have been thoroughly tested in accordance with the wishes of the author of the act above referred to; as it is, it has been taken in hand by private parties, viz, Messrs. Paigo and Morton, of Tulare county. These gentle-

men found that the maximum height to which the plant would grow in that region was about 5 ft., against 10 or 12 ft. attained by it in India. Add to this the manual labor by which alone thus far the fiber is known to be prepared, and which in India costs only about one-fourth of what it would cost in California, and it will readily be seen that the prospect for the profitable production of jute fiber here is not very promising.

It is possible that the locality chosen was not the best that could have been selected. It is also possible that machinery may be invented by which the hand labor now used in this preparation of jute fiber may largely be done away with. It may be that the State of California would do well to provide the means for pushing these problems to a practical solution; for it is quite certain that the College of Agriculture is not in possession of the funds for prosecuting such investigations at the present time.

E. W. HILGARD.

University of Cal., Berkeley.

## HORTICULTURE.

### Fruits Adapted to the Different Parts of California.

The following is the report submitted at the last meeting of the State Horticultural Society by Dr. J. Strentzel, chairman of the committee appointed to condense the information furnished by fruit growers, in response to circulars sent out by the society last winter. We shall follow this condensation with the response of each correspondent of the society as fast as we can find space in the RURAL. As there are about 150 of the letters, and as nearly every county in the State responded, there will be a great amount of local horticultural information presented to our readers. The following is Dr. Strentzel's review of the whole field covered by the correspondence. It will be followed by a supplemental report proposing a fruit list for the different parts of the State.

#### Dr. Strentzel's Report.

At the October meeting last year, of the California State Horticultural Society, a committee, consisting of Messrs. J. V. Webster, R. J. Trumbull and G. P. Rixford, were appointed to draft a circular embodying questions concerning the growth of the leading varieties of fruits in this State, the main object being to determine the fruits and varieties thereof, which succeed best under the local conditions existing in different parts of the State. Said circular was responded to by about 150 fruit growers, residents of many counties, and your committee beg leave to present a summary of those responses for the information of fruit growers, or still more desirable, of parties wishing to engage in fruit culture, proffering to them the knowledge and experience thus accumulated. To systematize these reports, adapting them to general view, it seemed most suitable to group contiguous counties subject to nearly the same climatic and topographical conditions, although it should be understood that, owing to manifold configurations of the land, alluvial or detrital soil, etc., an extreme variation exists in its productive quality even on comparatively limited parcels of ground, so no rigid rules what to plant can be prescribed or applicable to large bodies of land without discriminating closely the surrounding local conditions. Thus, for instance, in the central counties located around the bay, eminently adapted for culture of the choicest fruits, some of the terrain is adapted to the growth of apples, peaches will not do well, and *vice versa*. Some produce apricots and almonds to perfection, where figs are nearly a failure. So we are restricted to noticing in each county as reported, the predominant feature in fruit raising, following with a list of fruits of acknowledged excellence adapted for export, for the use of desiccators and canning establishments, to secure permanent support to families distributed over small tracts of land, to multiply our resources, to prevent that rapid deterioration and exhaustion of the soil consequent upon the skimming process of grain production, to increase the esthetic taste of the people for the beautiful and draw a rich usufruct from land heretofore producing at best a scanty pasturage.

#### Central Bay Counties.

Alameda—The land along the San Lorenzo unsurpassed for small fruits, the currant leading; for plums, prunes and apricots; good for apples, pears and almonds—rather too cool for the fig; peaches suffer with curled leaf; olives grow well, crops raised without irrigation.

Contra Costa—Good for choice apples, pears, plums, prunes, cherries, figs, pomegranates, quinces; sheltered nooks for oranges, higher land for apricots and almonds; south westerly slopes of the valleys are choice peach land; all the country around and at the foot of Mt. Diablo is destined to be a continuous orchard; crops raised without irrigation.

Santa Clara—Apples, pears, plums, prunes, cherries and small fruits do well; peaches, apricots and figs on high, sheltered land; olives produce well; curled leaf and mildew very prevalent and injurious; irrigation partial.

San Mateo—Apples, pears, plums, prunes, cherries, olives and figs do well; peaches curl badly; scale bugs and aphids prevailing; fruit ripens one month later than in Santa Clara.

Santa Cruz—Excellent for small fruit and



berries, apples, pears and plums; figs and cherries a failure; mildew on pears, curled leaf on peaches; codling moth, woolly aphis, caterpillars damaging fruit; too much water in the ground, but the mountain above the fog line is proven as choice land for the raising of all fruits of the temperate zone.

**Solano**—Around Vacaville and Green valley fruit ripens earlier than in the adjoining counties; apricots, peaches and figs do best, and are most profitable to raise; apples, pears, plums and prunes do well; too hot for currants, raspberries and walnuts; almonds not a sure crop; no irrigation.

**Napa**—Apples, plums, prunes, pears and quinces very productive; apricots, cherries, figs, almonds and peaches require well-sheltered, warm spots; curled leaf and mildew destructive to peaches; no irrigation.

**Sonoma**—Apples, pears, plums and prunes do exceedingly well; cherries fair; walnuts and almonds uncertain; apricots get frosted; peaches destroyed by curled leaf and mildew; small fruits do well; no irrigation.

**Lake**—Apples, pears and plums very good; apricots, almonds, figs and peaches require choice locations; cherries do not do well; no irrigation.

**Yolo**—Apples unprofitable; pears and plums do well; few peaches raised, which suffer with curled leaf and mildew; almonds and cherries uncertain; figs and olives do well; oranges frosted; practice sub-irrigation.

#### Northern Tier of Counties.

**Mendocino**—Apples, pears and plums do well; too frosty for peaches and figs.

**Humboldt**—Apples, pears, and plums; berries do well; no semi-tropicals.

**Del Norte**—Similar to Humboldt.

**Shasta**—Apples, pears, plums and almonds do fairly; walnuts very well.

**Siskiyou**—Apples, pears and plums do well; peach apricots often frosted; May Duke and Oxheart cherries succeed well.

#### Inland Counties.

**Colusa**—Apples, pears, plums, prunes, peaches and figs do well; seedling oranges mature.

**Tehama**—Apples and pears good; figs and peaches extra good.

**Plumas**—Apples and pears good; too frosty for peaches; irrigate.

**Butte**—Apples, pears, plums and figs good; peaches injured by curled leaf; almonds, walnuts, oranges and cherries do not do well.

**Yuba**—Apples, pears, plums and peaches do well; almonds and apricots unproductive; figs do not ripen well.

**Nevada**—Apples, pears, peaches and plums do well; apricots, almonds, walnuts, olives and figs get frosted; chestnuts are splendid.

**Placer**—Apples, pears, plums, olives and figs do well; peaches curl and mildew; high ground preferred for orchard; irrigate.

**El Dorado**—Apples, pears, plums and peaches do well; apricots trees killed to the ground; irrigate.

**Amador**—Apples, pears, peaches and plums; soft shell almonds, oranges, olives, pomegranate and figs do well; subject to curl, codling moth and untimely frost.

#### River Counties.

**Sacramento**—Apples, pears, plums, prunes, peaches and apricots do well; of small fruits, blackberries exuberant; figs a No. 1; almonds do well; irrigate upland; codling moth abundant.

**San Joaquin**—Too warm for apples; pears do well; plums and prunes extra good; peaches subject to curl and mildew; apricots uncertain; almonds not reliable; cherries not favored; olives and figs do well; oranges frosted; sandy land requires irrigation.

**Stanislaus**—Apples to be of any account must be irrigated; pears do better; peaches curl but bear well; plums a failure; apricots very successful; cherries not good; irrigate.

**Tuolumne**—Apples, pears and plums do very well; peaches curl badly; apricots and cherries do well; almonds not reliable; figs excellent; oranges frosted; irrigate.

**Merced**—Apples poor and wormy; peaches curl badly; plums, apricots, pears and figs do well; cherries do not good.

**Fresno**—Apples and pears do well; peaches, apricots and prunes grow to perfection; almonds not reliable; too warm for figs; walnuts and oranges get frosted; irrigation indispensable.

**Tulare**—Apples, pears, apricots, peaches and almonds do well; walnuts not successful; oranges frosted; cherries not good; young fig trees frosted; codling moth and aphids plentiful.

#### Southern Counties.

**Monterey**—Few apples and pears are raised; peaches curl badly; apricots and figs do well; almonds a failure; also cherries; too cold for oranges.

**San Benito**—Apples, pears, plums, prunes, cherries, almonds and figs do well; walnuts unsatisfactory; in some localities peaches destroyed by curled leaf.

**San Luis Obispo**—Apples do well; pears, prunes, peaches, apricots and figs tolerably well; all fruit does well in sheltered localities, out of the frost belt, without irrigation; oranges moderately good.

**Santa Barbara**—Apples and pears, few raised; young trees doing well; apricots, peaches, plums, walnuts, figs and olives grow well; almonds not satisfactory; cherries do moderately well; oranges suffering from black smut and scale; curled leaf and insects annoying.

**Los Angeles**—Apples, pears and plums on clayey soil do well; cherries, almonds and walnuts unsatisfactory; apricots and figs very good; oranges get frosted in some places, but attain

great perfection, are of large size and excellent flavor; irrigation required.

**San Bernardino**—Apples, plums, cherries, almonds, do not thrive; apricots, olives, figs, walnuts and oranges do well; peaches curl, but on high and warm land they do well; oranges and raisins the prevailing culture; irrigate.

**San Diego**—Apples perfect success; peaches do well; plums and almonds a failure; apricots and oranges a success; irrigate.

#### Deductions.

**Apples**—Require a cool location and richest of soil to produce fruit of full size and good flavor—low standard. Dusting the trees with a compound of ashes and lime during the rainy season is efficient in destroying insect pests and fungoid growths; by keeping the ground around the trees scraped smooth, with a cone of lime and ashes around the stem, codling larvæ will be deprived of shelter.

**Apricots**—The almost unlimited demand for the fruit and consequent great value of a productive apricot orchard, suggest close attention to the requirements of the tree and shelter from spring frosts; and experience has to guide us in the selection of a location. A rising ground facing west is most eligible, although flats, near large bodies of water, appear to furnish the same exemption. The use of apricot and plum seedlings for stock to bud the apricot upon is nearly discarded, and peach preferred. The yellow varieties of more stocky growth should be used. The practice of rebudding old almond trees, if successful, may bring almond seedlings into demand.

**Almonds**—The responses show the production limited, owing to late frosts; requiring close observation of conditions favorable to abundant fruiting, as the trees are very thrifty and the nuts valuable.

**Cherries**—The superabundance of the Black Tartarian will require many trees to be grafted with Royal Ann and other light colored varieties; the responses disclose the fact of the limited area this fruit can be raised in perfection; the insect pest noticed last spring in some orchards should be closely investigated during the ensuing year.

**Citrus Fruits**—The experience of late years narrows the profitable culture of the orange to four counties as now constituted, still of sufficient extent to produce oranges, lemons and limes to supply all the domestic demand for said fruits, and spare some for foreign export. The industry and sagacity of our people will brush off the scale and clean the golden fruit of its black incubus.

**Pears**—Succeed almost everywhere in California, and respond most readily to the richest of soil, neither much injured by alkali nor swampy soil.

**Peaches**—Most of the old white varieties are suffering with curled leaf and mildew, at their worst during cold and wet springs, when the excess of sap is not duly elaborated, for lack of solar heat, provide a ready pabulum for the fungoid growth. No persistent efforts, so far as known, have been made to destroy it, although, judging from analogy, sulphur promises to do the service so efficient on the grape mildew. To infuse new vigor to the stock debilitated by the use of seed from huddled trees, the sweet, hard-shell almond offers a substitute to bud the peach upon. Peaches, to do well, require a warm, sheltered ground, the richest of soil and regular shortening in process of pruning and thinning out the fruit.

**Plums and prunes for canning and drying** are in great request, causing a corresponding demand for trees not fully supplied, owing to scarcity of unsuckering plum stocks, which started the practice of budding the plum on peach seedlings, some plums requiring double working to secure well jointed trees. The inadequate supply of our nurserymen will induce some to import trees from Eastern sources, and with them the dreaded *Curculio* may be introduced. To avoid this calamity strenuous efforts should be made by the Chief Executive Horticultural Officer to provide an efficient quarantine and disinfection of such imported trees.

**Quince**—There is a broad field to gain notoriety and rich reward by the production of a new superior seedling quince, free from black knot.

**Small Fruits**—With water and compost at command, one acre of land can be made to produce sufficient income for the sustenance of a moderately sized family.

#### Fruit Tree Planting and Irrigation.

**EDITORS PRESS**—The time is now close at hand for planting trees of all kinds. Experience has taught us that it is the safest plan to set trees as early as the season will admit of it, or as soon as the ground is sufficiently wet to dig the holes. If trees are set early, the soil should not be tramped or pressed hard around the roots, as the rain during the season will settle it, and there will be no danger of them drying out if the soil is well cultivated. Trees start much earlier in the season than many think; hence, if trees are set early, they get all the benefit of the rain. Many trees are lost by too late planting, the dirt not being well settled around the roots.

Many are in search of land with a view of planting fruit trees and making a home. Not having any experience in horticulture, they consult the columns of the RURAL PRESS, which is a wise thing to do; however, there are articles which appear now and then in the PRESS which

it is hard to understand, unless explained, and one of them is friend Brier's, of Centerville, in the issue of Aug. 13th. Mr. Brier tells us if we wish to grow good peaches, we must select deep, well-drained alluvial soil, extending down to permanent water, which should not vary much from 12 ft below the surface. Even then summer irrigation is needed.

We have no doubt but this statement applies to Centerville and its vicinity; yet if this was the case all along the coast, then horticulture in this State would be a failure, for there are but few such locations as friend Brier tells us to select. But, thanks to the giver of all good gifts, there are many localities in our beautiful State that do not need irrigation to produce good peaches, and many other varieties of fine fruit.

It is a well-known fact that California is noted for its many varieties of climate and soil. There is no State in the Union that possesses so many climates as our own; hence two articles on the same subject, though from different localities, may each one be a true statement, yet widely differing from each other. Here in the northern part of Solano county, irrigation is detrimental to the peach and apricot. In 1861 Mr. Wolfskill irrigated his orchards, but soon found it to be a great injury to his fruit. It was very sour, full of water, and very poor color; hence, he soon discarded it. Our best peaches are grown on heavy soil, with a clay subsoil, no water to be had, not even by digging less than 25 ft., and in many places from 50 to 100 ft., hence the mistaken idea that peach trees must have a fountain of water for their roots to terminate in or be irrigated. Here we grow peaches and apricots on hill land, and in many places so steep that it is difficult to plow. There is no place in the State where they produce a better variety of fruit than in Solano county. Here are thousands of peach and apricot trees planted in soil that will not produce a profitable crop of wheat or corn, proving at once it does not require the richest of soil to produce the best of peaches, and that, too, without irrigation. There is more in the climate than there is in the soil. Any land that is well drained, if the climate is adapted to the peach tree, will produce good peaches. There are thousands of acres of land lying along the foothills between Vacaville and Winters, a distance 12 miles. This land is especially adapted to the production of early fruits and vegetables, and that without irrigation. This land ranges in price from \$20 to \$30 per acre. There are several reasons why we would choose the rolling hills and mountain sides. First, they are less subject to frost; second, they produce earlier fruit; third, the flavor is better; fourth, the fruit is of better color—a very essential thing in the sale of our green fruit. JIM STOKES.

Winters, Cal., Nov. 17.

## SHEEP AND WOOL.

### Vicissitudes of the Alpaca Industry.

Our angora breeders will be interested to learn of the efforts being made in England to revive the interest of dress wearers in alpaca, which seems now to be growing out of fashion. The movement is of vital importance to the alpaca manufacturing industry of Bradford, Eng., and its influence will no doubt be felt wherever mohair is produced, if the hopes of the revivers should be realized. The following, which is of English writing, well describes the effort and the occasion for it:

The Countess of Bective is engaged in an amiable endeavor to resuscitate the Bradford trade. The motives which have induced her Ladyship to make this experiment, are in every way praiseworthy, and we heartily wish her success. The branch of the Bradford trade, which is more particularly to have the benefit of her patronage, is the alpaca manufacture. Most persons have some acquaintance with its wonderful fortunes. Thirty-five years ago alpaca wool was almost unknown. It could hardly be said to be an article of commerce. The Indians of Chili and Peru had used it from time immemorial in weaving their blankets and ponchos, but the haunts of the animal, whose fleece supplies this beautiful material, were remote from civilization, and much enterprise was needed before it could be collected in sufficient quantities for exportation. The legends of the trade inform us that its introduction into this country was almost accidental. The late Sir Titus Salt, when on a visit to Liverpool for the purchase of cotton, had his attention directed to a number of bales of an unknown and unsalable commodity which had long encumbered the warehouse, and which he was told he might have for little or nothing if he chose to take them. He examined the mysterious consignment; he was struck with the length and brilliancy of the staple; and he saw, or thought he saw, his way to the production of a new and attractive textile fabric. His anticipations were verified on trial, and from that day the fortunes of the alpaca wool were made. He ordered larger supplies; he spent his capital in building a new mill of gigantic dimensions, and filling it with suitable machinery. A town was built for the accommodation of the work-people, and it was called after the name of its founder. An immense fortune was the reward of the successful venture. A baronetcy followed, and with it social distinction and world-wide fame. Every-

body paid a visit to Saltaire. It was one of the show places of the land, whither philosophers and sovereigns went to admire the last and greatest exhibition of industrial enterprise. Alpaca was soon in all the shop windows and on all the drapers' counters throughout the country. It was a popular article for ladies' dresses; its smooth and lustrous surface made it suitable for a great number of purposes for which a costlier material had previously been employed, and it formed an economical compromise between gingham and silk for umbrellas. The enterprising discoverer who sent the first bale of alpaca wool to this country, and the still more enterprising manufacturer who adapted it to the wants of the people, deserve a place among our public benefactors, and we cannot for a moment suppose that the usefulness of their efforts is yet exhausted.

But for the present, alpaca is under a cloud. A change of fashion has led the public taste into other directions. Who shall fully explain the mystery of the process? Fashion is variable as the wind, which bloweth where it listeth. The mere circumstance that a particular style or material of dress has been long in vogue is held a reason why it should be changed for another. Nothing can long remain fashionable after it has become common, so that, by a strange infelicity, the very qualities which bring an article into general use, and give it a just claim to preference, at the same time secure its rejection for something else which may not have half its intrinsic recommendations. Probably the chief reason why alpaca has been discarded is the recent growth of aestheticism in dress. Bright colors and lustrous surfaces are at a discount. A sad visage requires a sad attire, and every visage must be sad whose owner "lives up to" a cracked teapot. Graceful figures love to reveal themselves. There must be no needless amplitude of dress, and such as is worn must be soft and "clinging." Tried by these tests, alpaca is a double sinner, for it is at once lustrous and elastic. The considerations which have led to this change of fashion may be described as *caviare* to the vulgar, but where the enlightened and illustrious few take the lead, the multitude are never slow to follow. Woolen fabrics are now preferred, and those who can afford it prefer the finest and softest textures. This has given the French producers a turn, and for several years past there has been an increased import of the choicer woolen products of the French loom. The change has been disastrous to Bradford, and the Countess of Bective, whom, not anticipating these lengthened explanations, we introduced too soon, has gallantly stepped forward to assist in the emergency. Her Ladyship's object is two-fold. Her first and principal aim is to bring about a change of fashion by insisting upon the merits of alpaca, and next, if the tide should prove too strong to be stemmed, to testify to the excellence of the woolen fabrics of Bradford. Her Ladyship is about to make a pilgrimage to the alpaca factories of Yorkshire. She will be the guest of Mr. Wm. Foster, the High Sheriff of Lancashire, and in the course of her factory inspection will be entertained at luncheon by the Mayor of Bradford at the Town Hall. Meanwhile, we are gravely informed that "her Ladyship has caused some of the Bradford mohair and English luster goods to be converted into costumes, and the result is the production of dresses of a very effective appearance, better in fact, it is claimed, than could be made from French goods. The costumes are said to have distinctive merit, both as regards the style of dress and the manner in which the value of the Bradford goods has been displayed." This is a good beginning, and we trust a reaction is near at hand. But in setting off a dress much depends upon the wearer. If Lady Bective could be induced to visit the principal towns in the country clad in one of these Bradford costumes, the result would probably surpass her most sanguine anticipations. Her Ladyship would be hailed as a vast improvement on Lady Godiva; perhaps as an industrial Joan d'Arc, and it would be told in history how a woman sufficed to revive the fortunes of one of our greatest manufacturing communities, and contrived by mere dint of effective millinery to breathe courage into a sinking State.

#### THE ABSORBING CAPACITY OF THE EARTH.

The generally accepted notion that the capacity of the earth for absorbing moisture is increased by a long continued drouth is entirely incorrect, the very opposite being the case. After a period of very dry weather, the surface of the earth becomes hardened, and to a certain degree impervious to water, and the first heavy showers that fall run off into riuulets and water courses, moistening the soil only to a very slight depth. The absorbing capacity of the earth is increased in proportion to the amount of moisture it receives, until it reaches a point of saturation, and then the water goes to feed springs and underground reservoirs. This can be easily exemplified in the case of pots containing common house plants. When the earth in these pots becomes very dry, and water is poured on the surface, it remains quite a while on the top without descending through the soil. But if, after the first application is soaked up, more water is applied, it sinks through the earth at once and disappears. After the earth is saturated with water, the latter flows through the hole in the bottom of the pot. So that great floods are always more liable to result from heavy rains succeeding very dry weather than from like rains coming after the ground has been soaked gradually by small showers.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Meeting of the National Grange.

Address of W. M., J. J. Woodman.

The 15th annual session of the National Grange began in Washington, D. C., on Nov. 16th. The attendance was large, nearly every State being represented. The annual address of the M. W. was among the first things in order. It was a long and forcible document, from which we shall extract the leading portions and summarize the connecting links.

#### The Address.

After introductory allusions, the W. M. makes the following reference to the former's position:

Although it is not our province to enact laws for the people, yet no Congress ever assembled beneath the dome of yonder National Capitol with duties more closely allied to the general welfare than are devolving upon this National Grange of the Patrons of Husbandry. Although we represent a class, yet it is an industrial and wealth producing class, upon which the prosperity of all other industries and interests depend. We produce more wealth and contribute more to commerce, more for the education of the masses, more for the support of the Government and its institutions than all other interests combined. Upon the prosperity of agriculture depends the welfare, if not the existence of all other interests, and the strength and perpetuity of the Government. When the soil yields an abundant harvest every channel of business is electrified into life, but a partial failure of crops, as the returns of the present year indicate, operates like the drying away of the stream which furnishes the propelling power of the mill, the machinery moves slower, and much of it will stop altogether.

#### Co-operation.

After alluding to the importance of extending Grange work by Lecturers' labors and individual effort, and the Grange press, the speaker urges co-operation among agriculturists in these words:

There has been so much said and written upon this essential feature of our Order, so many different theories advanced, experiments tried, losses sustained, and successes achieved, that it seems not necessary to utilize and systematize the knowledge already acquired to enable us to perfect a system of practical business co-operation, adapted to the wants of our members. That co-operation in buying and selling among farmers is essential to their welfare, must be evident to everyone who has given thought to this subject.

Though not in itself the most essential and important feature of our organization, yet taken in connection with the educational, it is an indispensable necessity.

The farmer is brought into business relations with almost every other interest, and to be independent and successful in business transactions, he must have a practical knowledge of business and the laws of trade. Hence any system of co-operation which fails to inculcate practical lessons, and teach farmers to do business in a business way, will fail to meet the wants of our members. What we want is a system, simple, practical, and adapted to the wants of not only every subordinate Grange, but of every member of our Order. The amount made or saved in buying and selling is not always as essential to the operator as the experience and knowledge acquired by the transaction. When our Grange ship was launched upon the stormy sea of the business world, we floated from the mast-head a banner on which was inscribed, "National and State Co-operation," "Trade and Manufactures Supported by the Common Fund."

A few State Granges tried the experiment. Extensive manufacturing and business enterprises were attempted with the State Grange funds, and salaried agents to sell farm produce and purchase supplies for the farm, with power to create debts binding upon the State Granges, were appointed in commercial centers. Our ship carried too much sail, and was deficient in ballast. It foundered in the great financial storm which proved so disastrous to all business enterprises. This system was not adapted to the wants and condition of our organization. It was not sufficiently educational and co-operative in its operations and was wanting in safeguards. It attempted to grapple with great business enterprises without the experience and skill necessary to manage them. While these failures were disastrous to the welfare of the Order, the States emerging from the intercalaria, yet there can be but little doubt but that they proved valuable lessons to our members in other States, and saved the Order from similar losses and disasters elsewhere.

The National Grange next recommended co-operative associations with equally distributed burdens and profits, giving each co-operator an equal voice and vote in their management, and devised a well-guarded and thoroughly practical system of conducting them. Many have been organized, and operated with various results. Some have succeeded beyond the most sanguine expectations of those interested in them, others have failed. This was to have been expected. Some men succeed in business, others do not. Why is it? It is not luck but in management. So with our co-operative associations. But enough has succeeded to demonstrate the wisdom and practicality of the system.

Some State Granges have employed reliable agents and responsible business commission houses to sell farm produce and fill orders at a fixed commission, taking ample bonds for fair dealing and prompt returns.

This system has proved to be of much value to members, stimulating them to study the market reports, and familiarize themselves with the principles and customs of trade and transportation. It is both practical and thoroughly educational.

There yet remained another want in our business system. Many Granges were so situated that they could have no access to co-operative stores, and to make small orders from agents or supply houses was attended with too much trouble and delay. This want has been provided for, and many subordinate Granges are now enjoying its benefits in a most satisfactory degree. They raise a small purchasing fund, and invest it in such articles as are constantly needed in every family, and keep them in a room, provided for the purpose at the Grange hall, and deliver them to the members at the regular meetings, at nearly cost. The purchasing agent or storekeeper, who has charge of the business, gives security to the Grange for the funds placed in his hands, and a small per cent. added to remunerate him for time and expense. This brings the primitive lessons and pecuniary benefits of co-operation, within the appreciation and means of the humblest member of the Grange. It is both practical and safe. No great losses can occur, as everything is done on a cash basis. There are instances in the history of this practice, where results similar to those which have marked the history of successful business men have been obtained. Commencing with a small capital and small business, they have extended their business as the confidence and wants of members and their knowledge of business has increased, until the little room at the Grange hall has been exchanged for a first-class business place upon a commercial street, and a large and prosperous co-operative store is the result. I am clearly of the opinion that supply houses or arrangements for purchasing at wholesale rates, co-operative stores where they can be support-

ed and well managed, arrangements for shipping and selling farm produce, and the Grange purchasing fund where needed, if properly systematized, and encouraged, all working together, will constitute a system of co-operation well adapted to the wants of our members, and give to all both educational and financial benefits. But in no case should an agent be employed to create debts against the Grange, nor should the funds of the Grange be placed in the hands of an agent, or invested in business, without ample security for the return of every dollar to the Grange treasury.

#### Patent Rights.

Of the wrongs done to the industrial interests by the abuse of the patent laws, the address has the following:

This National Grange and the State Granges have repeatedly memorialized Congress, and tens of thousands of our citizens have petitioned, for the enactment of a law to give some degree of protection to innocent purchasers and users of patented articles; but as yet no definite action has been taken by that body, and the outrages under the law as interpreted by the courts are still being perpetrated with a high hand. Thousands of farmers and others are being prosecuted before the United States Courts, and put to great inconvenience and cost, for innocently violating the patent laws by using some article claimed to have been patented. A law which will allow a patentee to abandon his invention to the public and allow it to go into general use, and then allow him to collect royalty of every one who has ever used the article, is an outrage against justice and common sense.

Drive well suits are being commenced all over the land, and innocent purchasers, who have paid full price for their wells, are compelled to go into the courts to defend their rights, or to be robbed under any pretext which the holders of the patent may claim. How long must these things continue? How long will the people's representatives ignore the prayers of those electing them, and neglect to provide statutory relief from these unjust burdens? Will farmers ever realize what the Chairman of the Agricultural Committee in Congress has told them, that "they are strong in number, strong in material resources, and abundantly able to protect their own interests," independent of any "governmental aid or intervention."

We must not relinquish our efforts to bring about this much needed reform, but continue to agitate, enlighten and educate the masses; and at each returning session of Congress renew our appeal, until success shall finally be attained.

#### Transportation.

Under this head Bro. Woodham gives a long discourse on a subject of vital importance to every farmer and all the industrial people of the land. We shall quote from this portion of the address hereafter. After alluding to the stand taken by the National Anti-Monopoly League against the oppressive practices of the great transportation companies and quoting the telling arguments and facts brought forward by Judge Black, he closes his remarks under this head as follows:

The Grange took the initiative in this movement against the "tyranny of monopolies," and stand to-day before the world vindicated in our acts by the ablest statesmen and jurists of our country.

Senator Windom has recently spoken upon this great question in words of no uncertain meaning, and the country will be disappointed in him if his voice is not again heard in the Senate chamber for the right, and his influence, with that of the President of the Senate, given to the people's cause. The New York Board of Trade and Transportation, and the New York Chamber of Commerce are not only disseminating valuable information on the transportation question among business men in the commercial centers, but exerting a salutary influence among all classes of our citizens. They have lent their aid to the organization of a "National Anti-Monopoly League," with headquarters in the city of New York, and State and Subordinate Leagues in the several States. I regard this new organization as a valuable ally in the struggle for the emancipation of the industrial interests of the country from the despotism of monopolies. It is worthy the aid and encouragement not only of the farmers but of all classes engaged in industrial pursuits. Yet our organization with its perfect system of State, county and subordinate Granges, is regarded as the great medium through which the ears and minds of the masses in the rural districts are reached and made to understand the situation and warned of impending danger. By request of the National Anti-Monopoly League, Judge Black drafted a petition to Congress praying for the legislative regulation of inter-State commerce by railroads. The League kindly offered to furnish copies of it in our Order for circulation for signatures by subordinate Granges; and I directed them to be sent out, under the endorsement of the National Grange. I submit this action to you, and trust that you will take the necessary steps to encourage Patrons everywhere to interest themselves in circulating them and carrying out the recommendations of this League.

Then let us, with renewed courage, hope and perseverance, renew every effort heretofore put forth, and acknowledge, encourage and utilize all the means and forces which are being employed by other classes to educate and enlighten people upon this subject, and induce Congress and State legislatures to meet this question and forever settle it in fairness, protecting equally the interests of the people and the rights of the railroad companies.

#### Conclusion.

We are forced to pass over the discussion on the subject of education for the present and finish our review of the address with the speaker's concluding remarks:

I have called your attention only to those subjects which I deem most important to the general welfare of agriculturists, and which relate directly to the work of our organization. The field for work is broad, and it is your duty to explore it well, for originate and recommend measures for carrying forward this work so well begun, and accomplishing the great purposes for which we were organized. Let the members of our Order understand and feel that the social, literary and refining influences, and financial benefits of the subordinate Grange, do not constitute all of the objects and purposes of our Order, but that we aim to make our influence rise above and reach beyond all these, and benefit "our country and mankind."

In conclusion, I need make no apology for referring to another growing evil in the political system of our country. I have reference to the *spoils system*, upon the altar of which the President was sacrificed. In France I saw the President of the Republic following the remains of a General of the French army to his last resting place, surrounded by a bodyguard with drawn weapons, ready to punish with instant death any miscreant who should dare to do him injury; and I asked myself if the time would ever come when the President of this Republic would be unsafe among the people. It would be a reproach upon the good name of the intelligent, liberty-loving people of this country, to even imagine that the life of their President would be unsafe among them. But in the assassination of President Garfield by a political fanatic, are there not reasons to inquire if the time has not come when the newly inaugurated President is unsafe among this half million irrepressible office seekers by whom he is assailed, demanding their share of the spoils of office as a reward for political services in electing the President, who is made the great dispenser of public patronage; and is it strange that among the great number of humiliated, maddened and disappointed ones there should be one Guiteau?

This system, wrong in principle and corrupting in its influence, has been allowed to grow up under our indulgence, until it is now able to rear its giant form and de-

mand its office, or the life of its dispenser. It becomes, therefore, the duty of every statesman, philanthropist and citizen, to seek the cause of this terrible crime which has so shocked the world and disgraced the good name of our nation, and endeavor to remove the cause. To this great purpose let us, also, commit the influence of our Order.

### Co-operative Enterprise in San Joaquin County.

It is likely that the Grangers of Lodi and adjacent country will have the first co-operative society on the Rockdale plan on this side of the continent. We alluded briefly to their project in our report of the Lodi meeting last summer.

It appears from the following in the Lodi Review that the movement is going forward:

There was a stockholders' meeting of the Co-operative Union P. O. H. Wednesday afternoon in this place. There was a large attendance and the meeting was very harmonious and satisfactory. There were many visitors present, among whom was Mrs. Stamper and Brenart, of Washington Grange, Wm. White and wife, of Woodbridge Grange, also, Wm. Ennis and F. Ritter, of Elliott Grange.

Mr. Ennis was unanimously chosen Chairman, and Mr. Hoffman, Secretary. There was a committee of two appointed by the Chair from each Grange to canvass and receive subscriptions among the members toward the capital stock of the incorporation. They were as follows: Dr. Stamper and Van Sitt, for Washington; Bros. Wm. White and Blake Woods, of Woodbridge; Bros. Ritter and Ennis of Elliott; Bro. Phelps and Sister Ashley of Stockton, and Bros. Hoffman and Stoddard of Lodi.

A committee of three to draft by-laws and rules to govern the corporation, were J. D. Hoffman, Stoddard and Ennis.

We are acquainted with some of the earnest people engaged in this movement. If they will follow the Rockdale plan straight—strictly buying and selling for cash, and return one-half of the profits quarterly to the patrons, there is, according to long experience in England, no chance for a failure. Much credit will be due to those who carry forward the first organization. Under the provisions of our new constitutional law allowing co-operative associations, every shareholder is restricted to one vote, no matter how wealthy or how many shares he owns. This provision will evidently give a chance for equality of influence to each one who enters the undertaking.

### Grange Revivals.

We condense the following from the last issue of the *Patron*. Dormant Granges can be revived in this way:

In all cases where the charter of a dormant Grange has been retained in the hands of its former Master or Secretary, it can be reorganized simply by the meeting of four sisters and nine brothers of its former membership, who were in good standing at the time of suspension; elect a regular list of officers; send list of such officers to the Secretary of the State Grange, together with a statement that the Grange has been reorganized, giving name and number, and paying to the Secretary of the State Grange one quarter's dues for the number of members in good standing at the date of suspending work. If the charter has been surrendered and is now in possession of the State Secretary, it will be returned to the Grange upon application, whenever the conditions above enumerated shall have been complied with. In the event of a number of persons formerly belonging to subordinate Granges, wishing to reorganize, we think there will be no objection to their doing so, simply by a sufficient number meeting together, electing a complete list of officers, sending the list to the State Grange Secretary with a voucher that all members joining were in good standing at the time their several Granges suspended work, and the paying into the State Grange treasury the sum of \$3.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### CONTRA COSTA.

NEW TOWN.—*Gazette*, Nov. 26: Articles of agreement filed in the Recorder's office, entered into by Thomas Edwards, Sr., his wife, and sons, owners of the Edwards lacho, and J. L. Heald, who is conducting the foundry and machine shops at Vallejo, for the transfer and extension of that business, on the south shore of the Straits of Carquinez, at the Vanola station, about seven miles below Martinez. The articles provide for laying out of a town, supplying it with water through iron pipes, and permanently prohibiting the sale of intoxicating liquors therein. The work of preparing the ground for erection of one of the large, fire-proof, brick and iron foundry buildings has been in progress for some months and the enterprise is one of greater magnitude and importance than any other ever projected in the county. The new town is to be called "Crockett," in honor of the ex-Supreme Judge of that name, between whom and the Edwards family intimate relations have subsisted for many years, and who is understood to have drawn the articles of agreement.

#### HUMBOLDT.

DESTRUCTION OF DEER.—*Eureka Standard*: The wholesale destruction of deer in this county, simply to obtain their hides, is a species of vandalism which should be stopped. Deputy Sheriff W. H. Webster has just returned from a trip to the eastern and southern limits of this county, and he tells us that in the vicinity of Ericson's place, on the upper Mad river, an Oregon hunter, named Ketcham, and others, are making a business of this wholesale destruction of deer for their hides. He saw carcasses which had been stripped of their skins, but which were otherwise intact. Mr. Holland, who lives in that section, has given the vandals notice that they must cease or he will prosecute them to the full extent of the law. Where is our society for the protection of game? The Ukiah Dispatch says: The same may be said of Mendocino county. In a recent trip across the hills

from Long valley to Round valley, we came upon a number of deer which had been killed and stripped of their hides and the carcasses left as food for buzzards. We hope some effort will be made by our law officers to put a stop to this vandalism before the deer are entirely exterminated.

#### KERN.

IMPORTED STOCK.—*Californian*: Messrs. Haggin & Carr have just been making an importation of fine stock for the purpose of advancing the stock interests of the county. These animals, which are the finest of their kind, consist of a Clydesdale mare from Scotland, one jack and two jennies from a part of France celebrated the world over for the breeding of this species of the horse family, and 117 French Merino bucks, and 131 ewes from the celebrated Blaco flock in Alameda county. These sheep are the best bred animals ever brought to this State. They shear from 50 to 65 lbs. of wool each. They are kept at the Anderson farm, and will be tended with great care. Jean Phillippe, a Frenchman on the north side of the river, the purchaser of the farm of Messrs. Amy & Ardizzi, has also purchased 200 ewes and 4 very fine bucks of the same flock.

#### LOS ANGELES.

THE NEW OVERLAND ROAD.—*Express*: Mr. J. E. Hollenbeck, in a letter dated New York, Oct. 31st, to Mr. Wm. H. Workman, says: I called on Colonel Stone, President of the Atlantic and Pacific railroad. He received me with a great deal of cordiality, but was satisfied in his own mind that it would not be for the best interests of the company to change the route of their main line to take in Los Angeles valley, as it would make it very much longer; but he has no hesitation in saying that their company was impressed with the importance of a direct connection with Los Angeles, and just as soon as the main line was located permanently, he said, that the question of feeders would be looked into; that he proposed to visit our coast during the next two months, and would come to Los Angeles to consult and look over the ground. Mr. Nickerson, President of the California Southern and other roads on our coast, left Boston last week for that section, and President Stone thought it would be well for some of the representative citizens to see him and have him look the ground over. I do not think there is any hope of getting them to change the route of their main line, but I do think there are good grounds to expect that they will have a road to connect with their main line from our section. If Los Angeles were made the terminal point, it is questionable in my mind if the result would not be as great a benefit to our city as a station on the trunk line would be.

THE TRANSPORTATION OF FRUIT.—At a special meeting of the Chamber of Commerce last week there were present J. De Barth Shorb, President, Wm. J. Broderick, Secretary, and a quorum of the Directors. The object of the meeting was stated to be for the purpose of considering the ways and means that would best maintain, promote and extend the large and growing orange and other fruit interests of this section. On motion of Director E. F. Spence, seconded by Kaspare Cohn, the following resolution was unanimously adopted, and the Secretary authorized to furnish copy of the same to the gentlemen named:

WHEREAS, It is the opinion of this Chamber, that, unless some concessions of a reasonable nature be made by the railroad managers in their freight charges, whereby the shippers and producers of such fruits may be allowed to reach the markets of the west and southwest at living rates, that the orange and fruit interest must become unprofitable, the further extension of orchards be arrested, and this industry abandoned; and Whereas, This Chamber confidently believes, that a proper understanding of this matter upon the part of the railroad managers would, in consideration of their own interests, as well as of this community's, induce them to grant all reasonable concessions as to rates and modification of terms of shipment; and Whereas, This Chamber believes that the terms and conditions of the "Fruit Circular" issued by the Central Pacific Railroad Co., June 1st, 1881, does not give the required relief; now, therefore, be it Resolved, That J. de Barth Shorb, Chairman, J. M. Griffith and A. B. Clark be requested and empowered by this Chamber to open negotiations with the Southern and Central Pacific, and all connecting lines of railroads, with a view of obtaining the relief sought.

PROBLEMS OF ORANGE GROWERS.—The orange interest in this part of the State received a very serious set back last winter. The crop was large and would have sold at a good price if it could have been got to the Eastern market. The wants of San Francisco are altogether unequal to the consumption of the orange crop now raised here, and in order to make the interest pay, we must have fair terms of freight to the Eastern cities. If through rates, say to Chicago, could be had for \$300 a car, the orange growers would supply a great deal of business to the roads. The Eastern markets would take all the oranges we could send them, and an important industry, which received a temporary check through the unintelligent action of the railroad men last year, would be stimulated into immense possibilities. The number of trees now bearing in this and San Bernardino counties is so great that nothing less than the almost unlimited markets of the East will afford our orange growers a chance to dispose of their crops. San Francisco is so easily glutted that but a very small proportion of our crop can be disposed of there. Unless we can afford to send our oranges East there is a limit to this industry here. The present maturing crop will not be as large as last year's, but it will be sufficient to load 10 cars per day during the season.

#### MENDOCINO.

THE WOOL PRODUCT.—*Dispatch*, Nov. 26: Sheriff Donohoe has kindly called our attention



to the fact that one of the gentlemen who addressed the meeting of wool growers had greatly underestimated the annual wool product of this county, having given it at 300,000 pounds, assuring us that five or six of our largest wool growers combined ship more than that amount. By referring to the County Assessor's report for this year we discover that of imported or fine sheep there are 159, graded, 2,460, and common, 245,247, making a total of 247,867 sheep, valued at \$375,104. The average yield, which we will give at six pounds per sheep (and that is declared to be much below the average) shows that our wool growers annually place in the market 1,487,202 pounds. The proportion of the spring wool clip to the fall clip being two to one, we find that last spring there were 991,468 pounds shipped and this fall 495,735 pounds, for which this county receives an annual income of not less than \$308,346.

#### NAPA.

**STEAM TREE FELLING.**—St. Helena Star: It appears that the luxuriant growth of our neighboring hillock, Howell mountain, is no longer to await the slow progress of the woodman's ax, for a project is now under way to shave it closer than the "bald heads in front" by the all-powerful hand of steam. Albert Schranz took up Sunday a Mr. Smyth, who is the patentee and owner of a steam tree felling and sawing machine that has lately been at work in the Santa Cruz mountains. This engine stands off at a respectful distance and by the medium of a long gearing works a saw against the tree so energetically as to lop it off in a few minutes, and, contrary to the rules of the ring, doesn't stop even when it's down, but goes right ahead and saws it up into whatever lengths are desired. Mr. S. has returned to the city, and will soon be up again to make contracts for clearing, after which he will bring up his machine and go to work.

**FRUIT CANNING.**—Reporter: The fruit cannery agitation which has periodically affected the community all summer has not been wholly without results. It has at least directed the attention of competent persons to the superior facilities our city affords for such an industry and stimulated them to take initiatory steps in the movement to establish a cannery. For some time past Mr. W. J. Batchelder has been in correspondence with certain parties who are favorably impressed by the prospect of such an establishment, and who are seriously contemplating the investment of their capital in it. Negotiations for the lease of a portion of the East Napa Planing mills are pending, and a final agreement is daily expected. Should the plan be consummated work will begin about Jan. 1st in getting machinery in readiness for the handling of next season's fruit crop.

#### SANTA CRUZ.

**EDITORS PRESS:**—At the annual meeting of the Sixth Senatorial Agricultural Association, held at Santa Cruz Nov. 19, 1881, the following officers were elected: President, J. S. Mattison; First Vice-President, R. H. Sawin; Second Vice-President, J. S. Francis; Secretary and Librarian, Roger Conant; Treasurer, Martin Kinsley; Trustees, C. L. Anderson, W. W. Waterman and J. S. Waite; Library Committee, C. L. Anderson, W. M. Ord and W. W. Waterman.—ROGER CONANT, Sec'y.

#### SAN JOAQUIN.

**THE YOUNG HARVESTER.**—Cor. Stockton Independent: Jas. F. McMahon, of the Gaume ranch, is enthusiastic in praise of Young's harvester, and says grain cannot be harvested as cheaply by any other method. It does its work well, cutting cleaner than any ordinary header and threshing equal to the best of the separators, and cleaning the grain thoroughly. He harvested this season 1,400 acres in 35 days, averaging 40 acres per day, with 20 mules and four men to run it. The cut of the machine is 16 ft. Two additional men and a team were employed, who piled the sacks in a corral, the whole work being accomplished at an actual cash outlay of \$13 per day, for harvesting 40 acres of heavy grain.

**WIND SAWMILL.**—W. H. Radcliff has a fine windmill of his make, and when I visited his ranch had it busily at work sawing up oak logs and chunks for stove wood. This was a novel sight to me, and I so expressed myself. Said Mr. R., "don't you see that the power costs next to nothing? I have the mill for lifting water, and it cost but a dollar or so to rig it for wood sawing, and it is much easier for me to sit and see it do the work than to do it myself."

#### SONOMA.

**THE PROSPECTS.**—Santa Rosa Democrat: Adversities from all parts of the county are to the effect that a larger area will be sown to grain this season than usual. Potato digging is in progress; the crop is smaller this year than last, but prices are better. All farm produce is bringing better prices than for 10 years past. Dairy men are increasing their stock, and this interest, already large, bids fair to increase this season.

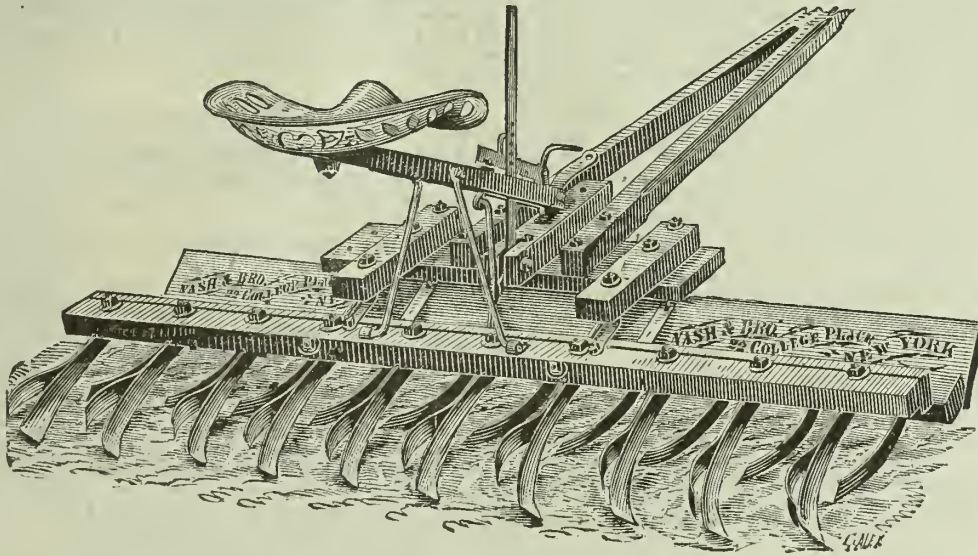
#### SISKIYOU.

**GRASSHOPPERS.**—Yreka Journal: These pests generally breed on the open uncultivated plains, where the eggs are hatched out near the surface of the ground, and do not come from plowed lands, where the plow buries the eggs beyond resurrection. In countries where the land is nearly all plowed up every season, grasshoppers, crickets and such pests are unknown,

and only come from vast deserts or unbroken land. In this county, the open plains used for grazing sheep and other stock, are full of them every season, and some seasons have an extraordinary production, to force myriads to the grain fields, orchards and gardens, through lack of nourishment in their native home. When this county is famed as extensively as counties below and in the East, grasshoppers will be very scarce, except possibly an occasional swarming from the dry prairies, as in Kansas, a few years ago, and also in this section and Rogue river valley, when efforts were first made to raise grain, causing many to think it was an impossibility to raise grain anywhere in this section or Rogue river valley. In Modoc county, also, the same trouble has occurred from grasshoppers, but they are disappearing, as the country becomes more thoroughly cultivated. Wild lands are the originators of much persecution from insect pests, to destroy the farmers' products, and a solitary grain field in the middle of a prairie is a hard place to raise grain, hence a general cultivation of any particular section benefits all concerned in the matter of successfully raising grain and other farm products.

#### The Acme Harrow-Cultivator.

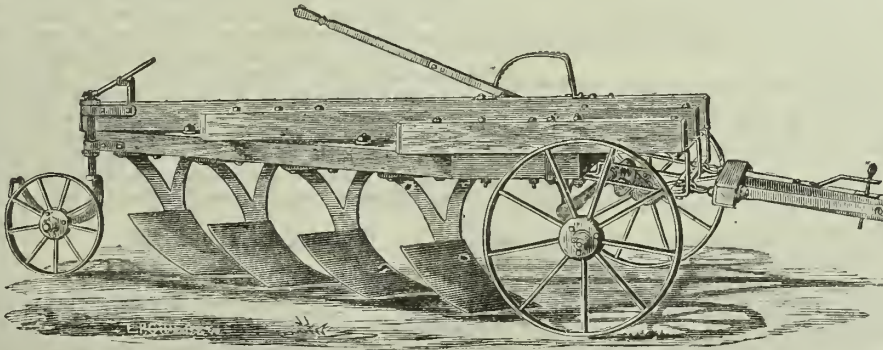
We give an engraving on this page to show



THE ACME PULVERIZING HARROW, CLOD-CRUSHER AND LEVELER.

the latest improved form of the Acme harrow-cultivator. This implement has already gained fair fame in this State, and its merits are vouched for by a host of California orchardists and farmers. It has been shown by experiment to be excellently adapted to orchard, vineyard and general field work, securing a thorough comminution of the soil and leaving a pulverized surface which is so essential to the retention of moisture—an item of the highest importance in this State. The Acme is an Eastern invention, and is the result of long experiment both in the shop

lowed to swing freely with the motion of the plow, or it may be fastened in line with the other wheels. Fourth—A tongue is used in the place of the chain usually employed. It is claimed that the plow runs much steadier with a tongue, and that it is much more convenient to attach the horses to, and that by its use (with the rear castor wheel and lifting lever) a square corner can be turned. Fifth—The standards are Price's wrought center pattern—that is, each standard has a wrought iron bar cast into it from top to bottom, the upper end of it terminating with a



NEW REVERSIBLE GANG PLOW OF THE SAN LEANDRO PLOW CO.

and in the field to regulate its method of construction and design. It has shown itself well adapted to California needs, and has been well pushed by the California agents, so that there are a great many now in successful operation. Any farther information which may be desired concerning the Acme can be gained by addressing the parties named in the advertisement which appears in our columns from week to week.

VARIOUS rumors have been afloat of the intention of Goodall, Perkins & Co. and the Villard—North Pacific and Oregon Railway and Navigation Co., connected with the sale of the Pacific Coast Steamship line. Among the latest reports is one to the effect that Goodall, Perkins & Co. will retain that portion of the steamship business along the coast between San Francisco and San Diego; that Mr. Villard has no desire to retain any portion of the line south of this city. The coasting business between San Francisco and San Diego, including San Luis Obispo, Los Angeles and other southern ports, is a profitable one, and it is the intention of gentlemen connected with the Pacific Coast Steamship line to endeavor to make such a division of the steamships and other property with Mr. Villard's representatives as to retain the southern trade for the new company to be formed during the next few weeks.

#### The New Reversible Gang Plow.

We presume the most of our readers are aware that the style of gang plow shown in the accompanying cut is in very extensive use in many sections of the State, notably in the San Joaquin valley and in Santa Barbara and Monterey counties. The plows are what are called double-edged or reversible, the moldboard and share being in one piece, and sharpened on its top and bottom edges. When the lower cutting edge becomes dull, the moldboard can be turned upside down, hence the name reversible.

The implement illustrated herewith differs from others of its class in the following particulars: First—It has high (30 inches) wrought iron wheels in the place of the small cast iron ones commonly used. Second—It has a crank axle and lever by which its depth of plowing can be instantly adjusted, or it may be raised entirely clear of the ground. The common way of adjusting the wheels is by moving each standard separately and fastening it in the desired position with a set-screw. Third—The castor wheel is placed behind the plow, and runs in the furrow instead of being on the side of the plow in front and running on the land. It may be al-

#### News in Brief.

FIVE hundred Danish farmers have located in Falls county, Tex.

It is reported that tin has been discovered on the Bitter Root, in Montana.

LARGE herds of buffalo have recently been seen at Glendive, in Montana.

THE first mine in the United States was discovered in South Carolina in 1790.

THE production of iron ore on Lake Superior is now over 3,000,000 tons annually.

GEN. SHERMAN recommends fewer garrisoned posts and forts and a larger standing army.

THE subscriptions to the Garfield Memorial Hospital at Washington, have reached \$86,000.

THE United States and Canada have shipped 883,975 barrels of apples to England this fall.

THE cotton crop of Texas for 1881 is estimated at 734,450 bales, against 1,040,000 last year.

E. J. BALDWIN is going to plant out 200,000 additional vines this winter in Los Angeles county.

THE borax interests in the Mohave desert appear to be very profitable, and shipments are increasing.

THE paymaster of the United States army doesn't handle as much money as a section foreman on a new railroad.

THE Government survey in the Yellowstone stone country has been completed. Over one thousand miles of line was run.

THE Fishery Society of Germany will send some dogfish to the United States, in return for the gift of California salmon spawn.

W. C. MCKASKIE has taken 2,000 czs. of gold this season from the Willow Creek and Ned mines in Madison county, M. T.

FIFTEEN cars of a freight train ran off the C. P. R. R. at Cape Horn. Some cattle were killed. Cause of accident was a broken car wheel.

A MILLION and a half dollars will be necessary to allow the Pacific Bank, Boston, to resume. The directors hope to raise \$1,000,000, and to realize \$500,000 on Week's securities.

THE levee on the Sacramento river, near Princeton, is to be built two ft. above highwater mark for 15 miles in either direction. A very large force is employed in the work.

OVER 1,600 miles of cable for the Central and South American telegraph company have been shipped from London, and direct communication with Peru and Brazil is promised by June.

HAY is very scarce in the Sawtooth and Galena country, Wood River. What little there is for sale in that section brings \$100 per ton, and will no doubt reach \$200 by spring.

AN only sister of Edmund Northrup wishes to learn his address. When last directly heard from he was at Knight's Landing, Cal., in 1867. Address Mrs. Adeline Burnside, Audubon, Iowa.

**PRACTICAL RECEIPTS AND PROCESSES.**—Mr. A. Roman, well known as a bookseller and publisher in this city, has again established himself in his old business at 120 Sutter street. He now makes a specialty of technical and standard works, and encyclopedias. Among the latter which he now has, is "Dick's Encyclopedia of Practical Receipts and Processes," containing 6,422 receipts, embracing thorough information, in plain language, applicable to almost every industrial and domestic requirement. Mr. Roman tells us that the utmost care has been bestowed on this work, to make it exact and reliable, and to this end most of the receipts have been tested to prove their value. Minute directions are given relative to the substances required, their proper proportions, how to prepare, mix and apply them. An important feature is also that the book points out and explains tests for proving the purity, strength, etc., of the article to be used. In fact, the work is a condensed form or comprehensive book of reference for almost every receipt and formula that may be required in the industrial arts, professions, trades and manufactures, medicine, and the ordinary occupations of daily life. The receipts are all classified, and a copious index renders them available for immediate reference. We have not seen so useful a work for many a day. It is complete in one royal octavo volume, bound in cloth, and costs \$5.

**DONATIONS OF BOOKS WANTED.**—Up to this date but very few publications have been donated to the Napa Insane Asylum. Nearly all of these were donated by a single benevolent Philadelphia gentleman, who has generously favored asylums in other States in a similar way. Many of the 1,050 (or more) inmates at Napa are in condition to enjoy reading and be benefited thereby by their severely discouraging confinement. The recent State Legislature refused the small appropriation of \$5,000 to establish a suitable library for its handsomely constructed and humanely conducted asylum. Donations are therefore very much needed from the generous citizens of California, to provide for the intellectual amusement and wants of their unfortunate neighbors, for whose benefit but little can be done at best. Any books, papers, pamphlets or pictures, sent prepaid, by mail or express, to this office, will be forwarded, without further expense, to the asylum.

#### Persimmon Tree Distribution.

About 1,000 of the Japan Persimmon trees sent to this coast last spring by the U. S. Commissioner of Agriculture for distribution to California growers, are now available to those who desire them. These are the trees which were not disposed of last spring and were planted out for the season on the University Grounds in Berkeley. Those who desire them can obtain them by sending 30 cts. (to cover cost of packing, etc.) to J. V. Webster, 40 California St., S. F. Seven or nine trees will be sent to each applicant; express charge being paid by the receiver.

THE public debt of Tennessee is \$33,000,000.





### Their Angels.

My heart is lonely as heart can be,  
And the cry of Rachel goes up from me,  
For the tender faces unforget  
Of the little children that are not;  
Although, I know,  
They are all in the land where I shall go.

I want them close in the dear old way;  
But life goes forward and will not stay;  
And he who made it has made it right;  
Yet I miss my darlings out of my sight.  
Although, I know,  
They are all in the land where I shall go.

Only one has died. There is one small mound  
Violet-heaped, in sweet grave-ground;  
Twenty years they have bloomed and spread  
Over the little baby head;  
And oh! I know  
She is safe in the land where I shall go.

Not dead; only grown and gone away,  
The hair of my darling is turning gray,  
That was golden once in the days so dear,  
Over for many and many a year.  
Yet I know—I know—  
She's a child in the land where I shall go.

My bright, brave boy is a grave-eyed man,  
Facing the world as a worker can;  
But I think of him now as I had him then,  
And I lay my cheek to my heart again.  
And so, I know,  
I shall have him there where we both shall go.

Out from the Father, and into life;  
Back to His breast from the ended strife,  
And the finished labor. I hear the word  
From the lips of Him who was Child and Lord,  
And I know, that so  
It shall be in the land where we all shall go.

Given back—with the gain. The secret this  
Of the blessed Kingdom of Children is!  
My mother's arms are waiting for me;  
I shall lay my head on my father's knee;  
For so, I know,  
I'm a child myself where I shall go.

The world is troublous and hard and cold,  
And men and women grow gray and old;  
But behind the world is an inner place  
Where yet their angels behold God's face.  
And lo! we know,  
That only the children can see Him so!

—Scribner's Monthly.

### Needle and Thread.

"An old bachelor?" said Honora Maywood. "That's what he told me, just in so many words," said Mrs. Pennypacker, who stood on the threshold of her best room, with her head tied up in a pocket handkerchief, and a hair-broom in her hand, wherewith she gesticulated, after a tragic fashion, as she talked, while Miss Maywood, tall and slender as a wild lily, stood in the hall, with a roll of music under her arm, and her slight figure wrapped in a shabby black shawl. "And he's willing to pay my price, cash, every Sunday night. Never attempted to heat me down a penny, if you'll believe it, my dear." "He drinks only English breakfast tea, and he wants his pie crust made with the best Alderney butter, instead of lard, as is good enough for the other people; and he must have ventilators to all the windows, and an open grate, instead of the base burning stove; and—I hope you'll not be offended, my dear—but he particularly dislikes a piano."

"Dislikes a piano?" said the little music teacher, reddening in spite of herself. "And he says, says he: 'I hope, Mrs. Pennypacker, that there is no piano in the house. A piano,' says he, 'plays the deuce with my nervous system, with its everlasting tum, tum!' These were his words, my dear. So, my dear, I'll be grateful if you won't mind doing your practising until he's out for his daily walk—from 1 to 3, just as regular as the clock."

Miss Maywood looked piteously up in the landlady's face.

"I will do anything to oblige you, Mrs. Pennypacker," she said, earnestly. "I have not forgotten how much I am indebted to you, both in actual money, and in kindness, which money can never repay."

"My dear, don't say a word," said Mrs. Pennypacker, hastily. "You've been sick, and you've got a little behindhand, and it's quite natural you should be a little low spirited now and then. But you mustn't get discouraged. And you're quite welcome to stay on here until you are able to settle up your little account."

Honora Maywood sighed as she thought how often her little advertisement had been inserted in the daily newspapers without attracting the least notice from the world of patrons and pupils. There were so many "capable music teachers" willing to give lessons at moderate prices nowadays, and how was anyone to know how sorely she needed the money?

And, as the time crept on and no pupils came, Honora began to ask herself seriously whether she should go out to some menial capacity, or stay genteelly at home and starve.

"Clothes, ma'am." Honora started from her reverie as the washerwoman's stumpy little girl banged herself, like a human battering-ram, up against the door, with a preposterously large basket on her arm.

"Yes," said Honora coloring. "Put them

down, Sally. But I—I'm afraid it isn't convenient to pay your mother to-day."

"Mother didn't say nothin' 'bout the pay," said Sally, wiping her forehead with a whisk of her feet. "I was to leave the clothes with her 'umble duty, and she 'oped they'd suit; but it was that dump on Monday and Tuesday as starch wouldn't stick. And she 'opes you'll excuse all mistakes, as they'll be done better next time."

"I dare say they are quite right," said Honora, with a little sigh, as she marvelled at this unexpected access of courtesy on the part of her Milisian laundress.

But when Sally had stumped off down stairs, her flapping slippers beating a sort of tattoo as she went, Miss Maywood took off the fringed towel that covered that basket of clothes, and gave a little start.

"Shirts," said Honora, "and socks, and turn-over collars No. 16, and great big pocket handkerchiefs, like the sails of a ship, and white vests, and goodness me, what does it all mean? Mrs. Mulvey has sent me some gentleman's wardrobe by mistake. I must send these things back at once."

But then Miss Maywood looked down at the articles thoughtfully.

"I never had a brother," mused Miss Maywood, "and I can't remember my father; but of this I am quite certain—if I had either one or the other, I should thank any girl to mend their dilapidated wardrobes, if they looked like this. And Mrs. Mulvey can't send before night, and unfortunately I've nothing to do, so I'll just mend this poor young fellow's clothes, whoever he may be. A half-starved theological student, perhaps, training for the Polynesian islands; or perhaps a newspaper reporter, or a pale clerk, under the skylight of some dry goods house. At all events he is worse off than I am, for he cannot mend his own clothes, and I can."

And the smiles dimpled around Honora Maywood's little rosebud of a mouth as she sat down to darn holes, sew on tapes and insert patches.

"He'll never know who did it," said Honora to herself, "but I daresay he'll be thankful; and if one can't get a chance to do a little good in this world, he ought not to grudge one's time and trouble."

And as Honora stitched away, she mused sadly whether or not she ought to accept a position which had offered itself of assistant matron in an orphan asylum, where the work would be almost unendurable, and the pay next to nothing, with no Sundays nor holidays, and a ladies' committee, consisting of three starched old maids, to "sit" upon her the first Friday of every month.

"I almost think I'd rather starve," said Honora. "But dear me! starving is a serious business when one comes to consider it face to face."

Sally Mulvey came back, puffing and blowing like a human whale, in about two hours.

"Mother said she sent the wrong basket," said she breathlessly.

"I thought it very probable, Sally," said Miss Maywood.

"And mother's compliments," added Sally, "and she can't undertake your things no longer, Miss Maywood, 'cause she does a cash business, and there ain't nothing been paid on your account since last June."

Honora felt herself turning scarlet. "I am very sorry, Sally," said she. "Tell your mother I will settle my bill as soon as I possibly can."

Sally flounced out of the room, red and indignant, like an overcharged thunder cloud, and poor little Honora, dropping her head on her hands, burst into tears.

"Pretty girl that—very pretty," said Mr. Broderick, the old bachelor, to his landlady.

"Do you mean —"

"I mean the young lady boarder of yours that I see on the stairs now and then," said Mr. Broderick. "Nice figure—big, soft eyes, like a gazelle. Didn't some one tell me she was a music teacher?"

"That's her profession," said Mrs. Pennypacker. "But there ain't many pupils as wants tuition, and poor little dear, as has had but a hard time of it."

"Humph," grunted Mr. Broderick, "What fools women are not to have a regular profession! If I had a daughter I'd bring her up a self-supporting institution."

And Mr. Broderick disappeared into his room, in the midst whereof stood a girl with flapping slippers, a pretentious shawl and a bonnet which had originally been manufactured for a woman twice her size.

"Who are you?" demanded Mr. Broderick.

"Please, sir, I'm Sally—the washerwoman's Sally!" was the response.

"And what do you want here?" said Mr. Broderick.

"Please, sir, I've come to bring your things," said Sally, chattering off her lesson like a parrot. "And, please, sir, her 'umble duty, and she 'opes they'll suit, but it was that damp and muggy Monday and Tuesday as starch wouldn't stick; and she 'opes you'll excuse all mistakes, as they shall be done better next time, sir—please, sir."

"Who mended 'em," demanded Mr. Broderick, whose hawk eyes had already caught sight of the dainty needlework upon his garments.

"Nobody mended 'em," said Sally. "And mother she says it's easy to see as the new suit is a bachelor, on account of the holes in his heels and toes, and strings off his dickerkeys."

"I can tell you who mended 'em," said Mrs.

Pennypacker, "for I see her at it, and pretty dear—Miss Maywood! And says she, 'I don't know whos they are, Mrs. Pennypacker; but,' says she, 'they need mending—and a kind action never comes amiss.' No more it does, sir, Lord bless her!"

"Humph!" said Mr. Broderick; "she's right—no more it does. And she's a regular scientist at the needle, is Miss Maywood. Just look at that patch, Mrs. Pennypacker! Euclid's Geometry couldn't produce a straighter line or truer angles. See the toe of that stocking! Its like a piece of Goblin tapestry. That's the way I like to see things done!"

And Mr. Broderick never rested until he had been formally introduced to Honora Maywood, and thanked her with equal formality for the good offices she had unwittingly rendered him.

It was a golden October evening that Honora came down into the kitchen where Mrs. Pennypacker was baking pies for her eccentric boarder, with the crusts made of the best Alderney butter instead of lard.

"Oh, dear! oh, dear!" said Mrs. Pennypacker; "what a thing it is to be an old bachelor."

"He won't be a bachelor much longer," said Honora, laughing and coloring as she laid her cheek on the good landlady's cushioning shoulder.

"What do you mean?" said Mrs. Pennypacker.

"He has asked me to marry him," said Honora, "after only two weeks' acquaintance. He says that a girl who can mend stockings as I do needs no other test. And he says he loves me; and—and—"

"Well?"

"I almost think I love him!" whispered Miss Maywood.

And so the problem of Honora's solitary life was solved, all through the magic influence of "Needle and Thread."—Selected.

### A New Dress Movement.

Mr. Elmond Yates writes in the London World as follows about the new dress-reform movement which is reported to be fast assuming the dimensions of a social craze: "I had read and heard of the 'Ladies' Dress Reform Association,' with Lady Haberton for its high-priestess; but I had no idea the reform had made any practical progress in England until last week, when I actually twice stumbled against ladies in the new garb in the streets of London—ons in Bond street and the other in Cromwell road. Well, I am bound to say I like it. To be sure, the ladies I happened to see in it were both handsome and well set-up, carrying themselves like queens. But really, in itself there appears nothing objectionable, and the dress certainly contributes to freedom of movement, and I should imagine, the comfort of the wearer. It is for all the world like a riding-habit cut short just above the ankle, exhibiting merely the extremities of the trousseurs. I must mention them. Only, instead of the dress and nether garments being in cloth, those I saw were of a black brocaded silk stuff that fell gracefully, and looked quiet and lady-like. Trousers worn thus, with a long skirt over them, are very different from the loud, vulgar Bloomer costume of former efforts in this direction; and it is just possible that the reform may spread. But to do so it must come from above, else society will not have it on any consideration. At the Ladies' Dress Reform Association may be seen a specimen of this 'rational dress,' as it is called. In this the trousers are made very wide, with a deep flounce at the extremity, which combines with the skirt worn over them, so that in all ordinary situations no person could possibly tell there was any difference from the present dress of a lady."

### Warning to Young Men.

[Written for the RURAL PRESS by MYRTLE.]

Why do some young men throw their lives away in such a reckless manner? They go to a saloon, and think there is no harm in spending an hour or two in playing a harmless game of cards. If that was all it would ever amount to, there would not be so many broken-hearted mothers. They who indulge in such a pastime little realize what it is leading to. After a while, it will not only be two hours, but all the time; not only a game of cards for pleasure, but gambling for money. Then comes the "strong temptation." Oh! it is heart-sickening to think of it—drunkenness and dissipation. What a dreadful state things are coming to! The young man stays until his money, credit and honor are gone. Who is to blame? The one who deals the deadly poison to him or his parents?

Thus once honorable, well-thought-of man is now nothing but a drunkard, all because of the pleasant hours spent in card playing. There are perhaps a great many who will deny that card playing leads to this, but it is so, and will come sooner or later. I wonder if saloon keepers ever picture to themselves the broken-hearted mother pleading to her son to shun the evil temptation, and stay at home, to be the joy and comfort of her declining years, instead of going to such a place and disgracing her forever. It is a puzzle to me how a saloon keeper can sell this deadly poison, and see the effects of it from day to day and have a clear conscience. If they have hearts, why can't they realize what it will be in the end?

Mason Valley, Nevada.

### Facts to Call Forth Thanks.

EDITORS PRESS:—Although the people of the U. S., as a nation, have been called upon to pass through deep waters, having had to mourn the loss of their Chief Magistrate, together with other minor calamities, yet there are many things for which they have reason to be thankful. While clamoring and war is the order of the day among the different nations of the earth, we enjoy uninterrupted peace and prosperity; for this reason we ought to rejoice and be glad. Almost within the last century the handful of down-trodden veterans have multiplied, until now the present census of the U. S. reaches upward of 50,000,000 of people, no longer ruled by the iron heel of oppression, but free and independent. Our imports are decreasing and exports increasing; barren wastes are being turned into fruitful fields, and immigrants are flocking here from every nation under the sun, bringing with them not only money in coin but money's worth in muscle and brains; every man who becomes a citizen of the U. S. is certainly of value to the country, if he be a law-abiding citizen. Every man who clears an acre of timber land is of value to the country in which he lives; for he cannot help himself without helping others; therefore, we should do all in our power to encourage immigration, and be glad that we live in a land which offers such inducements to the stranger. Truly the people of the U. S. have a "goodly heritage," and their "lines have fallen in pleasant places."

Above all men should the inhabitants of this State rejoice and be glad. Here we are situated in the very Eden of the Universe. It is not boasting to say that we have the best climates in the world, and while this is the case our soil, in various localities, is productive of everything except strictly tropical growths.

This has been an exceptional year in California for the farmer. When the crops are good the prices are generally below par; but, contrariwise, this year we have been blessed in many parts of the State with an abundant harvest, and the present prices are very encouraging. Rain has fallen in sufficient quantities, in many parts of the State to start the plow, and future prospects are good. "Thou crownest the year with thy goodness, and thy paths drop fatness." (LXXV psalm, 11th verse.)

Any who may feel so inclined are hers referred to the psalms of David from the LXXV to the LXXVII inclusive. It is a good lesson for Thanksgiving week.

Let the people praise thee, O God;  
Let all the people praise thee.

Willow Dell, Olinpo. L. D. JENKEN.

[This favor was received just too late for our Thanksgiving edition, but the sentiments expressed "are not for a day but for all time." EDS. PRESS.]

### Strong-Minded Women Among the Esquimaux.

A young woman, Dr. Dall tells us, really quite fine-looking, and of remarkably good physique and mental capacity, was observed to hold herself aloof from the young men of the tribe in an unusual manner. Inquiry, first of others, afterward of herself, brought out the following reasons for the eccentricity. In effect, she said she was as strong as any of the young men; not one of them had ever been able to conquer her in wrestling or other athletic exercises, though it had more than once been tried, sometimes by surprise and with odds against her. She could shoot and hunt deer as well as any of them, and make and set snares and nets. She had her own gun, bought from the proceeds of her trapping. She despised marriage, and did not desire to do the work of a wife, but preferred the work which custom among the Esquimaux allots to the men. In short, she was a "woman's rights" female of the most advanced type. When winter came, having made a convert of a smaller and less athletic damsel, the two set to work with walrus-tusk picks and dug the excavation in which they erected their own house, which was of the usual type of Esquimaux houses—walled and roofed with drift-wood covered with turf. It was, however, as an additional defence against unwished-for prowling males, divided into two rooms, with a very small and narrow door between them, next which lay some handy billets of wood, to crack the scone of a possible intruder. Here our two Amazons lived, traded and carried on their affairs in defiance of communal bonds and public sentiment. The latter seemed to be composed half of disapprobation and half of envious admiration; while all the young fellows in the village busied themselves in concocting plans against the enterprising pair. These were too fully on the alert to be surprised, and all efforts against their peace were fruitless. When the deer-hunting season came the two set off to the mountains, and no sooner had they departed than disappointed lovers and "outraged public sentiment," exemplified in a mob, reduced their winter quarters to a shapeless ruin. So far as Dr. Dall's information goes, the following year the ladies returned to the ordinary ways of the world, and gave up the unequal contest against a tyrannical public opinion.—Chamber's Journal.

THERE are said to be 263 styles of corsets, and yet different young ladies' waists feel very much alike—the girls say.



## Chaff.

APHORISM by a perfectly reckless belle: "Be virtuous and you will be happy."

THE most profitable thing a man can raise are fowls. For every grain they give a peck.

THE new style of fall bonnets may be photographed by slamming a ripe tomato against a board fence.

NORWAY has discovered that telegraph lines scare the wolves away. They are probably afraid of the extortionate rates.

WHEN a Chicago preacher wants a new church all his own, and a big congregation, he has himself convicted of heresy.

"THAT prisoner has a very smooth countenance," said the Judge to the Sheriff. "Yes," said the Sheriff, "he was ironed just before he was brought in."

THE experienced Philadelphia *News* man thinks the report that Louise is coming to Canada must be true, because Lorne is preparing to cross the ocean in the other direction.

THERE were enough generals and colonels at Yorktown to take command of an army of 7,000,000 men. But something must be done to overawe foreign despots.

BURDETTE is writing a life of William Penn. We shall see if he can resist the temptation to begin the biography in the good old way—"I take my Penn in hand."

"Is patriotism dying out?" asks the Chicago *Inter-Ocean*. No, sir; not much it isn't. In places where there are no saloons it is sold at the drugstores.

## The Prince of Planets.

We are indebted to the *Providence Journal* for the following description of Jupiter, which planet now nightly shines with unwonted brilliancy in close proximity to the glittering Pleiades: "This lordly leader of the starry throng now dominates the sky, and his four moons are plainly visible through a good field-glass. The dry climate and clear atmosphere of Arizona are peculiarly favorable to the observation of celestial phenomena, and if one of the observatories now located near the humid sea-shore, or in close proximity to smoking cities, were removed to one of our mountain peaks, the best results in astronomical discovery might be expected. Jupiter is morning star till the 13th of November, when, passing to the eastern side of the sun, he becomes evening star. If Mercury deserves the palm on the planetary annals of November as the hero of the transit, Jupiter will win equal renown for the most brilliant epoch in his course, his opposition with the sun. This grand event occurs at four o'clock on the morning of November 13th, when Jupiter will be nearer to us than he will again before more than a year to come. He will then rise at sunset, being opposite the sun, and no one who looks at the eastern sky, almost as soon as the sun has disappeared below the western horizon, can fail to recognize the prince of planets as with majestic steps he treads his sparkling pathway toward the zenith. In brilliancy and size he exceeds every star then visible in the heavens, and wins from every star-gazer tributes of wonder and admiration at his magnificent appearance. He will be a superb object in the heavens during the frosty nights of November, when the moon is out of the way, and for three months to come he will outlive every member of the starry host in the nightly pageant. He is only 13 days behind Saturn in reaching the same goal, and passes the meridian when in opposition at 42 minutes past 11 o'clock, 40 minutes behind Saturn. Jupiter is now about 408,000,000 miles from the earth, instead of 591,000,000 miles, as when farthest away—183,000,000 miles, the difference in distance, is something our finite powers can form little conception of, but it is of significant dimensions in celestial distances. For the distance of the earth from the sun, more than 90,000,000 miles, is the unit of measure for computing the distances of the fixed stars. Alpha Centauri, the nearest star in the myriad host, is estimated to be more than 200,000 times as far from us as the sun. In comparison with these distant shining orbs, Jupiter is our near neighbor, and his mean distance from the sun is not much more than five times greater than our own.

THE PRAYER OF FAITH.—There is nothing like the calming grace that follows the prayer of faith in hours of peril. It is always a serious moment at sea when, especially in the track of numerous vessels, a dense fog gathers around a steamship. Her foreboding whistle hardly penetrates the misty cloud, while it constantly startles the passengers on board the ship. To remain motionless does not insure security. In spite of the most vigilant precautions, in an instant a rapidly approaching vessel will leap out of the cloud so near as hardly to admit of defense against collision. At such a time there is only one satisfactory resource. Beyond the possibilities of human foresight there is only one arm that can insure positive security. The dread accident, indeed, may be permitted to occur; but He can keep the heart in such a state of calm repose that no event will move it. He hears prayer and holds the elements in his hands; but he does more; He holds his loving and trusting disciple also. In the midst of apparent perils he can lie down in the ship and rest as the Master did, whatever may be the perils without. "For He giveth his beloved sleep."

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of ten letters.  
My 6, 9, 4, 7, is found in every forest.  
My 8, 2, 5, 4, 7, is a river in Europe.  
My 8, 9, 6, 5, a bird.  
My 1, 5, 7, is a female animal.  
My 1, 7, 3, 4, is part of a harness.  
My 10, 2, 5, 7, is worn by ladies.  
My whole is an animal found in Asia.

ROBERT B.

## Syncope.

1. Syncope the name of one great poet and leave the name of another.
2. Syncope a weapon and leave a mineral.
3. Syncope a vegetable and leave a wager.
4. Syncope a measure and leave a part of the head.
5. Syncope an animal and leave an article of clothing.
6. Syncope a proverb and leave to injure.

LEO. P.

## Charade.

My whole when without a name abounded with my first. Strangers came, forming large numbers of my second, which frightened my first away.

HARRY.

## Buried Mountains.

1. "Quit that rock!" yelled Tom.
2. I lost my hat last night.
3. He crossed the Great American Desert.
4. The Indians may scalp Sam before he can be rescued.
5. Ah! I agree not to disclose aught of this affair.

BRUTUS.

## Decapitations.

1. Behead a kind of barrel and leave to question.
2. Behead a portion and leave skill.
3. Behead a fruit and leave a part of the head.
4. Behead a pointed instrument and leave a preposition.
5. Behead a small aperture in the skin and leave a mineral.
6. Behead to acquire knowledge and leave to deserve by labor.

JOSEPH.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—Captain Mayne Reid.  
DECAPITATIONS.—1. Will, ill. 2. Peat, eat. 3. Brain, rain. 4. Can't, ant. 5. Hour, our.  
HIDDEN TOWNS.—1. Lee. 2. Dayton. 3. Wells.  
CROSS-WORD ENIGMA.—Australian.  
CURTAILMENTS.—1. Tom, to. 2. Mart, mar. 3. Part, par. 4. Wine, win. 5. Warn, war.

## Mabel and Her Brother.

EDITORS PRESS:—I am a little girl. I have written a short piece for you. If you think it worthy of a place in the youth's column, you will please a little girl by placing it there.—MINNIE STOKES, Vacaville.

There lived a sweet little girl on the bank of a pure mountain stream, which played and rippled over the white pebbles as it made its way to the great Pacific ocean. Mabel, for this was the name of our dear little schoolmate, had such kind and loving ways that all who knew her loved the little girl. Soon a dark cloud came over the home of our little Mabel. She was taken very ill, and in a few days she was laid in her little narrow grave. We all mourned for the loving child, and in a few days there was another fresh made grave to receive her little brother. Their parents mourned for the loved ones, not as those that have no hope, for they believe that they would meet their loved ones in heaven. Their little schoolmates missed them, and planted flowers on their little graves. Their mother now has gone to meet them at the pearly gates, where the angels of God are waiting to meet us all, if we love the Lord. Should any of my little schoolmates read this, let them try and be as good as little Mabel was, and all will love them.

## Intelligent Cats and Feather-eating Chickens.

[Written for Our Young Folks.]

A Frenchman gave me a cat. Her name is Goney. The people call it a Maltese. The first time she had seven kittens; I saved one of them, and I call him LeGre. He will drive the chickens about when I tell him. One of my little friends liked him so much she could not put him down a moment while she was here.

Some people think cats are not tractable or intelligent, but ours knew their names and come when they are called. They will follow us around when we go after the cows, and even across the creek that flows very near our house.

We sent one of them to the sheep camp, where we thought he was wanted, the rats were troubling the man so much; but he found his way back over the hills to us next day.

In answer to Frank's letter, which I read in the *RURAL PRESS* of Oct. 15th, I have heard that plenty of meat and vegetables should be given to chickens that are shut up and eat feathers; it will be sure to cure them.

I was so very pleased with my sister's paper when she wrote to you that I thought I would write a letter and perhaps you would be so kind as to send me one; though as I am only nine years old I do not think my letter even as much worth printing as hers.

MARGARET E. ROGERS.

## Soledad, Cal.

WHEN a leading business man of Providence is convicted of burglary, what's the use of a Detroit boy walking three blocks to restore a wallet with only two shillings in it.

## GOOD HEALTH.

## Lemons for Cancer.

Written for the PRESS by LAURA J. DAKIN.

I knew Mr StC. when I lived in Massachusetts. He had a cancer on his right hand, and a terrible looking hand it was—as thick as four common hands. The cancer at the commencement resembled a wart, and they called it a cancerous wart. He had employed several physicians who tried everything they knew. Nitrate of silver was among the remedies prescribed; but nothing seemed to be of any avail. He was finally persuaded to go to the hospital, where they were supposed to have doctors who ought to fully understand his case. But he hated to go, he was getting quite old, and felt as though going to the hospital meant being shut up away from all his friends. Yet his hand was such a torture to him he consented at last to go. His daughter went over to the hospital with him and the doctors got about him and looked at his hand. One wanted him in charge, and another wanted him; and a third thought he could do best by him. There seemed to be a hint at amputation, and the poor old man got frightened and begged his daughter to let him go home and have his liberty. So home they went, and that evening his grandson was reading aloud from a newspaper and came across this one line: "Cure for a cancer: Lemon poultice."

"Why not try it for grandpa?" said the boy. "It couldn't do any harm," replied his mother; "I think we will. Put on your cap and run down to the grocers and get a dozen lemons."

The lemons were soon brought, and the question was, how to prepare the poultice. As there were no directions she did the best she knew how—took two or three lemons, squeezed out the insides, removed the seeds and stirred in pounded crackers to thicken it. I think she warmed it so as to soften the cracker, and then applied it to the hand. Well, for three hours that man walked the floor in such agony as he never suffered before. But he would not have the poultice removed, and, at the end of three hours, the pain began to lessen. In the morning that poultice was taken off and a fresh one applied, which he kept on 24 hours. In trying to remove the fourth poultice it stuck so to his hand the daughter feared hurting him when she tried to remove it.

"Never mind," said Mr. StC., "just pull it off anyhow."

So she gave a steady pull, and out came the whole cancer, leaving a hole so large she could have set a coffee cup into it. The cancer was as black as ink; that might have been caused by the nitrate of silver which had been used.

The hand began to heal right away, and in a few months was so well he could work as hard as other men of his age. He cut and split cord wood for my husband that winter, and that, you know, is pretty hard on the hands.

I have written the above story of Mr. StC.'s case very nearly as I lately heard it from a friend, hoping it might lead some sufferer to try the "lemon poultice remedy" for themselves, as I know many give up in despair when they find they are afflicted by that dreaded scourge—cancer.

I knew another case, that of an editor in Vermont, who had what was said to be a cancer commence in his cheek. He immediately changed his diet to bread and milk and vegetables, avoiding meat and all pastry. Instead of getting larger the sore gradually decreased in size till it disappeared.

I have read a well authenticated account of a lady who had a cancer as large as a pullet's egg, who spread raw, mashed cranberries on a cloth and applied as a poultice, changing it three times a day, until the whole was drawn away—the cancer becoming softened and decreasing in size until completely cured.

"A jeweler had a cancerous pimple on his cheek, in using gold dissolved in nitro-muriatic acid he unconsciously rubbed the cancer with his impregnated fingers, and was surprised to find it speedily change appearance and shortly after disappear. Proportions one ounce acid to six ounces chloride of gold." This remedy might be used where poultice could not be applied. I copy it and the one before it, from an article in the *Toledo Blade*.

[The cases referred to by our correspondent were undoubtedly cancerous tumors and not true cancers. Among the tumors admitted by general consent into the order of cancers there are widely different degrees of malignity, the most malignant of which—the true cancer—seldom, if ever, yields to any other treatment than the knife, and then only when it is taken early, before it invades the lymphatic glands.

The practical distinction of these tumors involves the closest observations and a thorough knowledge of the anatomy and relations of the textures in which they arise, including also an intimate acquaintance with the minute structure of such growths, such as can only be obtained by a skillful use of the microscope.

There are many species of cancerous tumors which readily yield to simple treatment, and it

is such cases generally which are largely talked about and advertised by quacks as wondrous cures. It is best in all cases of suspected cancer to apply to a well educated physician. If it should prove a simple tumor he will treat it better than any self-advertised "cancer doctor," and for less money. If it should prove a true cancer, you will always be the safer in such hands. A "quack" never yet healed a true cancer; and they never advertise their failures. EDs. PRESS.]

## DOMESTIC ECONOMY.

## Swiss Meringues.

Put a pinch of salt into the whites of four new laid eggs, and beat them to a stiff froth; add four ozs. of pulverized sugar and a tablespoonful of lemon juice, and beat until the mixture will not run; turn some dripping pans bottom side up, and cover them with buttered letter paper; put the frosting on this paper in the shape of thick jumbles, with only a small hole in the center; make a small cone for every ring; sift powdered sugar over the tops of all, and place the pans in a very gentle heat for two hours. If the oven is too hot, leave the door ajar. The frosting should dry rather than bake. It should be delicately colored both top and bottom, and crisp clear through. If not well done, it will melt. Take the rings from the paper as soon as finished, and put them away in a box between layers of paper. They may be kept a long time in a dry place.

When wanted, beat double cream (that which has stood on the milk 24 hours) to a standing froth, sweeten, and flavor with vanilla, place a large spoonful of it on each of the rings and a sugar cone on top of the cream. Serve immediately.

The nearer the cream is to being frozen, the quicker it will beat up. If it stands long after beating, it should be put in a very cold place, and even then it may go back a little; the thin part will settle in the bottom of the bowl, and must not be used.

The yolks of the eggs left after making the meringues will answer for the salad dressing. It will keep for any length of time, but should be set away closely covered, so as not to lose its strength. In this case, it should be made a little thinner than when it is to be used at once as it will grow thicker by standing.

SHREWSBERRY CAKE.—This is an old English cake, which was brought from that country by the earliest settlers in the New England States. The old form, with some improvements, is as follows: Take one lb. of fresh, sweet butter, and add one lb. of powdered white sugar; beat these thoroughly to a fine white cream; take four newly laid eggs, yolks and whites together, and whisk till very light; take a teaspoonful of powdered cinnamon, with a dash of mace and nutmeg; take one and a half lbs. of the best superfine flour; mix this with half a gill of water, flavored with the juice of two lemons and one orange. Now mix the above materials together into a dough, and roll out thin; cut into small, round cakes, place on greased baking tins and bake in a quick oven until the cakes are brown and the crust firm.

SNOW CUSTARD.—Use half a package of gelatine, three eggs, one pint of sweet milk, two cups of sugar and the juice of two good-sized lemons. Soak the gelatine in a teacup of cold water; it will need to soak for an hour, at least; when it is entirely dissolved add one pint of boiling water and two-thirds of the sugar and lemon juice; let all come to a boil; then take from the stove and pour in the dish in which it is to be carried to the table, or put it in a mold to cool. Make a custard of the milk, eggs and the rest of the sugar and lemon juice. When the gelatine in the mold is ready to serve, put the custard around the base, or cover it entirely with the custard.

POTATO CROQUETTES.—Season cold mashed potatoes with pepper, salt and nutmeg. Beat to a cream with a teaspoonful of melted butter to every cupful of potato; bind with two or three well beaten eggs, and some minced parsley (if you like). Roll into oval balls, dip in beaten egg, then in bread crumbs, and fry in hot lard or drippings. Pile on a pyramid upon a flat dish, and serve.

PRESERVES WITHOUT SUGAR.—EDITORS PRESS: To make excellent preserves without sugar: Take the juice of the Mission grape (expressed therefrom) and boil to one half. Then add the grapes, and continue boiling, until the whole is reduced to one half, and you have a most excellent and sweet article for dessert use.—A. D., Martinez.

Rusk.—Two cups of dough, one teacup of sugar, half a cup of butter, two well beaten eggs, flour enough to make a stiff dough. Set to rise, and when light make into high and rather narrow biscuit. When again light sift sugar and cinnamon over the top and bake.

CITRON PUDDING.—One spoonful of flour, two ounces of sugar, two ounces of citron peel, a little nutmeg, half a pint of cream and the yolks of three eggs. Bake in teacups in a quick oven.





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SAN FRANCISCO:

Saturday, December 3, 1881

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Peach Pits Wanted.—Nurseryman, box 2361, S. F. Wagons, Buckboards and Buggies, B. Steacy, Lockford. Fearless Threshing Machine, M. Harder, Cobleskill, N. Y. Cards, Clinton & Co., North Haven, Conn. Our Little Ones and the Nursery, Russell Publishing Co. Boone & Miller, Attorneys and Counsellors-at-Law, S. F. Flannel Underwear, Cadien & Bagley, Stockton, Cal. Driven Wells, Babcock, Howard & Co., S. F.

## The Week.

The elements have frowned considerably this week so far, but have not thus far assumed any very angry phases, consequently the situation in agricultural affairs has not materially changed. There is still need of a drenching rain to open the season clearly, although, for certain styles of work, the moisture is sufficient. Talk about the character of the season is now quite abundant and opinions, of course, vary with the individuals expressing them. We have heard much of late that November is the key of the season, and that the rain during the season is great or small according to November precipitation. Let us see what reason there is for this position, taking the rainfall for November and the seasons for the last 32 years, using the Sacramento table as representing the average of the State better than the San Francisco record:

	November	Season	November	Season	
	Inches.	Inches.	Inches.	Inches.	
1849-0	2.250	36.000	1866-7	2.426	25.305
1850-1	sprinkle	4.710	1867-8	3.806	32.769
1851-2	2.140	17.930	1868-9	0.774	16.644
1852-3	6.000	36.385	1869-0	0.850	13.572
1853-4	1.500	20.035	1870-1	0.584	8.470
1854-5	0.650	18.620	1871-2	1.220	24.052
1855-6	0.750	12.770	1872-3	1.930	14.208
1856-7	0.651	10.443	1873-4	1.210	22.898
1857-8	2.406	19.991	1874-5	3.891	23.647
1858-9	0.147	16.041	1875-6	6.206	25.671
1859-0	6.185	22.625	1876-7	0.320	9.325
1860-1	0.181	15.518	1877-8	1.120	21.249
1861-2	2.170	35.549	1878-9	0.415	16.772
1862-3	0.005	11.579	1879-0	1.760	18.511
1863-4	1.430	7.838	1880-1	0.000	23.392
1864-5	6.718	22.512	1881-2	1.72	7
1865-6	2.427	17.924			

Who will figure out the probabilities from this data?

The distillers of the Western cities met in Chicago on the 17th, and perfected plans to limit production to half the actual capacity; also, providing for the payment of a bonus on all goods exported.

## Carp as Food.

There arises occasionally in the public mind a doubt as to the food value of the carp which are now being grown so largely in this State. The doubts and questions come generally from those who have no practical experience in the consumption of carp. Many times when their questions are addressed to the carp grower of this State, he is not prepared to assert of his own knowledge that carp is a good eating fish, because many of our carp growers have begun within a year or two, and, considering their old fish too valuable and their young too small, have hitherto refrained from bringing the carp upon their tables. Some of the older breeders in Sonoma county have, however, eaten the fish quite freely, and have endorsed the judgments from abroad that the carp is very palatable and satisfactory as a food material. It would be well now in view of the doubts which have been expressed if all our readers who have eaten carp would send us their judgments of its food qualities; also the best ways of preparing the fish for the table. We invite statements of this kind from all our readers.

There seems no room to doubt the esteem in which the Europeans hold carp as food. The report of the U. S. Fish Commission for 1875-6 says:

If the carp were a fish of inferior quality, like the buffalo fish, for instance, its sale would doubtless be limited to the seaport towns of northern Germany and the principal cities of central Europe, as Vienna, Berlin and Paris. In the latter city in spite of an abundant supply of salt water and different kinds of fresh-water fish, the carp is preferred to these, and, with the exception of trout and salmon, it frequently commands a price three times as high as that of all the rest. I maintain my assertion that the carp, whether it be sea, mirror, or leather carp, is one of the most excellent fresh-water fishes, and its introduction will be of great value in point of national economy, especially on account of the facility of its culture and the enormous extent to which this may be carried on.

With a view of obtaining farther information on this subject, we called upon Hon. B. B. Redding, California Fish Commissioner, in company with W. L. Overhiser, of Stockton, a successful carp grower. Mr. Redding stated that he had had inquiries about the food qualities of carp in his correspondence, and showed us a reply he had written, and which he kindly permitted us to copy, as follows:

C. T. HARRIS, Hills Ferry:—Your letter of the 15th inst. received. I have never eaten carp in this country. I ate them constantly while traveling and on the Continent of Europe. Carp have no positive flavor other than the flavor of fish. No person dislikes them; they are very white and delicate. Trout have a positive definite flavor: so has codfish, and many people dislike them both in consequence of this flavor; but carp have no flavor to like or dislike. There is also this distinction: A radish has a positive flavor of the radish; so has Cayenne pepper, and people eat the one, but a potato has no flavor for a person to like or dislike, and neither has bread. Now, if you will call radish trout, and carp potato, you will have a clear understanding of carp.

The Germans serve them up with various sauces to give them flavor. I think they are very desirable, for the reason that they furnish a large amount of food, as does the potato, and no one can object to them on account of the flavor, as they do not have any flavor. I do not know how I can describe carp to you any better than I have.—B. B. REDDING.

In conversation with Mr. Redding, he likened the carp well cooked to the flesh of the sucker in the best of its season at the East, the meat being white, delicate and devoid of any positive flavor except that of fish. In cooking, the carp can be spoiled. It is rich, and if fried in fat may be too greasy to suit a delicate taste. It was remarked that one method of cooking practiced by the Germans was to clean the fish and dash a handful of salt into its interior. The head is not removed. The fish is then plunged into a kettle of boiling water and cooked until done. In this way the delicate flavor of the fish is preserved without contamination from grease, which would be used in frying. It is white and pure, and if then covered with a sauce which suits the palate of the eater, will afford a delightful meal.

The angling qualities of the carp are also a subject of some inquiry among those interested in the culture of the fish. It is agreed by all authorities that the carp is a poor game fish. The latest edition of Chamber's Encyclopedia (1880) has the following practical paragraph on the subject: To the anglers the carp is not a very valuable fish, as he is by no means a free biter. When hooked, however, he runs strongly, and fights with considerable determination and cunning. In still water the best means of fishing for carp is with a very light quill-float. A small piece of dead reed will answer the purpose equally well or better. The float should be fixed upon the line so that the bait may be upon the bottom, and if that be clear of weeds (the angler must take care that it is so) the carp will easily see and take up the bait. It is advisable, however, in fishing for carp to use two rods, and the float of one of these should be fixed so that the bait is just off the bottom. The former tackle should be baited with well-scoured red worms, gentles or grubs of some sort; the latter with a green pea, boiled wheat or paste. The hooks should be of No. 8 size, and tolerably stout in the wire, and the gut perfectly round and good, and as fine as is consistent with the size of the fish angled for. In using green peas or wheat, boil until the skin cracks. Very small potatoes, the size of a bean, have been known to attract good carp. The best paste is bread worked up with a little brandy or gin. Gentles, wasp grubs, flies or other insects, worms or caterpillars, may at all times take carp. When a carp bites, he nibbles at the bait for some seconds before he takes it, and often takes off the tail of the worm, or strips the hook completely. But it is quite useless to strike until the float disappears entirely.

## QUERIES AND REPLIES.

## Pinkeye.

EDITORS PRESS:—Have you any information in regard to precautions against, or remedies for the new horse disease "pinkeye," which is reported in San Francisco? If so, you can confer a favor by publishing the same in the next issue of the RURAL.—READER, Alameda Co.

As this disease promises to run its course here as at the East, we shall cheerfully comply with the request of our correspondent, and devote such space as may be required for quite a full review of the subject. Of the local occurrence of the disease, it is reported that since the last wet spell, quite a number of cases of "pinkeye" have developed in this city, several proving fatal, one stable near the corner of Natoma and Fifth having ten sick horses, one at North Beach six, and a stable on Folsom, between Sixteenth and Seventeenth, four. Many more are scattered about the city, it being estimated that 200 or more horses are affected with the disease. Should the present pleasant weather continue a few days longer, veterinary surgeons have hopes that the disease will disappear; but should rain come on, much trouble is anticipated from the disease.

As the pinkeye has cost the Eastern horsemen much anxiety and some actual loss, it is to be expected that the veterinary writers of the best Eastern journals would discourse upon it, and they have done so in very satisfactory treatises, which will be of interest and practical value here. First, we shall avail ourselves of the writings of Dr. N. H. Paaren, a leading veterinarian of the West, in the Chicago *Live Stock Journal* of the present month.

A form of influenza, to which the vulgar and unmeaning name of pink-eye has been given, has prevailed among the horses over a large extent of the United States, mainly in the cities, during the past two months. It has very generally been supposed to be a new disease, and has been so announced by the newspapers. The novice in vain looks through the index of his book on horse diseases, and concludes that since no such name can be found therein, it must be a new disease. However, the name is an old one, supposed to have originated somewhere in New England many years ago. But its use did not become general, and it was almost forgotten what it really meant, when some wise man again took it up and applied it to the present prevailing disease, one of the symptoms of which is a catarrhal affection of the eyes. The disease is, however, not confined to the mucous membrane of the eyes. It is a disease in which all the mucous surfaces have a tendency to become more or less implicated. Therefore, not only does it extend to the interior of the air-cells of the lungs, but it also more or less affects the mucous membrane of the digestive canal. In its progress throughout the extent of the nasal membrane, it often affects the sinuses of the head. When the mucous membrane of the eyes and the eyelids become prominently affected, the eyelids swell and are nearly closed; and the highly injected color of the membranes thus produced may have given origin to the name of pink-eye.

By far the larger number of horses affected suffer very little. Some of them recover within a week, and most of them within a fortnight. But the prostrating nature of the disease leaves the animals weak for a time after, and rest and good nourishment are generally all that is required to restore them. Horses that are in poor condition, exhausted from over work, or are kept in unhealthy, damp, or crowded quarters, generally suffer most. The disease under such conditions runs its course slower, fatal complications are apt to set in, and it requires more care and exertion to carry them through.

No measures can be suggested which would entirely prevent or ward off an attack of this disease. But precautionary measures may be adopted, such as thorough cleansing and disinfection of the stable, and the establishment of proper ventilation—by which is not meant the admission of cold air, or a draft through open doors or windows immediately in front or behind the horse. The food should be sound, and of the best quality, and one meal a day—preferably the evening ration—should consist of ground, steamed or scalded oats, with an admixture of bran and some ground flaxseed. As the disease, even in its milder form, is of a rapidly debilitating nature, it will be well to use some vegetable tonic, such as ground white willow bark, of which a handful may be given morning and evening, mixed among the food. With a view of relieving the congested state of the mucous membranes of the head and upper air passages, it would be well to steam the head once or twice daily by means of scalded bran and hay seed, placed in a deep bag hung over the animal's head. If the horse can be spared from work, so much the better; but moderate, light work, at a slow pace, will not materially interfere with the favorable progress towards convalescence, if the weather permits; but when not in motion, the animal should be covered with a blanket, and if there is any soreness of the throat and coughing, it will be well, in addition, to cover the neck and head with a hood. If the appetite is much diminished, or if the horse evinces difficulty in swallowing sufficient food to enable him to perform his work, or if he misses one or two meals, he should remain indoors, as under these conditions there is danger of serious complications. To relieve the irritation of the throat, some stimulating liniment should be ap-

plied twice a day, such as a mixture of one part of aqua ammonia and three parts of common olive or lard oil. The most common complications are bronchitis, inflammation of the lungs and pleurisy. The advent of either of these complications may be known by the general signs of a febrile condition—a staring coat, shivering of the body, general dullness, loss of appetite, hurried breathing, a quick and small pulse and cold extremities, followed by increased heat of the body. No time should then be lost in administering remedies, such as four ozs. of solution of acetate of ammonia, one oz. of sweet spirits of nitre, and half an ounce of fluid extract of belladonna, which should be carefully and slowly administered in one dose in half a pint of flaxseed tea, and repeated thrice daily. At the same time strong embrocations should be applied along the throat and to the sides of the chest; such as a liniment made of equal parts of aqua ammonia and common olive oil, or a soft poultice of best ground mustard (not grocery mustard). Setons, rowels and strong blisters should never be applied in this disease. The nose and eyes should be sponged several times daily with warm water. The animal should have all the flaxseed tea or slippery elm tea it will drink; and when the appetite returns, the food should consist of boiled or steamed barley and oats, with small admixture of flaxseed meal, and besides, some sliced carrots, apples, cabbage leaves, etc., and clean, sweet, aromatic upland hay, in preference to timothy hay.

During convalescence, or when the animal recovers from a severe attack of this disease, it will be proper to support the strength by the use of vegetable and mineral tonics, such as a powder composed of one drachm of carbonate of iron, and two drachms each of gentian root and elecampane, which may be mixed among each ration of food. If loss of appetite and great debility or prostration prevails, with swelling of the limbs, etc., the following medicine may be given every three hours: Take half a drachm of quinia, half a drachm of carbonate of iron, and two drachms each of fennel seeds and marshmallow root; mix together in powder, and give such a powder every three hours, by making it into a thick paste (electuary) with a little molasses, and apply the dose, by means of a smooth, flattened stick of wood, upon the root of the horse's tongue.

During the progress of this disease, the bowels are generally more or less constipated; but instead of laxative or purgative medicines, which only tend to still more prostrate the animal, give only loosening diet, such as above recommended, and occasional injections, *per rectum*, of lukewarm soap suds.

The directions here given, of course, only have reference to ordinary cases. If, by the means recommended, no benefit is derived, but on the contrary the disease assumes a serious aspect, by the advent of serious complications as are peculiar to it, no time should be lost in summoning skilled professional assistance.

Dr. E. Moore, veterinary surgeon, writes for the *Country Gentleman* a review of the disease from which we take the following points: The disease exists as an epizootic in the spring and fall of some seasons, and it may be said to be sporadic at all times. It begins with rigors or shivering, fever, and swelling of limbs and eyelids, with flow of tears down the face. The animal is dull, loses appetite, and lifts the limbs from pain, shifting them often. After the limbs are considerably swollen the pain mostly ceases. The redness and swelling of the eyelids give rise to the name "pink-eye." The bowels are torpid and faeces covered by a shiny mucus, and the evacuations are dark-colored. There is sometimes a cough present, and some disturbance in the breathing, but not serious unless aggravated by cold, neglect or metastasis. It is not necessary to speak here of internal temperature, pulse, etc., as the ordinary reader would not be any wiser. As a disease pure and simple, it is not dangerous or obstinate in proper hands. The animals recover in from four to ten days. Of course, if any complications set in, it may require longer time, or be fatal, depending upon the type of disease associating with it. It may, however, in some seasons, owing to certain conditions, climate and general surroundings of animals, take on a fatal character. Owing to a tendency to the formation of coagulable material in the blood, clots are sometimes formed in blood cavities, and death is thus produced. Or, if the blood vessels of the brain are the seat of thrombi, we may have cases of paralysis, brain symptoms of various kinds, etc.

Where a good veterinary surgeon can be had, he should be given charge of the animals. Not having one, give in the first stage of the disease a ball composed of four dr. of Barbadoes aloes, powdered nitrate of potash three dr., and powdered gentian five dr. Also give half the following drench the first day, repeating the second: Spirits of turpentine, 4 ozs.; raw oil, 12 ozs.; mix. The limbs should be rubbed with equal parts of spirits of camphor, aconite and laudanum, or with spirits alone, afterwards being bandaged. Steamed oats, bran, carrots and apples, also grass (if it is available) make the best diet. Hand rubbing of limbs is good. Box stalls are best for these patients. If the breathing is quickened, the following drench three times per day will be necessary: Sweet spirits of nitre, spirits of camphor, of each 2 ozs. fluid extract of belladonna, one-half dr.; fluid extract of foxglove, 20 minims; water, one-half pint. It is well to dissolve in the drinking water one-half oz. of powdered sal niter twice or thrice daily.



### Meeting of the State Horticultural Society.

The last meeting of the State Horticultural Society was held at the Academy of Sciences Nov. 25th, J. Lewelling presiding until the arrival of the Vice-President. H. P. McKoon, of S. F., was elected a regular member.

Dr. Strentzel reported for the committee appointed to prepare information of the success of different fruits in different parts of the State. The report may be found in full on page 370 of this issue. The report was received, and a vote of thanks extended to the committee. There will be a supplemental report as to varieties of fruit to be recommended.

Mr. Trumbull, for the committee to consider the advisability of sending a delegate to attend the meetings of agriculturists to be held in Washington in January, at the call of the Commissioner of Agriculture. The committee could not recommend the sending of a special delegate, because the funds of the society would not warrant it; but it was thought advisable to commission some one who would be at the East on other business, to represent the society. The name of Hon. C. P. Berry, Member of Congress for the Northern District, was suggested as a proper representative, as he is interested in agriculture. On motion, the Secretary was instructed to correspond with Mr. Berry, inviting him to represent the society.

#### Weather Reports.

The following communication from Gen. W. B. Hazen, Chief Signal Officer, Washington, D. C., explains itself:

Some years since request was made of the various Chambers of Commerce, Boards of Trade and other organizations throughout the country for such information as they could furnish, touching the value to commerce and agriculture of the system of weather forecasts then in use. Prompt and hearty response was made, and the Chief Signal Officer was encouraged thereby to extend the service, so as to more completely guard the material interests of the country against violent storms, floods and frosts. Among the new work undertaken since then is the furnishing to the press of special bulletins containing information of public interest for periods of more than 24 hours: The forecast of no-frost for the interior plateau in the interest of stock raising; the use of a cautionary northwest signal for the interior lakes, and of the cautionary off-shore signals for the sea coast service; the wider publication of warnings of floods and ice gorges; the increased information added to the farmers' and railway bulletins; the organization of a service for the special benefit of the cotton interests of the South; the extension of special frost warnings to the fruit interests of the country; investigation of the subjects of atmospheric electricity, of anemometry and actinometry (the last with reference to the absorption of the sun's heat by the atmosphere), and the establishment of a system of marine observations and reports for the benefit of shipping interests. Much work has been done to systematize and make accurate the extended series of observations upon which forecasts are made, and to improve the methods by which they are rendered valuable to the public.

In view of which, and also of the added experience afforded by the past several years, it is requested that your association shall give expression of its opinion upon the present value of the services rendered by the Signal Corps to the various interests of the country, and what these interests are, and also that it suggest any improvements in the work which will tend to make the service more efficient and useful.

On motion, the following committee was appointed to reply to Gen. Hazen, setting forth the service which could be rendered to the horticultural interest by the improvement and extension of the weather forecasts on this coast: M. Cooke, C. H. Dwinelle, R. J. Trumbull, E. W. Hilgard, R. B. Blowers.

The stated discussion on the subject of apple growing was introduced by Mr. Dwinelle in an essay which we will publish next week, together with the points brought out by the discussion which followed.

The subject of flowering bulbs was continued until the next meeting, as the speakers were not prepared to present the subject. The other subject for the December meeting will be "Orchard Planting," to be opened by Isaac Collins, of Haywards.

M. Cooke, Chief Horticultural Officer, called the attention of the society to the coming meeting of fruit growers, dealers, etc., to be held in Sacramento, Dec. 5th, and following days. He stated that general interest had been manifested in the meeting, and that an attendance from the fruit counties of the State seemed assured. The meeting promised to be of great value to all fruit growers, tree growers and fruit dealers.

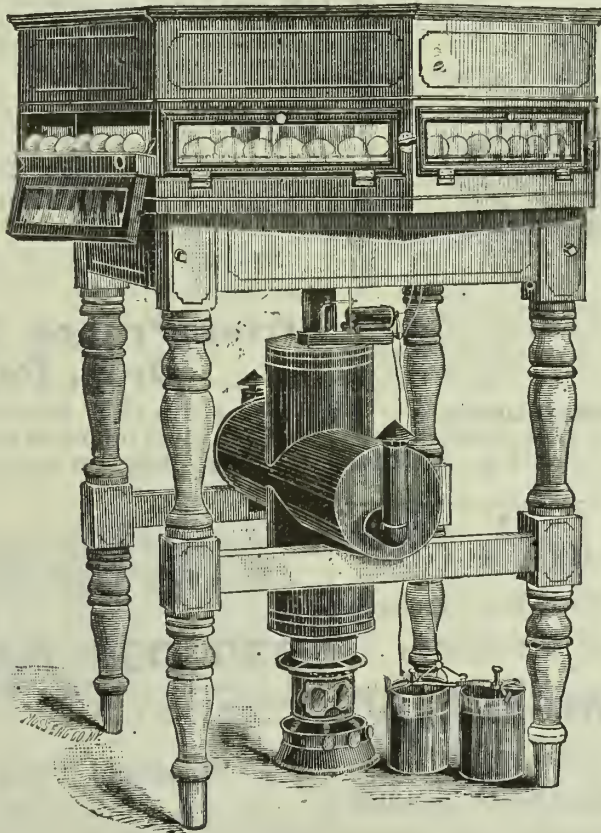
**IRRIGATION DITCHES AND ELECTRIC GENERATORS.**—Will it not be a delight to farm when the water running in the irrigation ditches turns the electric generators which will furnish motive power to do all the hard work of the farm by machinery? An English farmer has a dream of such a thing in the old country when he writes: "There are many of the slopes in our country where rivelets or ducts could be formed between the arable and pasture lands, and could be utilized in that good time coming when water wheels shall generate that electricity which is to do our plowing, grinding and chaff cutting." It is not at all impossible. It is to be expected that some day the force of water running in the ditches will be turned to account wherever the grade is sufficient to give the water the desired velocity. Certainly, the foothill farms give opportunity for the employment of inventive genius in this direction.

The council of the Geographical Society has decided to appoint a deputation, headed by Lord Aberdare, to wait on Lord Northbrook, First Lord of the Admiralty, to urge the government to dispatch an expedition to the Arctic.

### The Petaluma Incubator.

We have on this page an engraving which gives a good general idea of the design and construction of the Petaluma incubator, an egg-hatching machine of recent California invention, and which has already achieved a signal victory in public places, to wit, the award of superiority at the Sonoma and Marin District fair last September at Petaluma. At this fair this incubator was shown in connection with the National, and won the award, as we stated in the RURAL PRESS some weeks ago. In this and in other respects, the Petaluma machine has made a record which entitles it to the attention of chicken growers.

The Petaluma incubator is the joint invention of Messrs. T. R. Jacobs and I. L. Dias, of Petaluma, and patented through Dewey & Co.'s Agency. As the engraving shows, the incubator is octagon in shape, having a glass door in each space, so as to give access to the pans holding the eggs—eight in number—which are so arranged that any pan can be removed without disturbing the rest; the advantage is that a large quantity of eggs can be divided so as to be hatched with great ease. It stands on four turned legs, some three ft. high, which also support the heater (Greek cross in shape) that supplies the hot air, coal oil being used for generating the heat. The hot air enters the oven directly in the center from the heater below, passing through an ingeniously constructed valve, which is acted upon by an electric magnet in connection with a regulator made of a seamless tube filled with ether and



THE PETALUMA INCUBATOR.

hermetically sealed so as to perfectly govern the heat. When the hot air in the oven reaches the desired temperature, this regulator, which is very sensitive, completes the circuit, the magnet draws the valve shut, confining the hot air in the drum of the heater, allowing none to go to waste, at the same time fresh air passes through an opening in the side of the valve and up into the oven above. When it cools a sixteenth of a degree the circuit is again broken, the fresh air is shut off, the hot air ascends until the regulator and valve works as before.

Through the glass doors, the whole parts of the oven containing the eggs can be seen plainly, and when the little chickens begin to hatch, the operator can at all times witness the struggles of the young chicks in their first existence, and thus be informed of their progress without exposing the eggs to cold air.

At the Petaluma fair, 235 chickens hatched from 260 eggs placed in the machine three weeks before. This is a most excellent result; especially so considering the variation of the temperature of the pavilion—30° to 35° during the 24 hours.

Further particulars about the machine can be obtained by addressing the inventors as may be learned from their advertisement in another column.

**ERROR IN FIGURES.**—In M. H. D's letter against "levee building with slickens" in the PRESS of Nov. 19th, there was a typographical error in the second line of the second column. Instead of \$2,000,000 as "the canal and dam fund," it should read \$12,000,000 as the cost of this item.

MEISSONIER, the artist, has given a soiree in Paris in honor of Muybridge, the California photographer who invented the process by which photographs can be taken of animals in the swiftest motion.

### Mendocino Wool Growers' Association.

The Ukiah papers have accounts of the formation of a Wool Growers' Association in Mendocino county, the objects of which are, to carry on the business of buying and selling wool, receiving wool and other produce on commission, erecting warehouses, receiving wool for shipment and sale, and all other kinds of produce; and owning such buildings as may be necessary for carrying on the business.

At the meeting which was held Nov. 12th E. R. Shimmell presided; A. P. Martin, Secretary. There were addresses made by several wool growers setting forth the reasons which induced them to organize to do their own wool business. The speakers were Judge McGarvey, E. C. Buell, F. O. Townsend, T. R. Lucas, and others. The leading points made by the speakers were as follows:

The wool growers complained of the injustice done them by the wool dealers in San Francisco, who, by mixing the Humboldt and Mendocino wools with inferior wools from other portions of the State, depreciate the value of the best wool grown in the State, and to that extent deprive our wool men of their just dues—the profits which should at all times be theirs. The wool producers of the county—they wanted to get, and were entitled to, the very highest price their wools would command in the Philadelphia and Boston markets. This could only be accomplished by organizing and incorporating, with full power to deal in wool—make Ukiah the place of business, build a warehouse, secure a press, receive wool, grade and rate the same, forward it to the Eastern market direct, and place it in sale there and let it be disposed of upon its merits. The best business houses there would covet the trade, and the very highest prices would at all times be secured by the producers themselves.

It was shown that not less than 300,000 lbs. of wool was produced in the county every year, and that the amount would go beyond that in the future—that through

the proposed home organization the expenses connected with preparing it for market, shipping, etc., would be very materially reduced, and that the money saved and the increased amount obtained would be so much added to the income of the wool producers, all of which now goes to support the middlemen who make their living out of the business. By such an arrangement each producer would secure the best price that could be obtained for his own wool, and the small producers would realize a larger return than now, for, as a general rule, small flocks produce a better quality of wool than do the large flocks, and each lot of wool could and would be sold on its own special merits.

After the speaking Judge McGarvey moved that the wool growers do organize into an association to be known as the "Mendocino County Wool Growers' Association," and that the Chairman appoint a committee of five to draw up articles of agreement for the incorporation of the association. The Chair appointed Judge R. McGarvey, John S. Raed, F. O. Townsend, E. C. Buell and Wm. Ford on said committee.

In due time the articles were reported and adopted, setting forth the objects of organization as above, and providing as follows: The term for which it shall exist is 50 years from and after date of its incorporation. The number of Directors shall be five. The amount of capital stock of this incorporation shall be \$10,000, divided into 500 shares of the par value of \$20 per share. The following subscriptions to the capital stock were reported:

F. O. Townsend, 20 shares; R. Angle, 20; John S. Raed, 20; R. McGarvey, 20; E. R. Shimmell, 10; Wm. Ford, 10; E. C. Buell, 10; Wm. P. English, 5; A. P. Martin, 5; S. A. Hamburg, 5; Jesse C. Thompson, 5; S. D. Paxton, 5; S. McElhane, 2; W. W. Howell, 2; A. Davidson, 2; F. T. Muir, 2; J. Haell, 2; E. W. Reeves, 3; James Frost, 2; J. Garner, 5; Lewis Hale, 5; A. J. Thomas, 5; Geo. Ristine, 5; Smith Vann, 5; John Fordice, 5; L. D. Jones, 5; Dan Lambert, 5; Baucht Bros., 10; S. M. Clark, 1; J. G. Rowlison, 4; Willits & Johnson, 2; A. K. Davidson, 5.

By a unanimous vote the President was instructed to take the subscription paper and circulate the same in Little Lake valley for signatures, and afterward forward it to Round valley. The meeting adjourned until Dec. 3d.

### To Encourage Immigration.

The Immigration Association of California, a result of the recent agitation in the mercantile fraternity of the desirability of such an association for active, effective work, yesterday filed with the County Clerk their articles of incorporation. The objects of the incorporation are stated to be:

First—To encourage immigration into California of agriculturists, artisans, and such other persons (except Mongolians) as will be likely to become permanent residents and citizens of this State.

Second—To obtain and disseminate such information as can be obtained from reliable sources in reference to lands which may be purchased; climate; character of soil and its productions; opportunities for obtaining building material and fuel; water supply; transportation facilities; location with reference to markets, towns, schools, etc., and any and all practical information (with maps and statistics of California) which may be beneficial to immigrants seeking homes; to have same compiled and published in different languages when necessary and distributed in the States east of the Rocky mountains, and in Europe.

Third—To establish an immigration office in the City and County of San Francisco, State of California; to appoint agents of said corporation elsewhere wherever it is thought practicable; to distribute information, and to solicit immigrants to come to California; to assist immigrants in securing safe and inexpensive transportation, and render them such other assistance as the corporation may be able to render them while en route, and until they are settled in said State.

The principal place of business of the corporation is San Francisco; its term of existence 50 years; there is no capital stock, and its object is not pecuniary profit. The number of Directors is nine, five of whom must be members of the Board of Trade of this city. The Directors elected for the first year are: James R. Kelly, W. N. Hawley, Wm. L. Merry, Wm. Steinhart, James Duffy, T. L. Barker, Wm. Blanding, Arthur A. Briggs, J. V. Webster, all of San Francisco except the last named, who is of Oakland.

**PIONEER TIMES IN CALIFORNIA.**—Sketches of the "olden time" in California are exceedingly interesting, both to those who survive their participation in them, and to the junior race of citizens who can count their California years on their fingers. The latest contribution to pioneer literature is a book entitled "A Picture of Pioneer Times in California," by Wm. Gray, and is offered for sale by A. Roman, agent, 120 Sutter street, S. F. This work treats of pioneer life in California, more particularly in San Francisco and the coast towns and cities, including the old Missions and Spanish settlements, and treating upon California life up to the time of our late civil war. This book is respectfully dedicated to the boys and girls born on the Pacific slope, of pioneer parents. Its object is to draw a correct and faithful picture of pioneer times in California and thus expose the misstatements of itinerant lecturers and thoughtless or vicious writers, who seem to delight in wholesale misrepresentations of the habits and character of the first American settlers of this coast. The time has come when this matter should be discussed and set right. The pioneers are fast passing away, and in a few short years, not one will be left to contradict and expose the slanderous charges now constantly put forth against them. The book is published in inviting style, and will undoubtedly have wide sale.

**DRUNKEN BIRDS.**—The "Pride of India," or "China tree," as it is variously styled, is now being planted as an ornamental in different parts of the State. This fact will make interesting some notes on the tree and the birds which visit it, as drawn out by observation in Georgia. It is claimed that robins which feed upon the berries of the tree, become drunken, and sometimes fall to the ground stupefied after a long feast on the fruit. Those which do not eat enough to reach a state of obliviousness, become intoxicated and seemingly merry, buffeting each other with their wings and presenting a rakish and dissipated appearance. If the moral tone of California birds should not be too high for indulgence of this sort, it may be that the tree will serve a good purpose in attracting the birds away from orchard trees, providing the Pride of India came in fruit at the right season. Has anyone observed anything of the kind mentioned in California?

**CONSTITUTION OF COMETS.**—M. Przymowski concludes, from observations since 1858 by the spectroscope and polariscope, that comets are formed of a condensed portion, which constitutes the nucleus, surrounded by an incandescent gaseous atmosphere, which contains carbon and reflects the solar light, and of a swarm of disaggregated material which is not controlled by the cometary attraction but moves in obedience to universal attraction. In some comets the polarization of the light is strongly marked, while in others it is almost wholly absent. In the latter case he compares the structure to that of atmospheric clouds.—*Comptes Rendus.*

AN anti Jew mob stoned Sara Bernhardt's carriage as she was driving home from the theater, at Odessa, on the ground that she was of Jewish descent. They also stoned her hotel and stopped the performance at the theater.



SECURE PATENTS

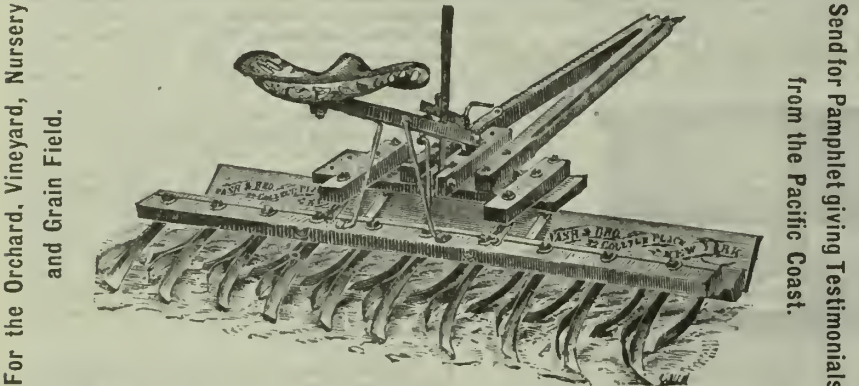


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"ACME"

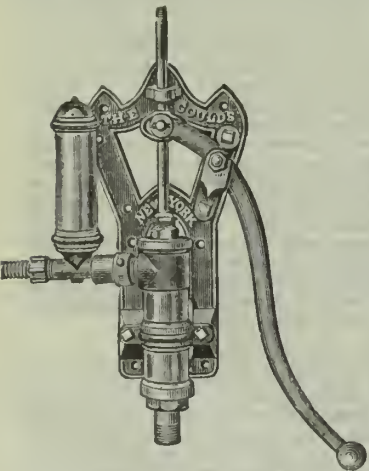
PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.



The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

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**GOULD'S SPRAYING PUMP.**

Used by Orchardists for Spraying Fruit Trees with  
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This Pump has been gotten up expressly for the purpose noted. The working parts are constructed entirely of Brass and are not affected by the corrosive solutions used in them. The sale of over 100 of these Pumps last year—principally in the Santa Clara valley is strong testimony as to their merit. Further information can be obtained by addressing the Agents,

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Dealers in all Kinds of Field and Garden Seeds at Reduced Prices in Large Quantities.

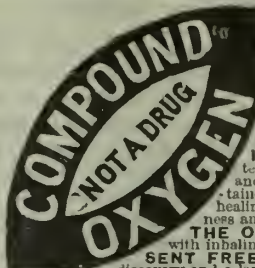
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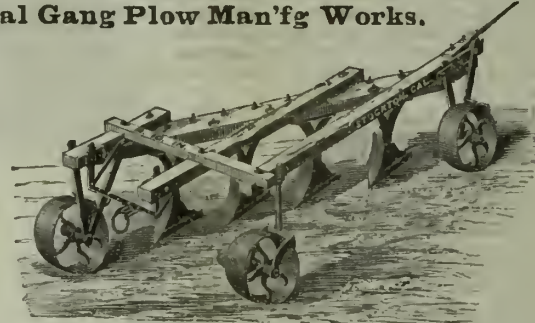
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The above trees are all selected and on Peach Roots and free from scale and other injurious insects.

Orders taken now for above trees in lots to suit.

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Every description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. Can be obtained at our Establishment Fresh, Pure and Genuine, at the Lowest Rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. (Seed and Tree Catalogue sent by Mail free on Application.)

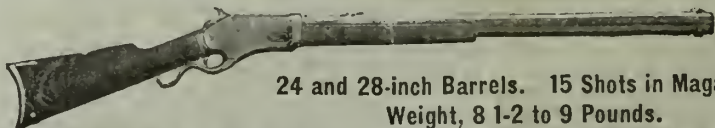
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Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for Sale Cheap, considering the quality of stock. For further information, send 3 cent stamp for new circular and price list to **R. G. HEAD, Napa, Cal.**

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**PETER SAXE & SON**, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

**PAGE BROTHERS**, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

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And make money by saving time and working your fallows before harvest. Our new size six-foot ORCHARD or VINEYARD HARROWS are provided with handles, rendering them as easily controlled as the Cultivators. These implements are acknowledged by all who are familiar with their work, to be the most practical for general use in the orchard or vineyard of any yet offered to the public. Manufactured only by

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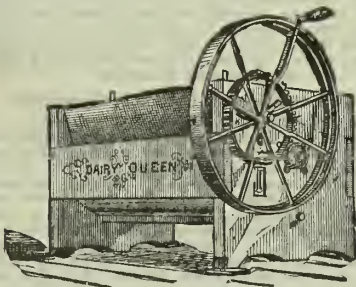
**D. C. & H. C. REED & CO.,** Kalamazoo, Michigan.

Beware of Infringements.

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Improved Churn and Butter-Worker.

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This Churn is the most perfect machine of its class ever made; the result of several years study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars, address the Inventor and Sole Patentee,

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## CLYDESDALE AND HAMBLETONIAN HORSES.

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The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.60 per gallon. For directions and testimonials apply to **FALKNER, BELL & CO.,**

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## Colonies of Pure Italian Bees,

In movable (10) frame hives prepared for shipping, \$12.50 each. J. D. ENAS, Sunnyside, Napa P. O., Cal.

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## Improved Patent Rotary Force Pump for Pumping Water by Horse Power.

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A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address **WILLIAM NILES**, Los Angeles, Cal.

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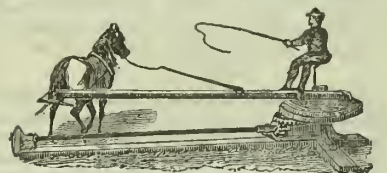
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This Mill grinds by corrugated friction rollers. It will grind eight tons to one-horse power per day, and one-half-horse power will run it and do work in proportion. It can be run by a common windmill. Any orders received by **W. C. STILES**, Nevada City, will be filled at once.

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The principle used attacks every spot and place in the fabric with force, and will cleanse the most delicate fabrics without injury. The rocking motion used takes but small power, so that a youth can do a washing. Strong, Durable and Ornamental. Agents Wanted on Liberal Terms. Address **JOHN D. WINTERS**, Davisville, Cal.



**Calvert's Carbolic SHEEP WASH.**  
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After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast.



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(Advertisement.)

## More About Water Supply.

The demand upon us for information has recently become so great that we are unable to reply to the letters daily received, and we have thus found it necessary to publish this additional circular, and to provide the means for meeting the demands of those who desire wells for domestic, stock and other purposes. As a large demand for the points used in the construction of the driven wells has recently arisen here, it has occurred to us that many of them are being put down without authority or license. The purchase of the point does not give the legal right to put down and use a well. The driven well is the invention of Col. Nelson W. Green, of New York, and is secured to him by letters patent No. 73,425, No. 4,372 (reissue) and No. 218,575. These patents have been exhaustively litigated in the United States Circuit Courts, in the States of New York, New Jersey, Massachusetts, Iowa and Minnesota, and in every instance decided in favor of Col. Green. Because of the immense value and utility of these inventions, combinations of large means and influence have been made at different times to defeat the collection of royalties and licenses. In one of these cases reported in 13th Blatchford, page 208, nineteen days were occupied by the most able counsel in the argument, and over three thousand printed pages of evidence and briefs were before the Court on behalf of the plaintiffs alone, and the expenses of the suit were over one hundred thousand dollars. The opinion was prepared by Judge Benedict, and completely established Col. Green's claim at every point. Judges Dillon, Nelson and Blatchford have all rendered opinions to the same effect; and in a hundred other cases, arising out of collateral matters, have the title and right of Col. Green been most fully sustained. Our object in making these statements is to

## Caution

All persons against the use of the driven well without authority, and to say that no person or persons have the legal right to put down or use a driven well in California without authority or license from us. We are the exclusive agents and attorneys of Col. Green, for the States and Territories west of the Rocky Mountains, and intend to enforce and protect his rights, as well as our own, to the uses and benefits of these patents. Should any person offer to put down a driven well for you, request him to exhibit his authority from us, and if he is not able to do this, you may rest assured that you will be required, sooner or later, to pay license to us.

To answer the constantly increasing demand for information, to guard against

## Fraud and Imposition,

And to supply the orders as fast as they may arrive, we have made arrangements with the well-known house of

## Huntington, Hopkins &amp; Co.

To keep on hand all materials necessary for the construction of these wells, which will be shipped by them on receipt of the price stated. Upon the receipt of such order by them, or as stated below, a full and minute letter of instructions as to the manner of constructing these wells, will also be sent, so that anyone of ordinary sense can put them down as perfectly as those especially engaged in the business. This letter of instructions—*together with the license*—will be sent with the goods. The articles sent will include everything necessary to a complete and perfect well, and also a pump of sufficient capacity to deliver 900 gallons of water per hour. Without this letter of instructions, and careful attention to the directions it contains, it is more than likely that the attempt to put down a satisfactory well would fail, and thus the goods furnished would prove a partial loss. In adopting these means of putting the driven well within the reach of everyone, the expenses of employing an expert, so called, are avoided, and the cost of the well is thereby so reduced as to be within the reach of everyone. One of these wells can be easily constructed by two men in two days—usually in one day—to a depth of 50 ft.

Where several wells are required in the same neighborhood, the work can be greatly facilitated by purchasing a few additional tools, costing not over \$20. These may be returned to us, if not broken, and one-half of the purchase price will be refunded.

When desired, we will send an expert, for cost of transportation and five dollars per day. Contracts for large water supplies will be entered into by us upon the most favorable terms—upon the basis of success or no pay.

Material for wells not more than 40 ft. in depth, including pump and license, will be sent for \$45. Wells of 50 ft. will be supplied for \$50, and for each foot over 50 ft., at 40 cents per ft.—to be sent, in all cases, before the goods are shipped.

In sending your order, it will be of advantage also to send us as full and accurate a description of the proposed location of the well, the distance—or supposed distance—of the water beneath the surface, the nature of the soil from the surface down—so far as known, the thickness of the different strata, and any other facts likely to be of advantage to you and us in writing our letter of instructions. In any case where, from the statement of facts, we are satisfied water cannot be obtained in satisfactory supply, we shall so state, and will immediately return your money.

We refer, by permission, to: Chas. Miller, Esq., of Huntington, Hopkins & Co., junction

of Bush and Market streets, Lambert & Green, Manufacturers of H. & L. Axle Grease, 144 N. 1st street, M. P. Holmes, Carriage Manufacturer, 327 and 329 Sutter street. Judge Robert Thompson, 76 Montgomery Block. R. H. McDonald, President of the Pacific Bank. All of San Francisco.

For circulars, and other information, address BARBCK, HOWARD & Co., 40 Merchant's Exchange, S. F., Cal.

NOTE.—No letter of instructions will be sent, except it is sent with the goods.

## Letter from Siegler Springs, Lake County.

The following extract from a private letter, lately received, speaks favorably of this noted resort:

PUBLISHERS OF RURAL PRESS.—Mr. Garratt, the manager here, will take me to Glenbrook to meet the stage on Monday morning, a week from to-day, when I will return to duty in my composing rooms. I have had a very pleasant time since I came here eight weeks ago, and Mr. Garratt has done first-rate by me. My swollen feet have got all right here, and I think the Springs have benefited me a great deal. I have also got rid of the cold which I had when I came. They are going to have a pleasant time on Thanksgiving Day at these Springs, and have invited a lot of company. We had quite a snowstorm a few days ago, but the snow soon disappeared, except in places on the sides of the mountains protected from the rays of a warm sun. I have been around a great deal since I came here, and have visited all the popular Springs around here, besides having had a good time gunning and fishing. A number of improvements are to be made this fall, including a large swimming bath, and invalids or others seeking health or enjoyment will not fail to be pleased with this popular resort. The table is supplied with the best the market affords, and Mr. Garratt and his staff and his wife spare no pains to make everything pleasant and comfortable for their guests. The hotel is kept open all the year round, the water proving equally efficacious at all times. Yours, ED. P. DEWEY.

## Fearless Threshing Machine.

We call the attention of farmers and threshermen to the advertisement of the celebrated Fearless Threshing Machine, elsewhere in this paper. Unparalleled honors have been bestowed upon this machine, at fairs and exhibitions, State, National and International; and, if universal victory at trials is evidence of superiority, then most assuredly was an ex-President of the New York State Agricultural Society correct, in saying of the Harrier Machines, "they are the best ever made." And, as equally good and reliable testimony has been borne times without number, persons desiring to purchase will do well to consult the manufacturer of the Fearless, Minard Harder, Cobleskill, N. Y.



Patent Agency and Newspaper Offices.

Dewey & Co.'s Patent Agency and the business offices of the Mining and Scientific Press, Pacific Rural Press, Pacific States Watchman, and the Fraternal Record, are now favorably situated at No. 252 Market St. Elevator entrance, No. 12 Front St., S. F.

## Business Offices and Sunny Rooms to Let.

We have some desirable rooms to let adjoining the offices of this paper which will be rented on favorable terms. Stair entrance, No. 252 Market St. Elevator, No. 12 Front St. Parties wishing offices, etc., will do well to call and see them. DEWEY & CO.

LIVERY STABLE IN OAKLAND.—We call the attention of farmers visiting Oakland, and others to hire teams or stable teams in Oakland, to the Hay, Sale, Boarding and Livery Stable of T. A. Cunningham, 1363 Broadway, Oakland. Mr. Cunningham (recently from Mayhew's where he still owns a ranch) has purchased a homestead in Oakland, and will do his best to give satisfaction to his new customers and old friends who may call.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

ST. JAMES HOTEL. First-class in every respect. When you go to San Jose, take free coach to the St. James. TYLER BEACH, Proprietor.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RICHOUT & Co., 10 Barclay St., N. Y.

We refer our readers to Mr. Benjamin Steacey's advertisement in our business columns.

## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Nov. 30, 1881.

Trade has been quiet this week, and little fluctuation, except a shading off because of the dullness. There is just at present an indisposition to operate in Wheat. Ships are plenty, but all are waiting for foreign markets to regain their strength. The latest statistics are still favorable to a continued good value in Wheat, owing to

shortage in the general supply. The latest from abroad is as follows:

LIVERPOOL, Nov. 29th.—Wheat: California spot lots, 10s 9d to 11s 1d. Cargo lots are quiet at 49s 6d for just shipped, 52s 1d for nearly due and off coast.

## Freights and Charters.

The following charters are reported: British ship *Morning Light*, 1,310 tons, Wheat to Cork, U. K.; £3 2s 9d—prior to arrival. German ship *Reland*, 1,800 tons, Wheat to Cork, U. K.; or Havre; £3 0s 3d—prior to arrival. Ship *John A. Briggs*, 2,110 tons, Wheat to Cork, for orders to Liverpool, Havre or Antwerp; £3 2s 6d—prior to arrival. British bark *Evangeline*, 562 tons, Wheat to Cork, U. K.; £3 2s 6d—prior to arrival. Ship *Nancy Pendleton*, 1,449 tons, Wheat to Cork, U. K., Havre or Antwerp; £3 5s—prior to arrival.

The chartered Wheat fleet in port has now a registered tonnage of 104,250, or a carrying capacity of 156,375 tons, or 3,127,500 cts, against 49,521 tons at the same time in 1880. There are also 1,395 tons loading at Wilmington, and 1,002 at San Diego. The disengaged tonnage in port has now a register of 18,721, or a carrying capacity of 28,081 tons, or 561,620 cts, against 5,454 tons at the same time in 1880. The tonnage now on the way to this port has a register of 308,810, against 203,650 at the same time in 1880 and 83,612 in 1879. Tonnage on the way to Oregon has a register of 69,532, while there are now in the Columbia river for Wheat, 26 vessels, of a register of 27,088.

## Eastern Wool Markets.

Boston, Nov. 29.—Wool is steady, and desirable grades are held with considerable firmness, but the demand is moderate, and we quote sales of Ohio and Pennsylvania XXX and XX and above at 42½¢ to 44¢, Michigan and Wisconsin fleeces, 40¢ to 42¢, and medium and No. 1 fleeces, 45¢ to 48¢, including Ohio and Michigan. Unwashed fleeces have been in fair demand, with sales 18¢ to 20¢ for carpet, 22¢ to 30¢ for fine and 25¢ to 30¢ for medium grades. Combed and delaine fleeces are steady, with sales at 45¢ to 50¢ for fine delaine, fine and No. 1 combeds, 30¢ to 32¢ for unwashed combeds. California Wool continues quiet, and sales are moderate. Fair Wool is as difficult to sell as ever, and can only be forced off at low prices. Pulled Wools are in fair demand and firm. Most sales of choice supers are made at 35¢ to 41¢, fair and good supers 40¢ to 43¢, and common supers, 30¢ to 31¢. Foreign Wool is quiet.

## The Foreign Review.

LONDON, Nov. 29th.—The *Mark Lane Express*, in its review of the British Grain trade for the past week says: Owing to the mild weather, young Wheat is growing very fast. Sowing is rapidly pushing forward in Scotland. The week's deliveries were of inferior quality. It is estimated that about half of the Wheat crop of 1881 has been already marketed. Trade was almost at a standstill, on account of millers refusing inferior samples. A reduction was generally necessary to effect sales. Foreign was unusually depressed throughout the week. The supply is liberal. An unusually large supply of Indian low grades at Liverpool has rather depressed the sale of California sorts. Off-coast trade was inanimate. Of the seven cargoes, four are held. The forward market was dull and cheaper. Floating bulk considerably increased, about half being American. Of Flour, all but the best grades were cheaper, and met with slow sale for foreign. Owing to the moderate supply rates were maintained. Sales, however, were dull and slow. Barley and Oats were in dull inquiry. Cheaper foreign Barley was unchanged. The trade has not improved. Foreign Oats were exceedingly dull and decidedly weaker, although the supply was small. Corn was generally weaker. Mixed American closed at 3½¢, cheaper in London and Liverpool. Sales of English Wheat during the week were 52,401 quarters at 44s 1d per quarter, against 4,601 quarters 45s 5d per quarter for the corresponding week of last year.

## Eastern Grain and Provision Markets.

CHICAGO, Nov. 26th.—On 'Change events have not been numerous or exciting, and except in cash Oats, there has been no very decided movement in any article. The general feeling has been one of weakness, but the results have not been any material reduction in prices, for what was lost rapidly regained slowly, the figures prevailing and at the close are firm. There seems to be a very strong combination crowding the shorts in November and December Oats, and as a result prices have advanced nearly three cents, except for the deferred options. Sales of January option were made as follows: Wheat, \$1.24½ to \$1.25½; Corn, 57½¢ to 59¢; Oats, 42¢ to 43¢; Pork, \$10.90 to \$11.70; Lard, \$11.02½ to \$11.27½. The receipts of Flour and Grain during the week were as follows: Flour, 56,000; Wheat, 189,000; Corn, 538,000; Oats, 199,000; Rye, 14,000; Barley, 166,000. The shipments were, of Flour, 44,000; Wheat, 146,000; Corn, 887,000; Oats, 111,000; Rye, 15,000; Barley, 83,000. The receipts for the same time last year were: Flour, 112,000; Wheat, 557,000; Corn, 993,000; Oats, 363,000; Rye, 31,000; Barley, 175,000. Shipments were: Flour, 76,000; Wheat, 189,000; Corn, 626,000; Oats, 246,000; Rye, 20,000; Barley, 60,000. The receipts were less than half those of last year in nearly every article, but they are not equal in the aggregate. The shipments were about the same as during 1880. At this time last year Wheat closed for cash at \$1.09; Corn, at 42¢; Oats, 34½¢ to 35¢; Rye, 91¢; Barley, \$1.03 to \$1.03½. Compare with these prices those of to-day, namely: Wheat, \$1.24½; Corn, 58½¢; Oats, 43¢; Rye, 97¢; Barley, \$1.04½, and there seems to be a condition that is only explained either by the fact that there is a short crop all round, or that notion is firmly fixed in the heads of farmers.

New York, Nov. 28th.—Wheat is steady, but at the extreme close the market was weak. Exporters are doing very little. Barley is quiet.

## London Wool Sales.

LONDON, Nov. 26th.—At the Wool sales to-day, 7,480 bales were sold of Victorian, Queensland and Cape. A good spirit was manifested and full rates were obtained.

## New York Dried Fruit Markets.

NEW YORK, Nov. 25th.—Raisins are 10¢ higher; layers are now held at \$2.60; London layers, \$2.50; Valencia, 9½¢.

BAGS—Bags are unchanged.

BARLEY—Barley is quiet and steady, perhaps a shade lower than a week ago. Sales are few, 250 sds Feed brought \$1.45.

BEANS—Peas and Small White Beans are 25¢ lower per ctl. Other kinds are unchanged.

CORN—Yellow is still running at \$1.45 per ctl; 1,000 sds large and small going at that price on Tuesday. White is quoted up to \$1.50, but it is nominal.

DAIRY PRODUCE—Fancy Butter is not so plentiful this week, but prices are unchanged. There is plenty of ordinary stock, and some sells down to 32½¢ per lb. Cheese is unchanged.

EGGS—Eggs are cheaper and more abundant, especially by rail. The price for choice California is 5 to 7½¢ lower per dozen.

FEED—There is Bran from country mills to be bought as low as \$16 to \$17 on the wharves.

FRESH MEAT—Beef and Pork are higher, as shown in our table.

FRUIT—Grapes and Peas have sold lower this week. A few Strawberries go at \$3 to \$12 per chest. Oranges, Lemons and Limes are lower.

HOPS—Hops are unchanged here and in New York (by telegraph) are reported dull and nominal.

OATS—The interest in Oats continues, and the demand is active. We note sales: 235 sds Oregon and 150 sds Washington Territory, \$1.65; 1,500 and 700 sds Washington, 300 sds Oregon and 500 sds Bay, \$1.60, and 500 sds common, \$1.57½.

ONIONS—There is a great range in quality, some selling as low as 50¢ per ctl, and the best.

POTATOES—There is little change in the market this week. Some choice varieties have gone a little higher, but the common lots, Early Rose and River Reds have declined.

PROVISIONS—The market is in better shape this week, but prices are not yet changed.

POULTRY AND GAME—Turkeys were sadly in excess last week, and many were sacrificed. There is now a tendency toward reaction. Hens are higher. Game and Ducks are abundant and low.

VEGETABLES—There is no change, except that Tomatoes are lower.

WHEAT—The ruling rate is about 5¢ lower, but there is little selling, and quotations liable to change with a renewed disposition to invest.

WOOL—The railroad has reduced its overland rate on Wool a little, and there is more interest in the trade. Prices are unchanged as yet.

## Domestic Produce.

## WHOLESALE.

WEDNESDAY M., November 30, 1881.

BEANS & PEAS.		Peanuts.....		Peanuts.....	
Bayo, cts.....	42 00	Filberts.....	14 @ 15	ONIONS.	
Butter.....	3 00 @ 3 10	Red.....	— @ —	POTATOES.	
Castor.....	3 50 @ 4 00	Silver Skin.....	50 @ 90	Early Rose.....	85 @ 90
Pea.....	3 00 @ 3 25	Oregon.....	— @ —	Petaluma, cts.....	1 20 @ 1 25
Red.....	1 75 @ 1 85	— @ —	— @ —	Tomatoes.....	1 20 @ 1 30
Large White.....	1 75 @ 1 85	— @ —	— @ —	Humboldt.....	1 30 @ 1 35
Small White.....	3 00 @ 3 25	— @ —	— @ —	Kidney.....	1 00 @ 1 20
Lima.....	4 75 @ 5 00	— @ —	— @ —	Peachblow.....	1 00 @ 1 20
Field Peas, h'l eye 50 lb	50 @ 75	— @ —	— @ —	Jersey.....	1 30 @ 1 35
do, green.....	2 50 @ 2 75	— @ —	— @ —	Cuffey Cove.....	25 @ 30
BROOM CORN.		— @ —	— @ —	River, red.....	75 @ 85
Southern.....	3 @ 6	— @ —	— @ —	Chile.....	— @ 25
Northern.....	4 @ 6	— @ —	— @ —	do, Oregon.....	85 @ 1 00
CHICKORY.		— @ —	— @ —	Sweet.....	1 25 @ 1 37½
California.....	4 @ 41	— @ —	— @ —	POULTRY & GAME.	
German.....	61 @ 7	— @ —	— @ —	Hen, doz.....	5 00 @ 6 00
DAIRY PRODUCE, ETC.		— @ —	— @ —	Roosters.....	4 00 @ 5 00
Cal. Fresh Roll, lb.....	32½ @ 35	— @ —	— @ —	Broilers.....	3 00 @ 4 00
do Fancy Brands.....	— @ 37½	— @ —	— @ —	Ducks, tame, doz.....	5 50 @ 6 75
Pickle Roll.....	31 @ 35	— @ —	— @ —	Mallard.....	2 00 @ 2 50
Parkin, new.....	32½ @ 35	— @ —	— @ —	Spring.....	1 25 @ 1 50
Eastern.....	20 @ 25	— @ —	— @ —	Turkey.....	75 @ 1 00
New York.....	— @ —	— @ —	— @ —	Wildgeese.....	50 @ 1 12½
EGGS.		— @ —	— @ —	Geese, pair.....	1 50 @ 2 00
Cheese, Cal., lb.....	13 @ 15	— @ —	— @ —	Wild Gray, doz.....	2 50 @ 3 00
Cal. Fresh, doz.....	40 @ 45	— @ —	— @ —	White do.....	1 50 @ 1 75
Ducks.....	35 @ 38	— @ —	— @ —	Turkeys.....	12½ @ 14
Oregons.....	35 @ 38	— @ —	— @ —	do, Dressed.....	12½ @ 14
Eastern, by express.....	— @ 37½	— @ —	— @ —	Turkey Feathers.....	5 @ 10
Pickled here.....	— @ —	— @ —	— @ —	Utah.....	10 @ 20
Utah.....	— @ 40	— @ —	— @ —	Snipe, Eng.....	— @ 50
FEED.		— @ —	— @ —	do, Common.....	50 @ 60
Bran, ton.....	16 00 @ 19 00	— @ —	— @ —	Quail, doz.....	— @ 75
Corn Meal.....	— @ 22 00	— @ —	— @ —	Rabbits.....	1 00 @ 1 50
Hay.....	9 00 @ 15 00	— @ —	— @ —	Michigan.....	2 00 @ 2 25
Midlings.....	— @ 25 00	— @ —	— @ —	Venison.....	— @ 7
Oil Cake Meal.....	— @ 25 00	— @ —	— @ —	PROVISIONS.	
Straw, bale.....	62½ @ 67½	— @ —	— @ —	Cal. Bacon, extra	— @ 15
FLOUR.		— @ —	— @ —	clear, lb.....	14½ @ 15
Extra, City Mills.....	5 25 @ 5 62½	— @ —	— @ —	Medium.....	13 @ 14
do, Country Mills.....	4 75 @ 5 00	— @ —	— @ —	Light.....	14 @ 15
do, Oregon.....	4 75 @ 5 12½	— @ —	— @ —	Lard.....	13 @ 17
do, Walla Walla.....	4 50 @ 5 00	— @ —	— @ —	Cal. Smoked Beef.....	11½ @ 12½
Superfine.....	3 50 @ 4 25	— @ —	— @ —	Shoulders.....	9 @ 10½
FRESH MEAT.		— @ —	— @ —	Hams, Cal.....	13 @ 13½
Beef, 1st quality, lb.....	6 @ 7	— @ —	— @ —	Dupe's.....	16 @ 17
Second.....	4 @ 5	— @ —	— @ —	Whittaker.....	16 @ 17
Third.....	4 @ 4½	— @ —	— @ —	Royal.....	16 @ 17
Mutton.....	4 @ 5	— @ —	— @ —	Stewart.....	16 @ 17
Spring Lamb.....	6 @ 7	— @ —	— @ —	Eastlake.....	16½ @ 17½
Pork, dressed.....	5 @ 6	— @ —	— @ —	SEEDS.	
Dressed.....	5 @ 6	— @ —	— @ —	Alfalfa.....	12 @ 13
Veal.....	6 @ 7	— @ —	— @ —	do, Chile.....	— @ —
Milk Calves.....	7 @ 8	— @ —	— @ —	Canary.....	34 @ 4
do, choice.....	— @ 8½	— @ —	— @ —	Clover, Red.....	14 @ 15
GRAIN, ETC.		— @ —	— @ —	White.....	45 @ 50
Barley, feed, ctl.....	41 @ 50	— @ —	— @ —	Cotton.....	— @ 30
do, Brewing.....	1 55 @ 1 62½	— @ —	— @ —	Flaxseed.....	2½ @ 3½
Chevalier.....	1 55 @ 1 57½	— @ —	— @ —	Hemp.....	— @ 5
do, Coast.....	1 42 @ 1 47½	— @ —	— @ —	Italian Rye Grass.....	25 @ —
Buckwheat.....	— @ 60	— @ —	— @ —	Perennial.....	10 @ 12
Corn, White.....	45 @ 50	— @ —	— @ —	Millet, German.....	7 @ 10
Yellow.....	— @ 45	— @ —	— @ —	do, Common.....	7 @ 10
Small Round.....	— @ 45	— @ —	— @ —	Mustard, White.....	12½ @ 24
Oats.....	1 50 @ 1 62½	— @ —	— @ —	Brown.....	24 @ 3
Milling.....	1 55 @ 1 75	— @ —	— @ —	Rape.....	21½ @ 24
Rye.....	2 35 @ 2 42½	— @ —	— @ —	Ky Blue Grass.....	20 @ 25
Wheat, No. 1.....	1 67½ @ 1 70	— @ —	— @ —	2d quality.....	16 @ 18
do, No. 2.....	1 60 @ 1 65	— @ —	— @ —	Sweet V Grass.....	— @ 75
do, No. 3.....	1 45 @ 1 50	— @ —	— @ —	Orchard.....	20 @ 25
Choice Milling.....	— @ 70	— @ —	— @ —	Red Top.....	— @ 15
HIDES.		— @ —	— @ —	Hungarian.....	8 @ 10
Hides, dry.....	18 @ 18½	— @ —	— @ —	Lawn.....	30 @ 40
Wet salted.....	9½ @ 10½	— @ —	— @ —	Mosquit.....	10 @ 12
HONEY, ETC.		— @ —	— @ —	Timothy.....	9 @ 10
Beeswax, lb.....	23 @ 25	— @ —	— @ —	Crude, lb.....	71 @ 74
Honey in comb.....	15 @ 20	— @ —	— @ —	Refined.....	94 @ 10
Extracted, light.....	9 @ 10	— @ —	— @ —	FEAL, ETC.	
do, dark.....	71 @ 9	— @ —	— @ —	San Joaquin.....	11 @ 14
HOPS.		— @ —	— @ —	do, Late.....	13 @ 15
Regon.....	24 @ 25	— @ —	— @ —	Southern Fall.....	11 @ 13
California, new.....	25 @ 26	— @ —	— @ —	do lambs.....	13 @ 14
ash Tree.....	25 @ 26	— @ —	— @ —	Northern, free.....	18 @ 21
Idaho Hops.....	— @ —	— @ —	— @ —	do, defective.....	14 @ 16
NETS—Jobbing.		— @ —	— @ —	Montana, free.....	16 @ 18
Alnuts, Cal.....	10 @ 11	— @ —	— @ —	do, slightly.....	13 @ 15
do, Chile.....	74 @ 8	— @ —	— @ —	Humboldt & Men-	— @ 21
Almonds, do.....	14 @ 15	— @ —	— @ —	docino.....	18 @ 21
Soft shell.....	14 @ 15	— @ —	— @ —		
Brazil.....	10 @ 11	— @ —	— @ —		
beans.....	13 @ 15	— @ —	— @ —		



## Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending November 29, 1881.  
HIGHEST AND LOWEST BAROMETER.

Nov. 23	Nov. 24	Nov. 25	Nov. 26	Nov. 27	Nov. 28	Nov. 29
30.254	30.237	30.230	30.227	30.220	30.152	30.050
30.185	30.167	30.174	30.170	30.152	29.995	29.991

MAXIMUM AND MINIMUM THERMOMETER.

62	61	63	62	59	58	60
47	48	49	49	51	52	50

MEAN DAILY HUMIDITY.

60.7	61.7	57.3	61	76.3	89.7	58.7
N	N	W	NW	W	SE	NE

WIND—MILES TRAVELED.

134	120	83	143	109	152	107
Clear.	Clear.	Clear.	Fair.	Cloudy	Cloudy.	Clear.

RAINFALL IN TWENTY-FOUR HOURS.

Total rain during the season, from July 1, 1881, .12 inches.

Gold, Legal Tenders, Exchange, Etc.  
(Corrected Weekly by SUTRO & Co.)

SAN FRANCISCO, November 30, 3 P. M.  
SILVER, 1.  
GOLD BARS, \$90@910. SILVER BARS, 10@18 ¢ cent, discount.  
EXCHANGE on New York, 5@10 premium; London, 49@49 1/2; Paris, 5.20 francs @ dollar; Mexican dollars, 91@92 1/2.  
New York (4 per cent), 117 1/2.

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J. P. HULME.

**Wool and Grain**  
Commission Merchants.

10 Davis Street, near Market,  
SAN FRANCISCO.

Liberal advances made on all consignments, and prompt personal attention given to all sales.

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Personal attention given all consignments.  
Special attention given to Wool, Grain, and Country Produce.

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**Grangers' Business Association of California.** Principal place of business, No. 38 California Street, in the City and County of San Francisco, State of California.

Notice is hereby given that, at a meeting of the Directors of said Corporation, held on Monday the 21st day of November, A. D. 1881, an Assessment has been levied of ten per cent (10%) upon the Capital Stock of said Corporation amounting to the sum of Two and one-half (\$2.50) Dollars upon each and every share of said Capital Stock, payable December 26th, 1881, to Amos Adams, the Secretary of said Corporation, at his office, No. 38 California Street, in the City and County of San Francisco, State of California.

Any stock upon which this assessment shall remain unpaid on the 26th day of December, A. D. 1881, will be delinquent, and advertised for sale at public auction, and unless payment is made before, will be sold on Monday, the 17th day of January A. D. 1882, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

AMOS ADAMS,  
Secretary of the Grangers Business Association of California. Office—No. 38 California St., San Francisco, Cal.



Is the only machine that received an award on both Horse-power and Thresher and Cleaner, at the Centennial Exhibition; was awarded the two last Gold Medals given by the New York State Agricultural Society on Horse-powers and Threshers; and is the only Thresher selected from the vast number built in the United States, for illustration and description in "Appleton's Cyclopaedia of Applied Mechanics," recently published, thus adopting it as the standard machine of this country. Catalogue sent free. Address, MINARD HARDER, Cobleskill, Scho. Co., N.Y.

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25¢ YEAR 1882 16¢ YEAR

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**Thirty or Forty Bushels of**  
**Peach Pits,**

Of the present season's growth, sound and in good condition. Parties having them to offer will please write, stating quantity and price, to

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CONTAINS 113 ROOMS.

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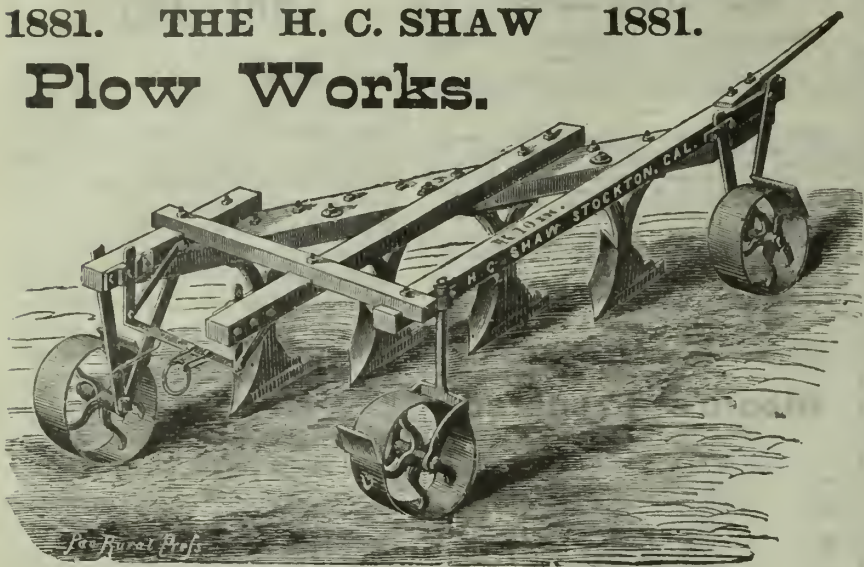
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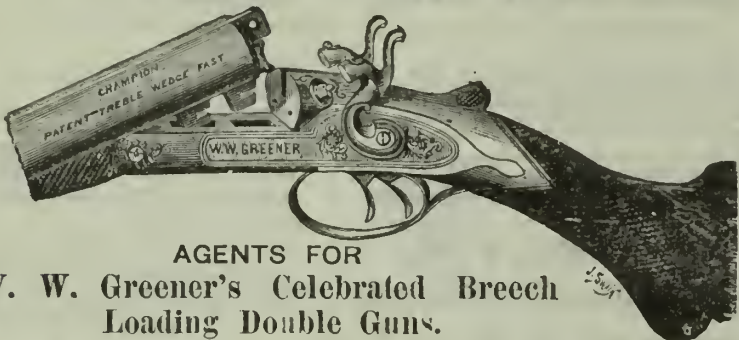
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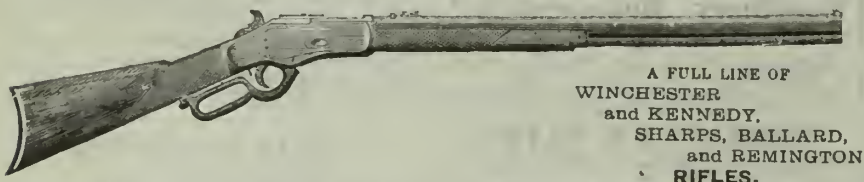
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This Harrow is guaranteed to do double the work of  
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(The Only Genuine.) Received 1st Premium State Fair,  
Electro-Magnetic Belts, New Style, \$10; Electro-Magnetic Belts,  
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On the line of the Southern Pacific Railroad and adjoining Fresno City and the Central Colony.  
Has the most favorable location of any Colony, as well as other superior advantages. Abun-  
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## Larroeche's Fertilizer.

It is manufactured solely of Bones and residues of Meats  
dried and pulverized in such manner that all the Calcium,  
Phosphates, Carbonates, Nitrates and Potassium, which are  
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Stable manures require frequent irrigation in order to  
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It checks the propagation of insects and luxuriates the  
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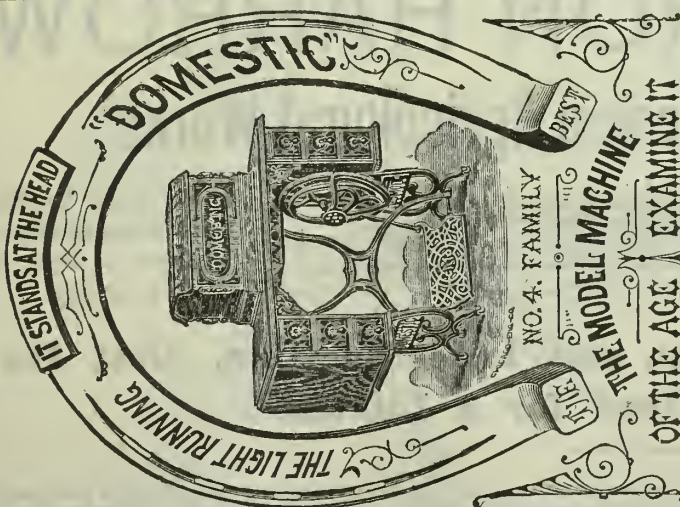
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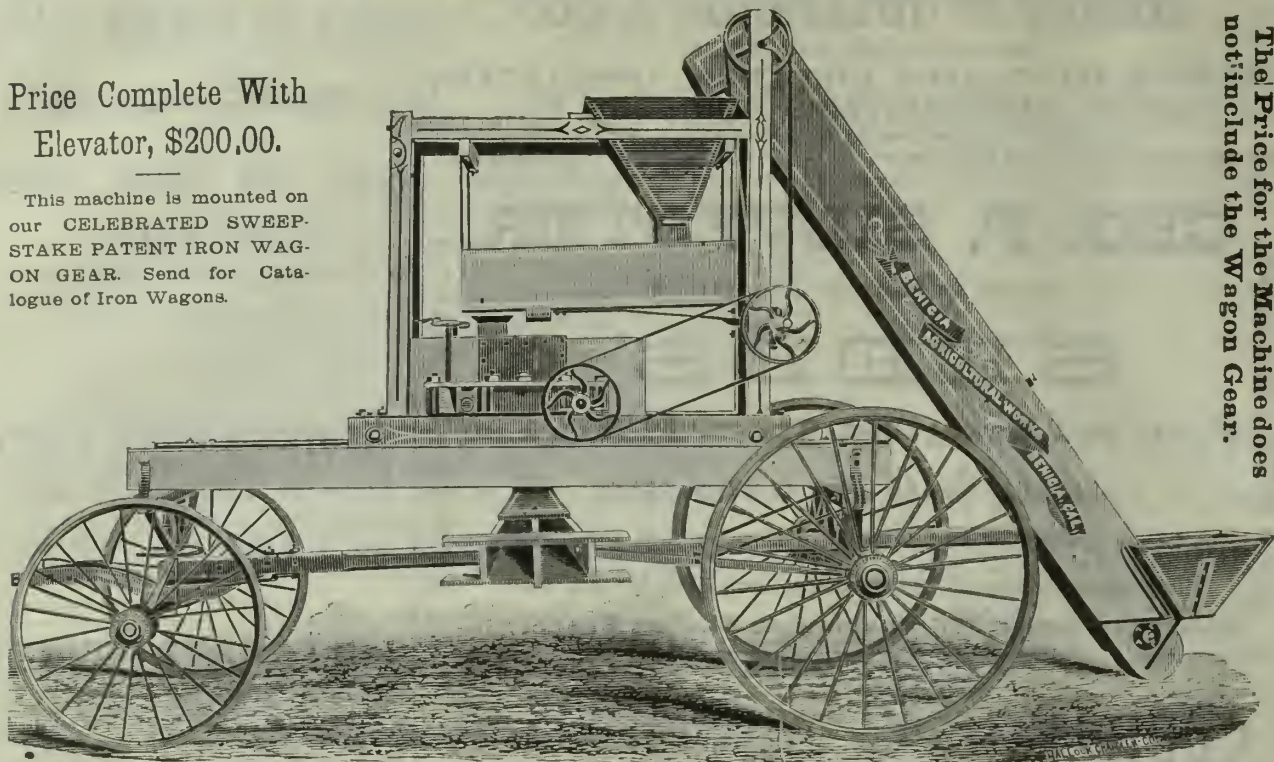
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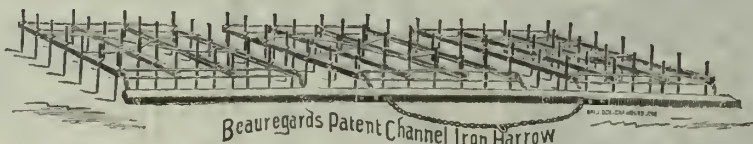
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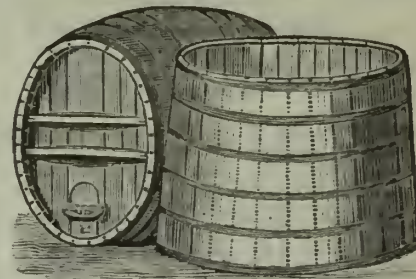
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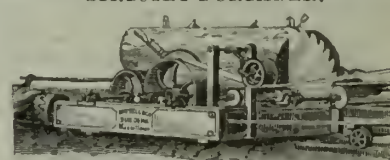
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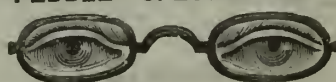
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# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, DECEMBER 10, 1881.

Number 24

## A Moth-Catching Plant.

At the last regular meeting of the California Academy of Sciences, Robert E. C. Stearns read the following paper "On the Botanical relations of *Physianthus albens*, the Structure of its flowers and their peculiarities as an Insect Trap."

The plant to which your attention is called is one of a highly interesting group; and this group is also related to many other groups which possess various important economical characters. Some of these have been known for a long time; others invite inquiry and afford a peculiarly fertile field for the investigations of the student in organic and pharmaceutical chemistry.

The species before us may be seen in many gardens and houseyards in and around San Francisco and Oakland. At Berkeley upon the University ground and the private grounds in the neighborhood, its rapid growth, hardy habit, clean shining leaves and sweet scented flowers, making it a favorite plant for ornamental purposes. The botanical name (I know no other) is *Physianthus albens*; it is a native of Buenos Ayres, and has been introduced as far north and east as Massachusetts, where it thrives as well it does here; it has also been noticed there as a moth-trap.

The genus *Physianthus* is included by botanists in the natural order of *Asclepiadaceae*, of which some of the forms are popularly known as *Milkweeds* on account of the character of the sap, which exactly resembles milk.

Before proceeding farther with the milkweeds I will mention the principal related large groups like the *Phloxes* (*Polemoniaceae*), ornamental chiefly, and natives of temperate latitudes, principally in North and South America; the *Dodders* (*Cuscutaceae*), parasitic in their habits, and found in the temperate parts of both hemispheres, and unfavorably known here in California as a parasite on the *Alfalfa*, around the stems of which it winds its fatal thread and strangles the plant by preventing the upward flow of sap. The bindweeds (*Convolvulaceae*) popular in some of its species by reason of their showy flowers; otherwise known by the sweet potato; from this group also Jalap scammony and the oil of rhodium are obtained. The plants abound in tropical, but are scarce in cold climates. The *Sebestens* (*Cordiaceae*), mostly tropical forms, in both hemispheres, with panicle flowers and drupaceous fruit, some species of which are edible. The *Deadly Nightshades* (*Atropaceae*), herbs or shrubs, with a wide distribution, include tobacco, henbane, mandrake, etc. The *Nightshades* (*Solanaceae*): Among these are found favorite vegetables, like the potato and tomato, also the egg plant and other useful forms. The *Olive* (*Oleaceae*), mostly inhabitants of the temperate zones, and principally known by the olive, whose drooping fruit is so largely used as human food, and otherwise familiar to us by the common lilac of our garden, also by the flowering ash and privet.

Having briefly noticed the principal groups related more or less directly to the *Asclepiads*, or milkweeds, let us now return to this latter group, with which our moth-trapping flower is more intimately connected.

Baird says: "They are chiefly shrubs, usually possessing a milky juice, and often twining. They inhabit, for the most part, warm and tropical regions, though there are many natives of northern latitudes. In general, they have acrid purgative, emetic and diaphoretic properties. The milky juice is usually bitter and acrid, but occasionally it is bland, and is used as milk, as in the case of *Gymnema lactiferum*, the cowplant of Ceylon, which the Cingalese use for this purpose. Many of the species of the genus *Asclepias* possess powerful medicinal properties. The roots of *A. curassavica*, or bastard ipecacuan of the West Indies are emetic, and are frequently sent to England as ipecacuanha. The roots of *A. tuberosa*, or tuberous swallowwort of North America, are famed for their diaphoretic qualities, and are used in Virginia in inflammatory diseases. The sap of *A. Syriaca*, or Syrian swallowwort, is recommended as an expectorant. It is white, and contains a considerable quantity of caoutchouc. The nec-

raries or leaflets of the crown act as fly traps. The seeds of this and some other species are covered with down, which is well adapted for stuffing mattresses and pillows. They are hence sometimes called cotton plants. A good many of them are cultivated in Europe for their beauty. Their flowers have curious horned processes added to the corolla. The species of the genus *Stapelia* are singular-looking plants, forming at the Cape of Good Hope a stunted, deformed vegetation in the form of leafless succulent plants resembling some of the *Cactuses* and *Euphorbias*. The flowers are often very fetid, and are consequently called carrion flowers.

The leaves of *Solenostema argel* are used in Egypt to adulterate senna, and the fragrant roots of *Hemidesmus indicus* are used in Madras as a substitute for sarsaparilla, under the name of

From the foregoing glance at the various properties of the milkweeds, of which much more might be said, the structural peculiarities of their blossoms which are curious through the connection of the stamens with the stigma and the cohesion of the pollen into wax-like or granular masses, which are attached in pairs to five glands of the stigma, and removed from the anther-cells usually by the agency of insects (Gray id.), and equally or more curious as forming in the species presented herein, a simple but effective insect-trap, especially for certain moths.

A year ago this month I noticed upon the flowers of this plant *Physianthus* or *Arauja albens* growing in the flower-bed along side of the front porch to my house at Berkeley, and running up on the porch-rail, several moths fluttering as if trying to get away from the blos-

ings of the plant, its flowers and the various parts of the flower, so as to show the construction of the trap and related parts, I sent specimens of the moth East to my friend, Dr. Packard for identification. In the meantime, I learned that *Physianthus* as a moth-trap had long before (*American Naturalist*, Jan. 7 and Feb. 7, 1880) been noticed, and by several parties at various times; more recently in Providence, R. I., Springfield and North Woburn, Mass., and notes of these observations had been published from time to time.

The matter, however, was new to me, and the investigation an ample reward for the trouble. It is none the less interesting because previously made known—though for this reason I have not brought it to the attention of the Academy before. My interest in the subject has also been revived by the recurrence of the moth season, and consequently additional and recent observations. On Saturday last (Nov. 5th) I detected the first entrapped moths of the season, nine in number, some dead, others apparently just caught. On Sunday (yesterday) Nov. 6th, eight or nine more, some just alive, others just caught; this morning (Monday, Nov. 7th,) five more; (Tuesday, Nov. 8th, windy and cold day,) two; (Wednesday, Nov. 9th, windy and cold,) two.

In figure 1 we have a spray of *Physianthus*, which gives an idea of the general aspect of the plant, its leaves and flowers.

In figures 2 and 3, (see page 389) the flowers with the moth upon them showing a back and also a side view of the insect.

In figure 4 the perianthium or perigonium constituting a single flower or blossom.

5 The staminal mass or corona staminea,  $\alpha$  is the anther wing,  $\beta$  exterior spurs to anther.

6 Gynecium, showing ovaries  $\alpha$ , stigma  $\beta$ , pollen-masses  $\gamma$ , and glands  $\delta$ .

7 Anther, showing wings  $\alpha$ , and exterior spur  $\beta$ .

8 Side view of anther, showing wings  $\alpha$ , and spur  $\beta$ .

9 Oral view, showing how the spurs head in and up against the winged anthers, and the edges of the wings of the anthers in pairs.

On turning to the figure of the flower it will be noticed that it is trumpet-shaped, flaring at the mouth where the petals divide then uniting and forming a tube which is swollen into a bulbous form where the corolla joins on to the calyx.

Now this exterior tube being pulled off reveals the anthers with their exterior spurs, pressing against the gynecium and hiding the ovaries and the pollen.

The moth in pursuit of the nectar, which is inside of the anthers near the top has to thrust the proboscis down the tube of the flower, describing a curve between the exterior of staminal crown or mass and the inside of the bulb of the perigonium, then push the proboscis upward between the edges of the anther wings, as far as may be necessary to reach the pollen masses, and after sucking until the nectar is exhausted or hunger is satisfied, attempts to withdraw the proboscis from the flower; but the edges of the two anthers, between which the proboscis has been thrust, being rigid and angular, act as a vise, or in the same way that a boot-jack holds a boot, and the more the moth pulls the tighter the grip; so unless the flower has reached that degree of maturity, so that it has begun to wilt before the vitality of the moth is too far exhausted, escape is impossible. When its flower begins to wilt the tissues are so softened that a vigorous moth may sometimes escape.

The species of moth which is most frequently trapped in the East is *Plusia precatonis*, and it is an interesting fact that the species which I have detected at Berkeley, as the victims of this plant, belong to the same genus though not of the same species.

In a single instance I have also obtained a butterfly of the species known as *Pyrausta caryae*.

Other insects, ants, beetles, etc., are often found in the nectar of this flower, but not as prisoners.

The planting of large vineyards in Shasta county is confidently expected by the people of that section.



FIG. 1.—LEAVES AND FLOWERS OF PHYSIANTHUS SLIGHTLY REDUCED.

country sarza. The celebrated Hindoo medicine, mudar, used as a diaphoretic in India, is procured from the bark of the root of several species of *Calothropis*, especially *C. gigantea*. It contains a principle called Mudarine, which gelatinizes upon being heated and becomes fluid on cooling. Some of the species of the genus *Cynanchum* act as purgatives; the *C. monspeliacum* furnishing what is called the Montpellier scammony, and being used to adulterate the true scammony. Some of the genera furnish species which yield a dye said to be similar to indigo. The *Hoya carnosia* has a peculiar, waxy-looking blossom, and is called the wax flower. The silk plant of Madeira, *Gomphocarpus fruticosus* belongs to this family.

"The juice of *A. tuberosa* (pleurisy root, butterfly weed) is not milky. In all it is bitter and acrid, and contains *Caoutchouc*. The roots, etc., are diaphoretic, emetic or cathartic. The inner bark yields abundance of very long and fine, extremely strong fibers."

some; upon careful examination I found they were in some way fastened to the flower, and were held by the proboscis, of which the tip was submerged or hidden in the interior of the blossom. Besides the living moths I found several dead ones, also hanging by the proboscis which was attached to the flower in some way. Knowing that so many of the plants of this group are poisonous, at first thought it occurred to me that the insects might be poisoned or perhaps intoxicated by some peculiar property of the nectar.

Supposing that I had made a new discovery, as to the insect-catching, or, more properly, moth-trapping peculiarity of *Physianthus*, I dissected blossoms to which moths were attached, and found that whether the nectar was harmful or otherwise, the trapping was wholly mechanical and due to the peculiar form of the anthers. After making draw-

\*Gray's Structural and Systematic Botany.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—EBS

## Levee Building with Slickens.

EDITORS PRESS:—I was surprised at Mr. Sneath's answer to my article in your issue of the 19th inst. I did expect he would read the article carefully and if he found any faults and discrepancies to point them out, but I did not think he would stigmatize it, as a whole, as "unfair, and so highly intemperate in language that anyone might well be ashamed to put his name to it," without giving his grounds for so doing. By such a reply it seems to me he is only exposing to the light of public opinion the weakness of his position and his inability to prove any one of the numerous assertions he has lately made.

In his note of the 26th inst., Mr. S. endorses his views of the 5th inst., and says that he represents 13,000 acres of swamp land, the value of which would be greatly enhanced by a covering of two ft. of slickens. With all due deference I must express myself as not believing that the gentleman means what he says. Such statements made a year ago might have gained some credence among people who were unacquainted with the ravages of slickens, but they are altogether out of place after the report of the committee from the Chamber of Commerce. This committee of representative men from San Francisco went up and made a careful examination of the effects and causes of slickens, and not only corroborated the existing reports and expressed themselves as surprised at the general destruction wrought by slickens, but laid the responsibility at the door of the hydraulic miners; and yet Mr. S. has the hardihood, after being over part of the same ground and viewing the same scenes of destruction, to assert that the slickens benefited the soil, and that he had 13,000 acres of land which he would like to have covered two ft. deep with it.

Mr. S. expresses his surprise that farmers "living along the streams that are being filled up have not utilized the slickens in building levees and filling up waste places." Any man could not have gone over the ground that Mr. S. did without seeing that slickens had been put to both of these uses—to the first by man, and the second by nature. As if by accident Mr. S. has hit upon the one use to which slickens can be put without direct loss, viz.: levee building; but even here it is the poorest material to be had for that purpose, on account of the ease with which it washes. The only practical way so far heard of to build these levees is by means of scrapers, and this entails an expense of from 10 to 35 cents per cubic yard moved. Only last year the State paid out about \$350,000 for this kind of work, and private individuals have sunk millions more in the same unremunerative way.

As to utilizing the slickens to fill up "waste places," Mr. S. must have perceived that Mother Nature has spared no pains to fill up the whole valleys of the Yuba, Feather and Bear rivers, as though they were all waste places. Her endeavors have been successful to such an extent that we have a mammoth waste place of 50,000 square acres (about 80 square miles), caused solely by this slickens which Mr. S. so wishes to have on his land. Instead of there being a few waste places needing filling, two-thirds of the valleys I spoke of are all waste places, and I defy Mr. S. or anyone else to point out one spot between Sacramento and Marysville which can compare in natural barrenness and worthlessness with the worthlessness of any one spot in this tract of 50,000 acres of slickens-covered soil.

It seems like a hopeless task for me to try to show Mr. S. why his suggestions are so impracticable; more so as he seems to be one of those men who say "it's so and cannot be otherwise." I think, however, I can make it clear even to Mr. S., if he desires to know, why the river was never conducted out of its channel to build levees by the deposition of its mud. The first reason is because it is highly impracticable. What I mean by impracticable is that the cost of building levees by such means would be inordinately great as compared to the cost of building them with scrapers. Second—It is impossible because the levees could not be built high enough in one year to hold the water, and they would be completely destroyed by the spring freshets. Suppose the deposit in the river is 3 ft. each year (which the miners will not admit is the case), and we could divert all this material to the lands adjacent the river, which, by-the-by, are from 8 ft. to 20 ft. below the bed of the channel, how are you going to get the water started down a narrow channel adjoining the old one without building levees to confine it there? I think I hear my friend Sneath say, "send your wives and daughters, your maid servants and (China) men servants out with brooms and plows to keep the water back till it will select and maintain a bed for itself." Supposing now we could keep the water adjacent to the old channel for a whole summer, and it filled up three ft. on each side, which is an abnormal supposition, we would still have the tops of the levees from 3 to 15 ft. below the bed of the old channel, and must go to work and strengthen the old levees to carry the water until next summer, when we

can continue our "levee building with slickens."

The third objection to diverting the stream to each side of the bed for diverting new channels, is that it would be literally "jumping from the frying-pan into the fire." At present there is only a narrow strip of original soil left adjoining the river channel, of from 100 yards to 2 miles in width, and Mr. S. proposes that the farmer eject the river from its bed and thus destroy this remnant of virgin soil they have left. Let us calculate the value of the land which would be destroyed. If we have two channels of 25 rods in width, each linear mile would contain 100 acres. Take 20 miles for the Yuba, as many more for the Feather, 15 for Bear, 20 for Sacramento above Marysville, 150 from Marysville to Benicia, and 50 for the American rivers; in all, 275 linear miles, containing 27,500 acres of land, which we will value at \$100 per acre. If it were not for hydraulic mining it would be worth from \$100 to \$1,000 per acre; 27,000 acres at \$100 per acre would be \$2,750,000; and yet this is a small item in comparison with the cost of dams, canals and dredging, as proposed by Mr. S. With the above facts before us, is it to be supposed that the farmers, whose every care has been to confine the rivers to their channels, would for an instant entertain the idea of converting their remaining lands into new beds for the river, in order to carry such a scheme?

By looking at Mr. Sneath's diagrams in the Press of the 5th inst., we have in prospect the unnatural phenomenon of a river flowing peacefully on top of a levee, which is stated to be from 15 to 25 ft. high. The width of base is not given, but as the two furrows were 100 ft. apart at base, and the slope seems to be about 3 to 2, the channel must be about 50 ft. wide, and from the diagram it is from 3 to 5 ft. deep. With two such channels Mr. S. proposes to carry the water which is now carried in channels of from 1 to 5 miles wide, bounded by levees from 6 to 15 ft. high on this river side. The novel feature is presented of an independent water ditch to the right of the channel. Like the Irishman who, having two cats, cut two holes in the bottom of his door, "one for the large cat and one for the small one," so Mr. Sneath having a broad channel, partitions it off in order, I suppose, that the water running out through the pipe may not interfere with the flow of that left in the channel.

Lower down we see a "hurdy gurdy" (?) revolving by the force of the water discharged from the pipe. Judging from the position of the vanes on the periphery of the wheel, the novel feature is here presented of a wheel revolving in the opposite direction from that in which the water is coming.

I have given Mr. Smith's article of the 5th inst., far more attention than it deserves, and I assure the gentleman that I did it, not because of any "personal feeling" on my part, but because I think his suggestions are impracticable and fallacious in every detail; and I wished to present to him the view of the case which would be taken by the farmers of the whole interested district. If I am in error in any particular I will willingly admit it, after it has been duly proven. I am open to conviction by any logical and reasonable argument, but it must be borne in mind that theory is not practice, nor is assertion, proof; any more than is a hydraulic miner a drift miner. The time has come when what is to be done, must not only tend to the saving of hydraulic mining but must, at the same time, protect the farmer from further destruction. M. H. DURST.

Oakland, Nov. 30th, 1881.

## Siskiyou Notes.

EDITORS PRESS:—As there is no one writing from this county, I thought I would send you a few items. The rains have started some of our farmers to plowing, but the nights are so cold and the ground so hard frozen that it's only in the afternoon that much can be done. I see that John McBride, John Smith and others have many acres now seeded to wheat.

I have been experimenting with Defiance wheat. I obtained one lb. from the University at Berkeley. I planted it in drills 10 inches apart on good land. It was planted on March 11, 1881, and was cut on Aug. 8th. It was decidedly a success. It turned off 60 bushels to the acre (or at that rate), and was perfectly free from rust or smut, while all my other wheat rusted so badly that I cut it for hay. The Polish wheat does well here, also Nepal barley: timothy, alfalfa, and red clover grow here to perfection. All the fault this county has, is that it is too frosty. Although we raise plenty of wheat, oats, potatoes and vegetables of all kinds and to spare, we have had frost in every month for the last year. There are plenty of apples, pears, plums and cherries raised in this valley, and some peaches; but not many peaches on French Creek. I obtained some fine pears (scions), gooseberries, strawberries, and the thornless blackberry, from the late B. S. Fox, of San Jose, which I will report on when they bear fruit.

The RURAL PRESS comes regularly, and is highly esteemed by my family and all who read it. I loan my paper to all who ask for it. I believe that I am one of your oldest subscribers, from 1871—just 10 years, and I hope to be able to take it for 10 years more, although I am now in my 65th year. It is a welcome visitor in my

house; the fact is, we don't intend to be without it so long as I can raise three dollars: The double paper of the 26th ult. was splendid, especially the engraving on the first page; it is so lifelike. I am a hunter, and witness these scenes every fall. My son and I killed 36 fat bucks in the month of September last. We dry the flesh and sell the hides. Mors anon.

H. H. NUNALLY.

French Creek, Siskiyou Co. Cal.

[We should like to hear more from our northern county friends. The extreme north of Cal. is not heard from as much as its value merits.—EBS. PRESS.]

## Fruit Growing and the Labor Question.

EDITORS PRESS:—General Rosecrans, Congressman elect of the San Francisco District, departed for his seat in Washington, D. C., on Nov. 26th. Being pumped by an interviewer of one of the city dailies, the General said, among other things, as follows:

"Why, during the past week I have been visited by quite a number of fruit raisers who protest against the exclusion of Chinese labor. They say that without Chinamen they cannot get their fruit gathered, and to stop Chinese laborers coming to their orchards and vineyards will destroy their business."

Now, as "during the past week" of which the General speaks, the members of the "State Horticultural Society of California" were assembling in San Francisco to hold a monthly session, it may be assumed that they constitute a portion of that "quite a number of fruit raisers who protest against the exclusion of Chinese labor." This may be more readily assumed when we recollect that this same society has lately been discussing the passage of a society resolution in favor of "Chinese cheap labor."

These "State Horticultural Society" fellows are the same who falsely report that "apples pears, plums and cherries are a failure" in Santa Cruz county; and they tell General Rosecrans that they are afraid of being ruined if the Chinese test is pulled out of their mouths. What a pity! To go for to ruin such intelligent citizens.

Let us reason a little about this ruin of the orchards by excluding Chinamen. In the first place it is a blind, false statement. New Jersey, Delaware, Virginia and Georgia raise more fruit by millions of dollars worth than California does, and no Chinaman touches a pound of it. In those States the fruit is gathered by American men, women and children. All the immense product of berries and small fruits for the New York, Philadelphia and Baltimore markets is cultivated and gathered by American hands. No Chinaman fingers a single berry in the fields. And the moral of this is that if Americans can gather the great crops of the Atlantic slope Americans can, also, gather the lesser crops of the Pacific slope. We haven't got the Americans on the Pacific slope. Well, it will not take long to get them, once the heathen is ousted. Look at the children swarming and shouting out of our hundreds of school houses. Will not they need employment? Ah, they are some trouble, at first, to train them to a steady, careful gait in the business. Other countries have conquered that trouble—so can we. Better take care and time to train the children to labor than to pay taxes to support them in the penitentiaries. At least it is as broad as it is long—it costs as much one way as the other. We have got already a good many children, and if I am not mistaken in the ways of our people, we are mighty liable to have a great many more.

If nobody had Chinamen nobody else would need Chinamen. If this sentence is not choice English it makes no odds—it is the broad statement of a choice fact. It is only where one fruit-raiser uses heathen labor that another fruit-raiser is compelled to use it also so as to compete. SwEEP away the Chinamen in obedience to the almost unanimous vote lately cast by the people of this State and, in a short time, things will come all right with American labor in the orchards. The southern planter of the U. S. thought and said, not many years ago, that he could not raise cotton and rice without slave labor. The southern planter now knows better. He then said he could not raise cotton and rice with hired negro labor. Necessity has taught him that he can raise without slaves and with hired negro labor the biggest crops of cotton and rice that ever was raised. The lesson, like all great lessons, was hard to learn, but nevertheless it has been learned.

The California grape and fruit raiser can, and not only can but must, learn that vines and orchards are to be carried on without Chinese labor. The lesson may be hard to learn, but postponement will only make it harder. There is no way of skirting this lesson. All the voters in the State, less 800, have said through the ballot boxes that the lesson is inevitable. It is not as some say, a lesson dictated by "the Sand Lot." On the contrary the lesson is deep down in the very bones of our voters. Every white and black child born in the State is a renewed emphasis added to the cry that "The Chinese must go."

The Chinese are the ruin of our rising generation. To ruin the rising generation is to ruin the State. Far better it is that every orchard and vineyard in the State should go to destruction than that we should continue to import the Mongolian and ruin our children.

But it is far from true that the exclusion of Chinese labor would destroy the vineyards and

orchards. Such exclusion can, at the worst, only disturb the fruit business temporarily, and that disturbance can only end, at length, in a lasting advantage.

Take this case into the city of San Francisco. If there are 30,000 Chinese in that city, nearly all male adults, they displace 30,000 voters, but they do worse than that. If there were 30,000 voters in place of those Chinamen it is fair to say that these 30,000 voters with their families would represent a population of between 140,000 and 180,000 souls. Each voter in the U. S. is roughly estimated to represent six people. Six times 30,000 is 180,000; so that Chinese once ousted, there would be added to the population of our chief city 180,000 fruit eaters instead of 30,000 rice eaters. This change of population would swell the fruit market very considerably. But suppose the substituted population did not work up to the ratio of 6 to 1; it would certainly average 4 to 1; at the rate of four European substitutes for each ousted Mongolian we would have in San Francisco 120,000 Europeans instead of 30,000 Mongolians; we will say that each of these 120,000 substitutes may eat three boxes of apples or pears per year (low estimate) that will make a consumption of those fruits per year amount to 360,000 boxes at 50 cts. per box (low estimate) or \$180,000 per year of increased wages to the raisers of apples or pears. Along with these fruits come the citrus fruits, small fruits, berries, etc.; anyone can figure out what amount of these fruits would probably, almost certainly be consumed by each member of a European population.

The figures will not show a ruined grape and fruit business. To these figures may be safely added the continual increase of fruit eaters in a compound ratio from well-known natural causes. What is true in this regard of San Francisco, is equally true all over the State. An ouster of the Chinese is a multiplication of the population by four or six. If there are 120,000 Chinamen in the State to be ousted by 120,000 voters, these voters multiplied by a family power of four or six, will give an increased and an increasing, permanent population of from 480,000 to 720,000 fruit eaters in place of 120,000 non-productive floating rice and rat eaters. These figures do not indicate the ultimate ruin of the fruit business. But I may be told that these figures represent chickens not yet hatched. That is a fact; but take your Mongolian serpent out of the nest and the chickens will come all right.

Part of the matter with this vine and orchard men is "big heads." They like the Chinaman because he is their slave, and they can sit in the shade and drive him as the old Southern overseer whilom did the negro in the cotton State.

The vineyard of California, like his lost prototype of South Carolina, wants "to be let alone" by public opinion. He wants to be a lord, an autocrat, over unquestioning serfs. That is what ails him.

And now I will tell you a little story—a little mining story:

I had a mining partner in Nevada. We two partners owned a mine. We sold the mine in 1874. We got our money. We divided the money. Both had families. My family was with me in Nevada. My partner's family was in Wisconsin. He bade me good-bye. I came to California and located my family on a little orchard farm in Pajaro valley. "Lard" went back to Wisconsin, promising to bring his family and join me in California. He brought his family and about \$25,000 in gold coin, in 1875, as far as San Francisco. He saw the Chinese. He went through Chinatown. He wrote me a letter. Here is the substance of his letter:

"Dear Old Doc.—Good-bye. I was coming to see you, but I can't now. Off for Wisconsin in the morning. Too d—d many Chinamen in California for me. Yours truly, W. S."

I am aware that in an artistic light the above is not a thrilling story, but, like Ben. Johnson's match rhyme with Sylvester, "it is true, though."

In fact, my little story is part of "the short and simple annals of the poor." The State of California lost a good citizen and a family with \$25,000, but she kept a sweet-scented Chinaman instead.

How often the State of California has repeated, and will repeat, the same story is a grave and interesting question for her financiers and politicians. J. W. GALLY.

Pajaro Valley, Nov. 30, 1881.

## Rice Growing.

EDITORS PRESS:—I see that some one up the country has been trying rice growing. I tried it once myself, in Los Angeles, inside the city limits. I got the rough rice sent me from the west coast of Africa. There is a hull on rice which it is necessary to leave on when used for planting. Hulling rice destroys the germ. In that tropical climate, 4° north, I saw it raised in abundance, and on the tops of the highest hills mostly. The natives clear off the land every time they raise a crop. Cutting down all the brush and trash in the dry season, the sun soon dries it so that the whole patch is like a brush heap, and so is all burnt over. This is just at the beginning of the rainy season. Then, with a little hoe, like a short chisel, they give a little tap about an inch into the ground, and with the other hand drop a few seeds into it; and as they still reach a little farther to strike,



the dirt flies back, covering it mostly about half an inch. Then come the rains, and the rice starts and grows rapidly, keeping down other vegetation, till in about four months a heavy crop is ready to harvest, without any further cultivation. I thought it would do so here in California, and I think still it might, though it failed with me just as up the country. I had not sufficient water to keep it growing rapidly. I planted it in drills about a foot apart, and got it too thick. It grew rank, however, for a time, but having been stunted for water, it grew but about two ft., and after awhile turned yellow, without throwing out heads. But I have always thought I could raise rice by having plenty of water, like the rains of Africa, and not planting till the ground and weather was quite warm, and using for the purpose the four warmest months in the year. This rice hill does not require flooding. And I have been informed that Carolina rice is not flooded so much on account of the rice as to kill the weeds. The rice, of course, needs plenty of water, but it can stand to be covered for days, and weeds cannot.

H. H. MESSENGER.  
Riverside, Pinal Co., A. T.

## METEOROLOGICAL.

### Probabilities of the Season's Rainfall.

EDITORS PRESS:—In your last issue you gave a table of rainfalls for November and the season for 32 years, and invite readers to figure out the probabilities therefrom. Suppose we arrange the data in this way, placing all years over 20 inches in one column and all under 20 inches in another:

	Nov. Inches.	Season. Inches.	Nov. Inches.	Season. Inches.
52-3	6.000	36.365	50-1	0.000
49-0	2.252	36.000	63-4	1.490
61-2	2.170	35.549	70-1	.584
67-8	3.806	32.709	76-7	.320
66-7	2.426	25.305	56-7	.651
71-2	1.220	24.052	62-3	.5
74-5	3.801	23.647	55-6	.750
80-1	0.000	23.392	69-0	.850
73-4	1.210	22.898	72-3	1.930
59-0	6.485	22.625	60-1	.181
64-5	6.713	22.512	58-9	.147
77-8	1.120	21.249	68-9	.774
53-4	1.500	20.035	78-9	.415

The 13 rainiest seasons, during the last 32 years, having each a total rainfall of over 20 inches, save with one exception, (1880-1) had over 1 inch in November, and an average of 2.97 inches. The 13 driest seasons in 32 years past, having a total rainfall each of less than 17 inches, save in two seasons (1863-4 and 1872-3) had less than one inch of rain in November. And during these 13 driest years, each ranging from 4 1/4 inches to 16 1/2 inches, no one of them had over 2 inches of rain in November, and but one season as large a fall as in November of this season. Thus, unless we have a departure from the precedent of the past 32 years, we are to receive at least 14 inches of rain for the season, with at least 9 chances in 10 that we shall be blessed with at least 20 inches. A.

Oakland, Cal.

### Mt. Whitney Station—Too-man-i-goo-yah Park.

EDITORS PRESS:—The recommendation of Gen. Hazen, chief of the Signal Service, that special stations and observations be organized for the Pacific coast, lends interest to the official orders by which the new signal station on the summit of Mt. Whitney was established the past summer. These orders, of which a correct copy is here given, were copied by your correspondent on the top of Mt. Whitney on the 6th of September—we slept there the night before—from the official document which was enclosed in a tin case and deposited that morning by Capt. Michaelis in the monument on the summit of our highest mountain.

CAMP FRANK THOMSON SIGNAL SERVICE STATION,  
Mt. Whitney, Cal., Sept. 6th, 1881.  
On the 16th of August, 1881, Capt. O. E. Michaelis, Ordnance Corps, U. S. A., accompanied by Sergt. J. J. Narry, Signal Service, and S. B. Coles, Quartermaster's employee, in compliance with orders of the War Department, established a signal station on this peak, hoisted the U. S. flag officially and issued the following orders:

Order No. 1. SUMMIT OF MT. WHITNEY,  
Aug. 16th, 1881.  
In compliance with special orders No. 152, dated Adjutant General's office, Washington, July 6th, 1881, and with the instructions of Brevet Maj. Genl. W. B. Hazen, Chief Signal Officer of the army, a Signal Service station is hereby established on this mountain.

II. In acknowledgement of the interest shown by Mr. Frank Thomson, of Philadelphia, in the special scientific observations of Prof. S. P. Langley, the furtherance of which led to the establishment of this station, it is hereby named Camp Frank Thomson.

[Signed.] O. E. MICHAELIS, Capt. of Ordnance on Signal duty.

Official, O. E. MICHAELIS, Capt. of Ordnance.

Special order, No. 152. HEADQUARTERS OF THE ARMY, ADJ. GENL'S OFFICE, July 6th, 1881.

By direction of the Secy. of War, paragraph 4, special orders No. 150, July 24, 1881, from this office, relating to Capt. O. E. Michaelis, Ordnance Dept., is recommended as to direct that officer to proceed from this city via Philadelphia and Pittsburg, Penn., to San Francisco, Cal., and thence via Mohave, Cal., to Mt. Whitney, Cal., and there establish a Signal Service station, under such instructions as he may receive from the Chief Signal Service officer of the Army. By command of GENL. SHERMAN.

[Signed.] R. C. DRUM, Adj. Genl.  
It is to be hoped that Congress will this winter appropriate, according to recommendations of Capt. Michaelis and party, the small sum of \$10,000 to erect a comfortable stone house on

the summit, and make the new trail proposed, up Lone Pine canyon some 15 or 20 miles, to render this a permanent station the year round, in spite of the deep snows that accumulate on, and for miles around it. Then, if Congress will set aside as a Government reservation, an area extending at least 10 miles north and south of Mt. Whitney, about seven miles to base of Sierras, and 13 or more west, including the very grand canyon of the Kern and the isolated Kaweah buttes, California will have in the proposed

#### Too-man-i-goo-yah Park,

A future resort, not quite equal to Yellowstone Park in extent and in some of its natural features, but one of which Californians may well be proud. It would embrace our highest peaks and table-lands, one of our deepest and grandest canyons, and certainly the longest. It would embrace some of our highest falls, fine mountain streams and lakes, that can and should be stocked with fish, and some of our most extensive mountain forests. The force at Mt. Whitney should see that no bands of sheep are driven into this reservation, and that its forests be preserved from the devastating effects of mountain fires. Within this area there is no very large amount of pasturage, and plenty can be found elsewhere for sheep in our vast mountain regions. The deer, mountain sheep, or big horns, and other game, would be thus increased, in this picturesque and wild, but now dreary district, and it would be a national park worthy of our continent and our people.

Fresno county, Nov. 29th. J. W. A. W.

## HORTICULTURE.

### The Apple.

The following paper was read at the last meeting of the State Horticultural Society by PROF. C. H. DWINELLE, of the University.

The apple is emphatically a fruit of the temperate zones, as it is there that it is grown in perfection. Some would say that this is the fruit of the temperate zones, if its importance as an article of food, and the ease with which it can be produced under varying circumstances are to be considered. There are several wild apples, or crabs, known in the northern temperate zone. Of these the Wilding, or Crab (*Pyrus malus*), which is still found in its natural form in various parts of Europe and Asia is generally looked upon as the original parent of our cultivated varieties. If such is the case, its culture must have been begun at a very early period, to give time for the wonderful changes in the habit of the tree which have been brought about, and the production of the legion varieties which are now known. Although it is now generally conceded that words in the Bible translated into English by apple referred to other fruits, still, historical studies from time to time, push back the date at which undoubted traces of the culture of the fruit can be found. Brought to North America, the tree has found a most congenial home, not only under cultivation, but also where it has run wild on the Atlantic slope, and on the southern continent as well, notably in southern Chile. To write an exhaustive history of this fine fruit and the best methods of cultivating and utilizing it, would be the work of years, which should also be preceded by a lifetime of study and observation.

During the short time at our command today, let us attempt to consider but a few of the questions bearing upon this important subject. Some may be of long standing, and others of recent origin, owing to our peculiar local circumstances.

#### Need the Birds be Killed?

The apple crop in California is often sadly marred by birds, as woodpeckers, bluejays and finches, but we should beware of punishing the marauders beyond their deserts. The woodpecker greatly relishes the apple worm, the larva of the codling moth. Many a one he ruthlessly snatches from its snug winter nest, and earlier in the season he does not hesitate to dig into the center of an infested apple to secure the coveted morsel. Small blame to him! Small loss to the orchardist!

I have seen a thrifty family orchard in Marin county, which the owner saved from the attacks of birds, largely bluejays, by encouraging the growth of the native elderberry along the neighboring fences. The berries prove more attractive than the choicest fruits at the season when the birds might do damage, and at other times the latter doubtless aid greatly in keeping down noxious insects.

There is an important suggestion in this, as to the feasibility of dealing with our feathered friends in a more humane and economical manner than by the use of the shotgun. Can they not be furnished with some fruit better suited to their tastes than that raised for the market, and for less money than it takes to destroy them, and the insects and weed seeds, which form the greater part of their natural food?

One of our most successful and intelligent raisin-makers never allows a bird to be killed on his grounds, but devotes the figs on a long row of trees to their use, believing this to be a small return for their services to him. It would seem as though a little thought and experimenting would provide us with a series of such bird fruits which would last through the summer. Elderberries and figs have been mentioned. To

these add the mountain ashes and various wild cherries of the Atlantic States and Europe, and others that will come to notice from time to time, and the list will soon be a long one. Most of these trees are ornamental, and also produce valuable timber. Even the elderberry here assuming the form and proportions of a tree.

#### What Stocks Should be Used?

If very small dwarf trees are wanted for the garden or lawn the stocks to graft or bud upon should be those of the Paradise apple. Being a pigmy itself, its limited roots do not furnish sap for a large development of the kind worked upon it. Besides the pleasure to be derived from a miniature orchard, the Paradise stock gives a means of quickly testing the fruit of seedlings or other new varieties. The restraint imposed upon the top by the Paradise seems to act in the same manner as a ligature or anything else that impedes the flow of sap in forcing the formation of fruit buds. The Paradise stocks are usually raised from layers which root very easily. Besides other advantages these stocks have that of being uniform in character.

#### The Doucin.

A more vigorous stock is the Doucin, which is propagated by layers, and also comes true from seed. While reckoned as a dwarfing stock, trees grown upon the Doucin are much larger than those upon the Paradise, and some may even be classed with full sized standards on free stocks.

#### Free Stocks.

While the Paradise and Doucin apple trees have been known and used for certain purposes for a very long period, the greater part of the trees set in orchards are upon what are called "free stocks." These are procured by sowing the seeds of the apples in ordinary use. Sometimes the pomace from cider mills is sown in seed-beds or nursery rows direct. In other cases the pomace, or apples which have been allowed to decay, are washed in a rocker similar to that used in the placer mines, and the clean seeds collected in the bottom. The seedlings from these are placed in the nursery, and when of sufficient size grafted or budded, as may be thought best. These details are not given as something new, but to be subjected to critical thought, and, if possible, improved upon.

#### Desirable Qualities.

If these seedling stocks are to give satisfactory results, they should produce trees having some of the following qualities: Uniformity in size and style of growth in the top, both for the sake of appearance and for certainty in estimating the distances at which they are to be set; character of roots, which should be deep where there is a corresponding soil, or wide-spreading to utilize a shallow stratum; suitability of stock to scion, giving a strong and smooth union; precocity, returning a profit on capital invested within a reasonable time; longevity, continuing that profit for as long a time as possible; evenness in fruit, as to size, time of ripening, texture, flavor and color; and last but not least, immunity from, or ability to resist the attacks of insects injurious to the tree or its fruit.

Are we justified in expecting these desirable results in using seedling stocks raised in the manner spoken of? At best the habit of the tree has been so broken up by cultivation as to be notorious for the variation of its seedlings. In orchard culture this tendency is aggravated by the cross fertilization which takes place where many varieties are in close proximity.

To increase the confusion the pomace from the cider mill has ordinarily been made from almost every variety grown in the neighborhood; sweet and sour, early and late, good and bad mixed together. Almost any apple orchard of any considerable age gives ample illustration of the unsatisfactory results from working on such mongrel stocks. While the tops resulting from grafts of any particular kind have a general similarity to each other, and to the type peculiar to that variety, many of them are much modified by their struggles with an uncongenial stock. Frequently the stock is much smaller than the trunk above it, thus giving the effect to a considerable extent of a dwarfing stock. In other cases the tops are vigorous, but the fruit on some ripens at a different season from that on others, and there are many grades in size, texture, keeping qualities, flavor and color, so as to seriously interfere with economy in gathering and uniformity in price.

Individual trees also show a weakness of constitution and ultimately perish, while others of their kind are still in their prime.

At a recent meeting, I spoke of two Baldwin trees in an orchard in the foot-hills of the Sierra Nevada, the fruit of one being subject to those brown specks under the skin known as "dry rot," and of comparatively little value for storing, while the other gave apples free from defects and keeping well for the late and profitable market. One of our most successful nurserymen said that in his view the difference was not caused by the stocks, but by the difference in depth to which the roots had penetrated, as the apple could not do its best in our dry summers unless its roots were well down in a deep soil.

Admitting this, it seems far more probable that with two trees, side by side, the stocks worked upon rather than the soil, would be responsible for the depth of the roots.

Any row of promiscuous seedlings will illustrate the difference in habit in this respect.

#### Resistance to Insects.

At former meetings the fact that some varieties of the apple are less subject to the attacks of the codling moth has been brought out. This

is important, but it affects the fruit alone, and consequently has to do mainly with the grafted top, although the stock may influence the time of blooming so as to expose the fruit in a greater or less degree to the ravages of the insect.

In the "wooly aphid" we have an enemy striking at the very life of the tree; not only does it disfigure the part of the tree above ground, but in untold millions it attacks the roots in a manner very similar to the phylloxera upon the vine. The tree is so stunted as to become practically worthless if it does not speedily die.

The application of anything to kill the insect is difficult in an old orchard, where the roots are widespread, so that the value of a good stock which would resist its attacks can hardly be overestimated. If really careful and extensive experiments have been made in search of such a stock, I have failed to find any record of them. M. Blot says "employ the pips of bitter apples only." Can any of our members give more definite advice as to a resistant stock? In some parts of our State, at least, the question of finding some efficient weapon against the "wooly aphid" appears to be the most serious one in apple culture.

### Fruit in Santa Cruz County.

EDITORS PRESS:—In the report of the State Horticultural Society, submitted by Dr. J. Strentzel, as published in the PRESS of Dec. 3d, occurs this bit of news to us "Santa Cruzans."

Santa Cruz: "Cherries and figs a failure; mildew on pears; curl leaf on peaches; codling moth, aphid and caterpillars destroying fruit; too much water in the ground, etc."

Now, with all deference to our President of the Board, I would like to ask the doctor for his authority for this information. His informant is certainly not a resident of Santa Cruz county, or at least he is ignorant of the facts in the case.

#### Mildew on Pears.

If anybody ever saw "mildew on pears" in Santa Cruz county, let us have his name. I have been in the county eight years, and have been engaged in fruit growing all the while, and have spent a good deal of time, every year, in the investigation of the fruit-growing interest of Santa Cruz, Santa Clara, and portions of Monterey and San Benito counties, and I have failed to discover any mildew on pears in Santa Cruz county. Further, I can give the names of several responsible individuals, in different parts of the county, who have been growing pears here for the last 20 years, who tell me that their pears have been a regular crop, sound and nice fruit, free from insects and all other troubles, until within the last three years some varieties have been troubled, in some localities, with what is generally called the "scab," and this is confined to about three varieties and few localities. With this communication I send you a few Winter Nelis and Easter Beurre pears, grown on my foothill fruit farm, and ask you to compare them with other pears you find in the market, and see if you discover any "mildew." I think I have sent you samples for the last four years from my young orchard, which bears regularly.

Now we come to

#### Cherries.

If the doctor will give us a visit next summer, we will treat him to a basket of as fine cherries as he ever ate, from trees that have borne regularly for the last 20 years—never missed a year. My young trees have borne full every year since they began bearing, and I have been told by several orchardists of San Jose, where they pride themselves on cherries, were as good as they ever saw. How is that for a "failure?" As for the ground here being too wet to grow cherries or pears, that is a great mistake. There are not 100 acres of land in the county that are too wet for pears, that is not continually covered with water—a few hundred acres of marsh, near the bay.

With regard to figs, we don't expect them to be a success near the bay; but if you go to the fruit growing region of "Ben Lomond" mountain, and tell them they can't grow figs, they would laugh at you. With your permission, I will notice the peach and curl leaf at another time.

Santa Cruz, Cal.

[The pears sent are clean and fine. We have seen others like them from year to year. Dr. Strentzel's report on the different counties was based upon letters written to the society by fruit growers in each of the counties named. As we propose to publish all these letters in full, as soon as we can, all readers will see just what local information the committee used in preparing the report.—EDS. PRESS.]

HINTS ABOUT SCREWS.—When screws are driven into soft wood and subjected to considerable strain, they are likely to work loose; in such case, dip the screw in thick glue before inserting. When buying screws, see that the heads are round and well cut; that there are no flaws in the body or thread part, and that they have gimlet points. A screw of good make will drive into oak as easy as others into pine, and will cadure having twice the force brought against it. When there is an article of furniture to be hastily repaired, and no glue is handy, insert a stick a little less in size than the hole for the screw and fill the rest of the cavity with powdered resin; heat the screw sufficiently to meet the resin as it is driven in.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Meeting of the National Grange—No. 2.

Of this year's session of the National Grange in Washington, D. C., the *Grange Bulletin* says:

With a larger number of States represented than last year, with a more assured feeling of good work performed and brighter prospects for the future, with joyous reunions of old friends of the past, and hearty greetings for the new members, and a cordial welcome from the founders of the Order, nearly all of whom were present, the fifteenth annual session commenced its labors. The sessions are held in one of the dining halls of the National Hotel where all the delegates are comfortably located. Quite a large number of visiting Patrons are present from New York, Pennsylvania, New Jersey, Maryland, Virginia, Ohio and several other States.

After the reading of Bro. Woodman's annual address, of which we gave the chief facts last week, the W. L. of the National Grange, Bro. H. Eshbaugh made his report, from which we take the following:

Experience and observation has enabled me to gather a few facts which may be worthy of consideration. There is a general desire expressed everywhere for information on Grange work, much of which must be communicated by some system of lecturing with a view of disseminating sound Grange principles more widely among members and farmers generally.

Proper lectures are great educators, and should be encouraged as far as practicable for they are essential elements in every community, to stimulate the membership to greater activity and to awaken an interest among the farmers to seek after knowledge. But the value of lectures depends largely on what they contain, if calculated to amuse and interest only for the time being, their usefulness to a large extent ceases with the close of their delivery. Hence Grange lectures to be most beneficial, should contain nothing imaginary, but facts and realities as they exist, spiced and seasoned with good, practical ideas, made plain and comprehensive with an effort to impress facts firmly upon the mind of every hearer. Such lectures furnish wholesome food for the mind that cannot be discarded or thrust aside at pleasure, but is indelibly fixed for reflection, that will bring forth their fruit in due season.

A large number of our members are fully satisfied that mixed husbandry, improved tillage, increased production, and close economy will not bring them true prosperity nor relieve them from burdens of injustice; they are therefore not so eager in seeking information upon these subjects, as they are concerning the future hopes of the farmer, and how to liberate themselves from the evils surrounding them. Lecturing and educating should therefore be directed to this end, so that not only Patrons but all farmers may become more familiar with every subject requiring the attention and co-operative work of our Order. To accomplish this most successfully requires local efforts, public meetings held in Grange halls and school houses, where the neighborhood can be gathered in to meet in social communion, and if they then and there can enjoy the privilege of hearing a practical lecture upon Grange work much good would be accomplished. Not that I would be understood as speaking adversely to large gatherings, for these are all right in their place and they have their mission of usefulness to perform, and right well have they accomplished much good work. But they are not the best means to be employed for recruiting purposes, nor for educating the masses. Lecturing should be directed as much as possible upon the same subject and for like purposes throughout the United States, at least as far as may be consistent with locality and interest, to the end that members in every section of the country may become informed upon the same subject alike and at the same time. This would lead to a greater uniformity in every co-operative effort for the advancement of our interests and our principles. To make this practicable the National Grange should inaugurate the preliminary steps and the State Granges carry them into execution as may be best calculated to accomplish the most good.

#### Secretary's Report.

Bro. W. M. Ireland, Secretary of the National Grange, presented his report from which we take the following:

It is with pleasure that your Secretary announces that the cloud which has so long lowered about one of the stars in our galaxy and obscured its light has been dispelled and it again shines forth and will be more brilliant than ever before. Through the efforts of some zealous and earnest Patrons, encouraged by words of advice from the Worthy Master of the National Grange, a State Grange has been organized in Arkansas, and has put on the armor; and is ready to advance to do battle for the good cause. A Patron of that State writes: "We have again entered the fold, and have come this time to stay."

During the year ending Sept. 30, 1880, were organized 44 new Granges. During the year just closed the number reached 57, an increase of nearly 33 per cent. These figures, though small when compared with the years immediately following the introduction of the Order, it is believed represent a healthy increase.

During the six weeks that have passed since the close of the fiscal year disbursements have been issued to 13 new Granges, and during the same period of 1880 but two were sent out. (Bro. Ireland then gave an itemized statement of all receipts and expenditures.) The increase in receipts—over 85 per cent.—has been accompanied by a corresponding increase in the labor of the office. Nearly 2,000 letters have been received and answered. The entire working hours of the day, to the exclusion of all other business, are now required to keep the work up.

The chosen representative of the "Founders of the Order" has in fitting and eloquent words given you greeting. Your Secretary also bids you welcome to the birthplace of the Order. Welcome to those whose faces and voices are dear to us, who have long and patiently toiled in the work. Welcome to those who now for the first time sit with us as co-laborers. Welcome to those who come to visit us. Welcome, a hearty welcome to all.

#### Reports from the State Grange.

The evening of the first day was occupied with extempore reports from the Masters of the different State Granges, setting forth the condition of the Order in the several commonwealths. Of these reports the *Grange Bulletin* says: "It can be plainly noted by the reports that a better feeling prevails and a growing revival of interest and upbuilding of the Order is going on in nearly every State."

On behalf of the California State Grange our W. M., Bro. Daniel Flint, said:

We had unfortunate reverses in business enterprises, but we have overcome the effects of those early clouds and are to-day full of faith, and our reports show an increase of members over last year. We have four business associations. One at Sacramento has in a single year reported a business of \$100,000. At one other point it has amounted to nearly \$200,000. In San Francisco the business is simply immense. As I came through the

city on my way here I found one warehouse containing 21,000 tons and so full that the managers are talking of securing additional room. We also have the Grangers' Bank of California, built up and managed by Patrons; starting with \$25,000 capital it now has \$540,000, at which any farmer with good security, either personal, or wheat in the warehouse, can get needed funds. The bank building cost \$75,000, and also has in it the Business Association and the office of the *California Patron*, which latter is doing good. A few years ago our Order was small but it now has many friends, and is prospering, and we have taken our place among men.

#### The Next Meeting—Officers.

We have just learned by special note from Bro. Flint, that the next meeting of the National Grange will be held in Indianapolis, Ind.

Bro. Flint also sends us a list of the officers chosen for the ensuing two years: Master, J. J. Woodman, Paw Paw, Mich.; Overseer, Put. Darden, Fayette, Miss.; Lecturer, Henry Eshbaugh, Honora, Mo.; Steward, William Sims, Topeka, Kan.; Assistant Steward, John J. Rosa, Milford, Del.; Chaplain, Henry O. Devries, Mariottsville, Md.; Treasurer, F. M. McDowell, Wayne, N. Y.; Secretary, William M. Ireland, Washington, D. C.; Gate Keeper, James V. Scott, Texarkana, Ark.; Pomona, Mrs. Mary Lou Darden, Fayette, Miss.; Flora, Mrs. Elizabeth M. Nicholson, Camden, N. J.; Ceres, Mrs. Harly H. Woodman, Paw Paw, Mich.; Lady Assistant Steward, Mrs. Harriet A. Sims, Topeka, Kan.; Executive Committee, D. Wyatt Aiken, Cokesbury, S. C.; James M. Blanton, Farmville, Virginia.

### Amendment to Constitution of National Grange.

EDITORS PRESS:—Herewith I send you a copy of an amendment to the Constitution of the National Grange (Article I), adopted at the 15th annual session just closed.—Wm. M. Ireland.

#### Amendment.

Amend Article I, under the head of "State Grange," by adding the following as an additional section:

"Sec. 3. Where a State has not reduced its representation, any subordinate Grange shall have the right to elect a Past Master as its representative in the State Grange, when the Master is unable to attend."

### Persimmon Supply Exhausted.

EDITORS PRESS:—Please announce in this week's issue of your paper, that the supply of persimmon trees at my disposal is exhausted, and that no further orders can be filled.

J. V. WEBSTER, Sec'y State Grange.  
San Francisco, Dec. 8, 1881.

RE-ORGANIZATION OF MERCED GRANGE.—At an informal meeting of the members of the Merced Grange of the Patrons of Husbandry, held at the residence of R. S. Clay, on Saturday last, the question of re-organization of the Merced Grange was discussed and declared by the members present to be advisable, and a resolution was passed calling a meeting at Garibaldi's hall at the hour of 1 o'clock P. M. to-day (Saturday, Dec. 3d), of the members in good standing at the date of the last meeting of the Grange, for the purpose of taking steps to re-organize, and a committee of three of the members present was appointed to present a code of by-laws for the government of said Grange. A committee was also appointed to secure a hall in which to hold the said meeting, and arrange for a place for future meetings. The Grange is peculiarly a farmers' society, and in this locality, where the principal vocation of the people is wheat farming, we see no reason why the organization should not be kept in a flourishing condition. Let the re-organization be accomplished by all means, and, farmers, after joining it, attend its meetings regularly, pay your dues promptly, and otherwise aid it with your countenance and support, and it will succeed, benefiting all who are in position to profit by the blessings it confers. Here, upon the prosperity of farmers depends the prosperity of every class of citizens, and the main object of this institution is to promote the welfare and prosperity of those who till the soil, by united action in a way that will injure no person or class of persons.—*Valley Argus*.

WALNUT CREEK GRANGE, CONTRA COSTA COUNTY.—M. L. Gray, M.; John Larkey, O.; T. W. Sturgis, L.; J. W. Jones, S.; H. Hunsaker, A. S.; Mrs. D. E. Seaman, C.; John Baker, T.; E. H. Seaman, Sec'y; Jeff Dunnigan, G. K.; Miss Lizzie Hodges, Ceres; Miss Clara Hunsaker, Pomona; Miss Flora McKay, Flora; Mary Baker, L. A. S.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### FRESNO.

BLUE HULLESS BARLEY.—*Republican*, Dec. 2: Mr. D. G. Hodges, living near Sanders, has shown us a sample of this rather unique and rare variety of grain. Originally, Mr. Hodges obtained 49 kernels of the barley, and now, after planting three times, he has 37 sacks of an average weight of 140 lbs. The grains are of a rich purple color, very plump, and resemble wheat grains in form. When growing, the plant resembles ordinary barley, but in threshing the hull is carried off with the chaff. Some of the seed, sent to Agricultural Commissioner Loring, elicited a reply that the name of the grain was not known. A sample was then sent to the State University, and it was there given the name of blue hullless barley. Anyone wishing to plant some of the grain can get a limited quantity from Mr. Hodges, who offers it at 5c

a lb. Stock are said to prefer it to either wheat or common barley when green.

#### MERCED.

ORANGE TREES.—*Valley Argus*, Dec. 3: There are quite a number of orange trees bearing fruit this year in Merced. Among the finest we have seen are those in the garden of Geo. Turner, Esq. Our neighbor, Mr. J. T. Reed, has a tree which has quite a number, and nearly ripe enough to pick. This is doubtless a good climate for orange culture if people only understood how to cultivate them.

#### SACRAMENTO.

RAISINS.—*Stockton Independent*: George H. Kerr was in town yesterday with samples of his celebrated Muscatel raisins, which are made from grapes grown by him at Elk Grove, Sacramento county. The vineyard of Mr. Kerr contains about 40 acres, the vines ranging in age from 10 to 18 years. They are grown on loamy soil, upland, underlaid by clay, and the vines are not irrigated. Mr. K. has been engaged in manufacturing raisins for seven years, and works only the growth of his own vineyard. The raisins shown were plump and large, and of as fine flavor as any that can be found in this market or elsewhere. The grapes are first sun-dried until turning point of color is reached, when they are taken to the dryer, which handles 20 tons at a time, and there the curing is finished.

#### SAN BERNARDINO.

CHINO RANCH.—*Los Angeles Mirror*: The Chino ranch, the property of Richard Gird, is one of the finest and most valuable estates in southern California. Its proprietor has become immensely wealthy through successful mining enterprises in Arizona, and is now stocking his heronial estate in a lordly manner. The rancho comprises 34,000 acres, and cost the snug little sum of \$250,000. Sixty miles of wire fence has been constructed toward inclosing the tract, and the work is completed with the exception of about 10 miles. Eight hundred head of high bred cattle have just been placed on the rancho, which were procured in Utah, near Salt Lake, and driven through to this point. The fine stud of horses which is being collected comprises some of the best blood in the country. Mr. Gird's aim seems to be to make the finest ranch in this State, where so many princely possessions have been created, and to stock it with the very best to be procured.

#### SANTA CRUZ.

FRUIT.—J. W. Gally in *Sentinel*: If there is a place in the State where "apples, pears, plums and cherries" will grow, that place is in the valley and canyon portions of Santa Cruz county. Santa Cruz is, not yet, a great success in figs, oranges, lemons, nuts, apricots or peaches, as all these require a clear sky, an early season and a warm—not to say hot climate; but for any fruit or plant requiring a deep, rich soil, an ordinary season and a cool—not cold—climate the valleys and canyons of Santa Cruz county, cannot be excelled, so far as I know, on the face of the globe. To the fruits which we do raise—and claim to be of the best quality—to wit: apples, pears, plums, prunes, cherries, etc., there are but two objectionable, among many favorable, features; our fruits come a little late, and the yellow varieties, owing to a lack of steady sunshine, do not color as highly as in Vaca valley and elsewhere. But our red, black and blue tree-fruits color to perfection. For long keeping and for shipping purposes we raise in Pajaro valley and in tributary canyons the best fruits in California, and, perhaps, the best for such purposes on the Pacific coast. I never saw, read or heard of a Santa Cruz apple with a codling moth hole in it in Santa Cruz county, and I doubt if anybody else ever did. It is not yet proven that the codling moth will live and thrive in our humid atmosphere. I, myself, doubt if this moth can ever support more than a weakly existence in our peculiar climate.

#### SAN JOAQUIN.

LOCKEFORD NOTES.—EDITORS PRESS: This town has inherited the name of one of the best known and oldest citizens of this valley, Dr. D. J. Locke, at one time a worthy and capable practicing physician here, but has ceased to practice for some time past, and confines himself to the management of his large farm. He devotes about 17 acres to the cultivation of hops, and realized about six tons the current year. Dr. L. is the postmaster of this town, which has a population of about 200 people; it sustains two churches, two hotels, stable, harness shop and one of the best conducted primary schools in the county, of which Mr. W. B. Ambrose is the principal and Miss M. K. Howe the assistant; the annual attendance is about 60 scholars. But the chief and main thing that imparts an impetus and makes Lockeford the mart and center for the farmers for many miles around, is the presence of three first class wagon manufacturing, and it is safe to say that no more finished, desirable, or cheaper work is done in any other section of the State; and in fact, a great many prefer it to that done elsewhere. We speak from personal experience, having had an occasion to test the mechanical skill of one of those well-known wagon and buggy makers, Benj. Steacey, who, although comparatively young in years, has established for himself an enviable reputation for solid good workmanship, far beyond the limits of Lockeford, San Joaquin county, and even outside of the State; his work is all over the State. It is much to be regretted that land is entirely too high around here; none can be had under \$100 per acre, thus debarring the locality from being settled more rapidly and thickly.—D. W. K.

CARP.—*Independent*: Geo. Moshier, who resides on the Cherokee lane, about six miles from Stockton, has been engaged in the culture of carp for two years past. His first venture was the purchase of 30 yearling fish from Mr. Davis, of Russian river, and of these he got 17 home safely, the rest having died on the way. This was in January, and in May his pond was swarming with little fish, the increase being 5,300. It is generally supposed that carp do not spawn until they are two years old, but Mr. M. brought his fish for yearlings, and supposes that was their age, as none were over six inches long. His pond is 70 ft. in diameter and 6 ft. deep, fed by a mill from the ordinary well water. He is now preparing a pond 550 ft. long by 70 ft. broad, which will be divided into four sections, for keeping the fish of different ages separated. The carp does not eat its spawn or young when properly fed. Corn meal, shorts, bran, hoiled cabbage, potatoes and other vegetables it eats with avidity, and it also thrives on watergrasses, huir clover—and, in fact, it eats everything that a horse or a hog will feed on. The fish is a rapid grower, and at the age of three years some of Mr. M's. fish are 20 inches long.

#### SONOMA.

FLUKES.—*Flag*, Dec. 1: Mr. Geo. Young, of Young Bros. & Cagwin, Alexander valley, tells us that on hutchering a young heifer last week, obtained from a near neighbor, he found the liver infested with flukes, and now comes one of our market men and relates that a heef cow obtained from the same pasture and killed at his slaughter-house, also last week, was infested likewise. The animals were very fat and healthy, the attack of fluke having been but recent. Messrs. Young & Cagwin have lost many sheep from the same fluke.

SALE OF NORMAN HORSES.—*Petaluma Argus*: Steele Bros., of San Luis Obispo, last week purchased of H. Mechem, of this city, a two-year-old Norman filly, by "Duke de Chartres," weighing 1,365 lbs., for \$300. The same parties bought of Wm. Hill a three-year-filly, by the same horse, and about the same weight as the above mentioned filly, for \$275. They also bought of H. Wilsey the Norman stallion "Silver Duke," for about \$2,500.

#### STANISLAUS.

THOROUGH CULTIVATION.—*News*: Improvements in the mode of cultivating the soil still continue in this locality. Second plowing of summer-fallowed lands is now almost the invariable rule, whilst a few replow as often as three and some as many as four plowings. Mr. R. C. Bailey, of the Salida neighborhood, informed us that he was now plowing some of his land before seeding to wheat, the fourth time. Many others are doing the same thing. All of this system is in striking contrast with the mode of cultivation 10 or 12 years ago. Then one half the fields were cultivated each year by simply dragging a brush over the ground and the seed lost the year before allowed to come up volunteer. The brushings were done in some occasions to break down the stubble, and others to more generally scatter the seed lying on the ground. The next year, perhaps, the same land was plowed by gang plows to the depth of three inches with a seed-sower attached, but in front of the plow. Of course, after the third or fourth years of such cultivation, the yield per acre became light even in favorable seasons, and crop failures from what was then termed drouth years were frequent. Under the present more thorough system of cultivation, the yield per acre has doubled and the crops assured with half the rainfall then requisite.

STANISLAUS SHEEP ABROAD.—Mr. A. G. Stonifer, of the Orestima ranch, near Hill's Ferry, in this county, recently sold two-carloads of his fine thoroughbred French merino sheep to parties in Utah. He also sold one carload to be shipped to Wyoming Territory. Mr. S. has a fine flock of thoroughbreds and we are pleased to see that he is finding such ready sale from abroad, thus showing the reputation he has justly gained by his care and energy.

#### VENTURA.

LIMA BEAN GROWING.—*Bakersfield Californian*: Judge Hineer, of Ventura county, describes a remarkable state of prosperity as existing among the farmers of that section. Their crops are principally grain and Lima beans, both of which yield largely, and the latter crop, especially, finds a ready sale at highly remunerative prices, the sunny side of Santa Clara valley being almost entirely devoted to it. This variety of the bean yields largely, needs but little cultivation, and is in all respects easy to manage, but it thrives best in a warm climate and requires a long season. They are planted there in April and are ready to harvest in October. Here, where the heat is greater, they would ripen sooner. The average net result they have given the farmer there, the present season, is \$100 per acre, and they are so rich, prosperous and independent that they look with pity upon men holding official positions and the mercantile class. Freight rates are very low, compared with what they are here, and steamers and sailing vessels do not regulate them upon the principle of all the article will bear. Lands within reasonable distance of the point of embarkation sell for \$150 per acre, and those not so favorably situated, are worth \$60. A single crop generally pays for the land at the latter figure. Merchants have such confidence in farming that no industrious man who engages in the business seems to have any difficulty in getting whatever he needs to go on with. He mentioned the case of a man entirely without resources who, last year, bought 40 acres of



land at \$60 per acre, engaging to make a payment this year to the extent of his crop. He planted Lima beans, and this year the gross result was \$122 per acre, and he paid for his land and had a large surplus.

### OREGON.

VALUE OF IMPROVEMENT IN SHEEP.—J. Minto in *Willamette Farmer*: A rather amusing incident occurred between Mr. Frazer and one of his wool-growing neighbors (Mr. J. Despain), who has also been a fairly successful wool grower, though pursuing a different course from Mr. Frazer. At the commencement of their neighborhood Mr. Despain was inclined to make fun of Mr. Frazer's "little black sheep," as he called the thoroughbred rams. He believed in "noses" (numbers), without much regard to quality and relative weight of fleece. At the end of three years Mr. Frazer sheared 1,000 lbs. more fleece wool from 600 less sheep than Mr. Despain sheared, and sold his clip at one cent per pound higher price, on the same date to the same party. At the end of 10 years of breeding towards the Merino, Mr. Frazer informed me that from 1,500 head of wethers he clipped an average of 11 lbs. of fleece. These facts being well known, they enable Mr. Frazer to sell 800 grade rams in one season almost without effort. But the most important fact should not be lost sight of, which is that the excellence and high rate of profit was secured by persistent breeding to the best attainable thoroughbreds.

### News in Brief.

THE Land League is being reorganized under the name of the Political Prisoners' Aid Society.

THE present winter promises to be a very active one as regards mining operations in southern Oregon.

THIRTY thousand tons of wheat have already been exported from Los Angeles county the present year.

E. H. SHOEMAKER has been appointed Assistant Superintendent of the North Pacific Coast railroad.

It appears that \$13,323,000 has already been expended on the Brooklyn bridge, and \$3,000,000 more is necessary.

DURING the month of Nov., the receipts of the Harbor Commissioners' office from the wharves, were \$45,396 31.

THE hooks, machinery, statuary and other movable property of the University, valued at \$300,000, are being inventoried.

SIR JAMES PAGET, the eminent London surgeon, has been suffering from blood poisoning, which is attributed to vaccination.

SENATOR SAUNDERS recently introduced a bill to extend the northern boundary of Nebraska, to take in 600,000 acres of Montana.

A GOLD brick weighing \$28,000 was received at Oroville last week, from the Spring Valley hydraulic company, the result of a partial cleanup.

FIFTEEN THOUSAND young salmon were turned loose in the Alameda and Laguna creeks, a few days ago, by direction of the U. S. Fish Commission.

DURING the rain of Sunday night a large fragment of the sandstone coping about two ft. in diameter, fell from the Mint building to the sidewalk.

THE Ferris cross-levée on the lower end of Roberts island is completed, and 12,000 acres are now secure against any flood. All will be put into grain.

THE electric tower at San Jose is fast approaching completion. Seen from a distance it looms up distinctly outlined far above the church spires of the city.

A DECREE has been published in Russia providing that all trials for crimes against the State will, as being specially calculated to excite the people, be held with closed doors.

IN Sierra county, snow-shoes are already the only means of communication between many mining camps. In that locality men, women and children all have snow-shoes, and use them expertly.

It is reported evictions will shortly be made on the islands along the coast of Ireland. The most important of these is Dursey, the inhabitants of which are said to be determined to resist, and are possessed of dynamite.

THEODORE S. FANTON, the stage-driver millionaire who recently died in Utica, N. Y., left \$83,000 to a number of societies, including local Masonic Lodges, the American Bible Society and the Presbyterian Home Missions.

THE Mayor of Chicago has vetoed the ordinance allowing the Mutual Union Telegraph Co. to string wires on poles through the streets, and the Council, by a vote of 22 yeas to 14 nays, refused to pass it over the veto.

THE Fresno *Expositor* reports that a change has been made in the route of the California Central railroad, and it will now reach the Southern Pacific railroad south of Madera, following in part the old Mammoth City trail.

THE new Government buildings at Camp Mohave, A. T., are almost completed. They are built in a very substantial manner and calculated to hold out against the storms that usually destroy them, the roofs being fastened to the walls with heavy iron bolts.

ACCORDING to the *Albuquerque*, N. M., *Journal*, the Atchison, Topeka, and Santa Fe railroad is experiencing a great deal of loss and annoyance by having freight cars broken into and robbed all along the line. The thefts are very annoying, not only to the company but to the owners of the goods lost, although the company assumes to pay all losses.

### The Phylloxera in France.

Out of 2,300,000 hectares of vineyards throughout the country, the phylloxera has utterly destroyed 500,000, while as much again is suffering from its attacks, and will have, sooner or later, to be rooted up. The industrial capital thus rendered valueless is estimated at not less than a milliard, while it is calculated that at least half a million of persons occupied as *vignerons* and laborers are either without employment, or have had to take what they can get in the ordinary ranks of agriculture. Some of the departments, indeed, have entirely lost their former industrial importance arising from wine growing. Herault, which possessed, prior to the appearance of the phylloxera, 180,000 hectares of vineyards, has lost 131,000; Gard has lost 97,800 hectares out of 98,500; Var, 50,000 out of 90,000, etc.; and, in point of fact, the wine trade may be said to have practically disappeared from Gard, Herault, Ardeche, Bouches-du-Rhone, Vaucluse, and Drome, while it is seriously compromised in Var, Lot-et-Garonne, the two Charentes and Gironde. Considering the gigantic misfortune which has overtaken this great industry, it is somewhat surprising that efforts have not been made to find the remedy on a larger scale than they have, for, according to the following table, but a small proportion of the vineyard acreage has been subjected to treatment:

Department.	Submersion.	Sulphuret of Carbon.	Sulpho-carbonates.
Gironde	2,800	1,200	250
Herault	1,590	1,875	869
Bouches-du-Rhone	2,500	120	49
Gard	535	45	6
Vaucluse	430	59	33
Other parts of France	8,093	5,547	1,472
Total	15,948	8,846	2,679

Thus, out of nearly 1,000,000 acres of vines

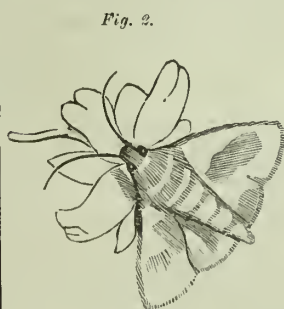


Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 7.



Fig. 8.



Fig. 9.

TRAPPED MOTHS AND PHYSIANTHUS BLOSSOM DISSECTED.—See First Page; attacked, only 27 473 have been experimented upon.—*London Farmer*.

F. W. HATCH, Secretary of the California Board of Health, writes to the St. Louis Health Commissioner that California has quarantined against Chicago, and that trains on the Central Pacific railroad have introduced small-pox in five counties along the line in California, and in every case the disease can be traced to Chicago arrivals. The small-pox is very prevalent there, and has broken out in many first-class localities of late.

FRUIT FARM FOR SALE.—Attention is directed to the advertisement of G. W. McGrew, of a fruit farm for sale near Los Gatos, a region which has become very popular with home seekers. Mr. McGrew's announcement is well worth looking into. He had such advantages in starting his place that it must be in desirable condition. It is nicely located as to climate, view, etc.

F. R. GIRARD, 332 Sutter street, S. F. The largest stock of Pianos and Organs in the city. Large new 8 step Organ for \$95 cash. New Upright Pianos, Hartman & Co., for \$275. The celebrated Wheelock Piano. No agents employed. No commission paid. All pianos sold at factory prices, and sent on test trial in the country; if not satisfactory, to be returned at his cost. Write to Mr. F. R. Girard, 332 Sutter street for catalogue. Pianos sold on installments to good parties.

MANSON HOUSE.—First-class in every respect, and reasonable prices.—When you visit Stockton stop at the Manson House. Free Coach to the house.

J. H. CROSS, Proprietor.

ANNUAL STATISTICIAN of 1881.—"It is the most complete and accurate work of its kind in the world."—S. F. *Call*. Address L. P. McCarty, 816 California st. Price, \$4.

### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents

Front St. Elevator  
DEWEY & CO.  
Market St.

Patent Agency and Newspaper Offices.

Dewey & Co.'s Patent Agency and the business offices of the Mining and Scientific Press, Pacific Rural Press, Pacific States Watchman, and the Fraternal Record, are now favorably situated at No. 252 Market St. Elevator entrance, No. 12 Front St., S. F.

BOOKSELLERS, STATIONERS, ETC.—Messrs. Payot, Upham & Co., No. 204 Sansome Street, are one of the oldest, most enterprising and reliable firms in the book and stationery trade in San Francisco. Scientific, industrial and foreign publications are a specialty with them. They are also noted for their first quality of blank book and fine stationery line of goods.

### Business Offices and Sunny Rooms to Let.

We have some desirable rooms to let adjoining the offices of this paper which will be rented on favorable terms. Stair entrance, No. 252 Market St. Elevator, No. 12 Front St. Parties wishing offices, etc., will do well to call and see them.

DEWEY & CO.

LIVERY STABLE IN OAKLAND.—We call the attention of farmers visiting Oakland, and others to hire teams or

### Meteorological Summary for the Month of November, 1881.

Date	Daily Mean Barom.	Daily Mean Temp.	Daily Mean Humidity	Prevailing Direction of Wind	Daily Rain-fall.
1.....	30.183	58.3	49.3	NW	....
2.....	30.232	58.7	53.0	NW	....
3.....	30.133	58.0	58.0	NW	....
4.....	30.021	57.3	64.3	N	....
5.....	30.111	56.7	75.7	W	....
6.....	30.166	56.3	70.3	W	....
7.....	30.185	56.3	48.7	NW	....
8.....	30.172	56.3	40.0	NW	....
9.....	30.275	56.7	40.3	N	....
10.....	30.117	58.0	43.0	N	....
11.....	30.226	54.3	51.3	NW	....
12.....	30.220	53.3	76.3	W	....
13.....	30.109	54.7	79.7	W	....
14.....	30.050	55.7	85.3	S	....
15.....	29.952	53.3	86.3	W	1.34
16.....	30.036	50.7	70.3	S	.32
17.....	30.202	47.7	67.3	NW	....
18.....	30.411	48.3	62.0	NW	....
19.....	30.275	48.0	67.0	NW	....
20.....	30.192	49.9	69.3	N	....
21.....	30.134	53.8	59.7	NE	....
22.....	30.203	53.0	64.0	N	....
23.....	30.219	53.7	60.7	N	....
24.....	30.205	54.0	61.7	N	....
25.....	30.198	54.7	57.3	W	....
26.....	30.198	54.3	61.0	NW	....
27.....	30.179	54.3	76.3	W	....
28.....	30.051	53.3	89.7	SE	.12
29.....	30.015	54.0	58.7	NE	....
30.....	30.008	52.7	70.3	NW	.10
Sums.....	904.653	1,626.3	1,916.8		1.94
Means.....	30.155	54.2	63.9	NW	....

### General Items.

Highest barometer, 30.451, Nov. 18th, at 7:58 A. M.; lowest barometer, 29.920, Nov. 15th, at 3:58 P. M.; monthly range of barometer, .531; highest daily average barometer, 30.411, Nov. 18th; lowest daily average barometer, 29.952, Nov. 15th; highest temperature, 66°, Nov. 1st, 21 and 3d; lowest temperature, 44°, Nov. 19th; monthly range of temperature, 22°; greatest daily range of temperature, 15°, Nov. 23d; least daily range of temperature, 5°, Nov. 30th; highest daily average of temperature, 58.7°, Nov. 2d; lowest daily average of temperature, 47.7°, Nov. 17th; mean of maximum temperature, 60.4°; mean of minimum temperature, 50.8°; mean daily range of temperature, 10.6°; highest observed relative humidity, 93°, Nov. 14th, 15th and 28th; lowest observed relative humidity, 17°, Nov. 10th; highest daily average of relative humidity, 59.7°, Nov. 28th; lowest daily average of relative humidity, 40°, Nov. 8th; average cloudiness during month, 19.70%; total movement of air, 4,771 miles; greatest daily movement of air, 462 miles, Nov. 9th; least daily movement of air, 64 miles, Nov. 22d; average daily movement of air, 159 miles; average hourly velocity of wind, 6.6 miles; maximum hourly velocity of wind, and direction, 29 miles, north, Nov. 8th; average hourly velocity and prevailing direction of wind at 3:58 A. M., 5 miles, northwest; average hourly velocity and prevailing direction of wind at 11:58 A. M., 7.9 miles, north; average hourly velocity and prevailing direction of wind at 7:58 P. M., 5 miles, northwest; dates of solar halos, Nov. 5th, 12th, 26th and 27th; dates of lunar halos, Nov. 26th and 29th; dates of frosts, Nov. 8th, 11th, 12th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th and 26th.

NELSON GOROM, Serg't Signal Corps, U. S. A.

### AVERAGE TEMPERATURE AND RELATIVE HUMIDITY AT THE DIFFERENT HOURS.

Time.	Average Temperature	Average Dew Point.	Average Relative Humidity—Per Cent
3 58 A. M.	50.6	42.6	75.5
7 58 A. M.	51.2	41.7	72.0
11 58 A. M.	57.5	38.2	51.8
3 58 P. M.	58.5	40.7	53.8
7 58 P. M.	54.5	42.0	64.5

During the month there were 23 clear, 1 fair, 1 cloudy, 1 foggy and 4 rainy days.

Tabular statement showing the mean barometer, mean temperature, rainfall, etc., for the past month and a comparison with preceding years:

YEARS.	Mean Barometer	Mean Temperature	Mean Relative Humidity	Maximum Temperature	Minimum Temperature	Prevailing Wind	Rainfall	Since July 1st.
1871.....	30.073	54.9	68.1	78	45	N	2.81	2.90
1872.....	30.148	56.0	65.1	67	44	NW	2.79	2.95
1873.....	30.089	57.7	67.1	72	47	SW	1.16	2.08
1874.....	30.056	56.6	76.8	69	44	SW	6.55	9.26
1875.....	30.022	57.4	79.4	68	49	SW	7.27	7.51
1876.....	30.089	58.5	69.1	70	50	N	2.54	4.01
1877.....	30.114	56.9	73.2	69	49	N	1.57	2.24
1878.....	30.098	57.1	74.4	68	47	W	5.27	2.40
1879.....	30.114	54.4	71.0	65	45	N	4.03	4.84
1880.....	30.154	53.9	58.4	75	41	N	.33	.38
1881.....	30.155	54.2	63.9	66	44	NW	1.94	2.73
Means, etc.....	30.092	56.1	69.7	69.7	45.9	NW	2.66	3.75

### S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Dec. 7, 1881.

The markets have been quiet and values not subject to much variation. Wheat has, however, ruled low and weak in tone, but holders are now expecting better things in view of better reports from abroad. The latest from abroad is as follows:

LIVERPOOL, Dec. 6.—Wheat: California spot lots, 10s 8d to 11s 1d. Cargo lots are firmer, at 50s 6d for just shipped. 52s 6d for nearly due, and 53s for off coast.

#### Freights and Charters.

The latest spot Wheat charters reported are the British ship Cambridge, 1,135 tons, to Cork for orders, £3 10s ship A. J. Fuller, 1,818 tons, Liverpool direct, £3 7s 6d, short lay days, and ship Rembrandt, 1,414 tons, Cork for orders, to Liverpool, Havre or Antwerp, £3 11s 6d.

#### Eastern Wool Markets.

NEW YORK, Dec. 3.—In Wool the holders of domestic do not appear to weaken much in their faith, and the samples shown are in most cases limited in value and well up to the farmers' line of figures. This is especially noticeable upon the better classes of stock, but the feeling

(CONTINUED ON PAGE 396.)

### Annual Meeting.

The regular annual meeting of the stockholders of the Grangers' Bank of California and the election of Directors for the ensuing year will take place at the office of the Bank, in the City of San Francisco, State of California, on Tuesday, the 10th day of January, 1882, at 1 o'clock P. M.

ALBERT MONTPELLIER,

December 1, 1881. Cashier and Manager.

ST. JAMES HOTEL. First-class in every respect. When you go to San Jose, take free coach to the St. James. TYLER BEACH, Proprietor.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIDGOUT & Co., 10 Barclay St., N. Y.

We refer our readers to Mr. Benjamin Steacey's advertisement in our business columns.





### Io Victis.

I sing the hymn of the conquered, who fell in the battle of life—  
The hymn of the wounded, the beaten, who died overwhelmed in the strife;  
Not the jubilant song of the victors, for whom the resounding acclaim  
Of nations was lifted in chorus, whose brows wore the chaplet of fame—  
But the hymn of the low and the humble, the weary, the broken in heart,  
Who strove and who failed, acting bravely a silent and desperate part;  
Whose youth bore no flower in its branches, whose hopes burned in ashes away,  
From whose hands slipped the prize they had grasped at, who stood at the dying day  
With the work of their life all around them, unpitied, unheeded, alone;  
With death sweetening down o'er their failure, and all but their faith overthrown.

While the voice of the world shouts its chorus, its psalm for those who have won—  
While the trumpet is sounding triumphant, and high to the breeze and the sun  
Gay banners are waving, hands clapping, and hurrying feet  
Thronging after the laurel-crowned victors—I stand on the field of defeat  
In the shadow, 'mongst those who are fallen, and wounded and dying—and there  
Chant a requiem low, place my hand on their pain-knotted brows, breathe a prayer,  
Fold the hand that is helpless, and whisper, "They only the victory win,  
Who have fought the good fight, and have vanquished the demon that tempts us within;  
Who have held to their faith unswayed by the prizes the world holds on high;  
Who have dared for a high cause to suffer, resist, fight—if need be, to die."

Speak, history! Who are life's victors? Unroll thy long annals and say—  
Are they those whom the world called the victors, who won the success of a day?  
The Martyrs, or Nero? The Spartans who fell at Thermopylae's trust,  
Or the Persians and Xerxes? His judges, or Socrates? Pilate or Christ?  
W. W. Story.

### Sabbath Evening Thoughts.

EDITORS PRESS:—We are recipients of nature's bounty of a sabbath morn. Born in the realm of love and wisdom, its mission shall be co-equal with time itself. We have also a noon, the crowning glory of creation. Nature in her positive mood proclaims her meridian, splendor and power. It is no wonder why the ancients worshipped the king of day as the highest visible emblem of divine royalty. Regularly the sun rises from the east, chasing the night shadows into oblivion with his life-giving rays. But when his noon day mission is ended, gradually he fades away to the west, creating a theme for poet and painter in the golden tints of his setting.

Sabbath evening: The very name exhumes from memory scenes and incidents from the long forgotten past. Sabbath evening has held a place in our affections for 60 years. The church bell still tolls in the chambers of memory. The same faces greet us as we enter the sacred temple of worship. The holy man pours forth his message of "Love and good will to mankind." The last blessing is given, and the spiritually fed retire with a warmth and glow of soul which the truly good can only enjoy.

Anon we retire to the solitudes of nature, whose voice attunes the soul to meditation. The clear purring brooks reflect images of weird and spiritual beauty. The mingled sounds of insect life and feathered throng adding to the spirit worship of the beautiful and grand in nature, and the infinites wisdom displayed by nature's architect.

What a charm Sabbath eve throws around these scenes from contact and reflection. The setting sun illumines the mountain tops with a golden spray of light, as a departing signal of its early return. As the gloom approaches to darkness, we gather around the old fireplace to converse upon the sacred things belonging to this day of rest. No one dared question the reality of God and revealed religion. The patriarch read and expounded the scriptures, sang the simple melodies of a religious cast, then all bowed in prayer, and such simple, earnest prayer, so very rarely ascend to heaven's altar in this day of progressive wisdom. After such Sabbath evenings, spent in earnest religious converse and prayer, can you doubt about the sweetness of a Sabbath night's rest in the olden time, or the refreshed spirit renewed in mental and physical energies to cope with life's problems for the balance of the week. Surely, such a life, grand in its purity and simplicity, was enough to inspire the immortal Burns to pen his "Cotter's Saturday night," all of which is true to life and experience.

This was in the morn of life. We, too, have changed. Who can experience all the changes from morning's springtime of life to this twilight of its setting without experiencing many changes, physically, morally and spiritually? But as the rays of the morning sun are the most genial, so are the memories of life's morn to the weary traveler as he approaches the Sab-

bath morn of eternal rest. Sabbath eve is a holy hour. The heart is filled with good thoughts and charitable deeds, which should find expression, so that the law of compensation may return a hundred fold. The rural population enjoys nature and communion with nature's God, more than those living in cities; but the refining influences of cities cannot be ignored. God and goodness are not confined to locality or condition. The eternity of space is God's throne. Every soul born to "eternal life" is an expression of that divine presence. "Our Father" is spoken by all His children, and I accept "the brotherhood of man and Fatherhood of God."

I would that the whole family of God could enjoy the true happiness of a holy Sabbath evening. The morn of life may be calm and serene; the noon full of darkness and thunder mutterings, the evening clad in despair and sadness. We would banish such a picture from the record of passing events. But is it not true that the sun may shine with a noonday splendor in vain? The spirit of man is capable of eclipse. Violation of divine law leads to sorrow and suffering, premature death and retribution; for is it not written, "To sin is to suffer?" Would that every human and immortal soul could live so as to enjoy the splendors of life's setting sun; for set it will, sooner or later. It is by little Nature rears her dome of myriad gems to attract us heavenward. It is by little we light up the temple of the undying spirit. It is also by little we create shadows which may lead us to a worse than Egyptian darkness. Light creates life, warmth and true happiness. Darkness produces death, despair and a prison of gloom for the soul. The ending of our short day is measured by the light begotten of good deeds performed in the name of Him who reigneth supreme, for ever. Amen! JOHN TAYLOR.

Chinese Camp, Nov. 16, 1881.

### Time.

[Written for the RURAL PRESS by S. B. McCORMICK.]

Time is an article that everybody needs, and yet it is a subject that is not properly understood by the great majority of people. With your permission, I shall attempt to elucidate the subject of time, not that I can make any more of it, but that it may the better divided to suit the farmer.

Sideral time is measured by some fixed star, and thus measured, gives 366 days to the year. The nearest fixed star is billions of miles away, while the sun is within the earth's orbit.

Solar time is measured by the daily and yearly motion of the earth, which gains a day on sideral time by turning once on its axis while going round the sun, without causing the distinction between light and darkness. If the earth's orbit were a perfect circle, then sun time and true clock time would always agree.

The elliptical form of the earth's orbit is one cause of the sun being sometimes fast and sometimes slow. The sun being in one focus is another cause, while the rapid motion of the earth in or near its perihelion, and its slower motion in or nearer its aphelion, is the third cause.

From September to Christmas the sun is fast, sometimes as much as 16 minutes, because it is passing along one side of an ellipse, and will present the same meridian to the sun sooner each day—that is, it makes a revolution in less than 24 hours. From Christmas until the middle of April the sun is slow because, in its perihelion, or near it, it is passing the sharp curve of its orbit, and also moving farther in said orbit, in a given time. It may be slow 14 minutes.

From the middle of April until the middle of June it is fast, sometimes four minutes, and from the middle of June until September it is slow again, the maximum being about six minutes, both for the reasons above stated.

Clock time is that which divides the year into 365 equal parts, the same that the sun would do, if the earth's orbit were a perfect circle. A clock may keep exact time from Jan. 1st, 1881, until Jan. 1st, 1882, and yet be with the sun only four times in the entire year. Noon will not be when the sun is on the meridian, and hence, this time does not suit the farmer.

Railroad time is equated time; if the road runs north and south, there is no need of equating the time; if it runs east and west the time must be equated about every 1,000 miles, or 1,040 miles makes one hour of difference in the time, consequently if railroad men wish to carry the same time, the Eastern man would have to set his watch 30 minutes slow, and the Western man would have to set his watch 30 minutes fast, so when they would meet their timepieces would agree. But this equated time does not suit the farmer, unless he lives on or near the meridian by which the time is equated.

What does suit the farmer? Time regulated by a noon mark. This divides the day, and every day into two equal parts, measured from sun-up to sun-down. Set two posts up on a clear night, to range with the north star, or get a compass, and make a noon mark. The north star has an azimuth, but the variation does not amount to much, and a noon mark made by posts will be as accurate as one made by a compass, unless one knows the exact variation of the needle for his meridian.

To be strictly accurate, get a work on surveying, or navigation, and from the tables get the true variation of the needle, and the true azimuth of the north star, and make a noon mark which can be seen in our California skies at

least 300 days during each year. Regulate the clocks, fast or slow, to agree with this noon-mark. This will give the granger the kind of time he really needs. It brings daylight, sunrise, noon, sunset, and twilight, all, to suit his business. People who travel or who live in cities may need other time, but the farmer needs the division of time that the natural motion of sun and earth make.

Turlock, Stanislaus Co., Cal.

### From Girlhood to Womanhood.

There are two periods in the moral and intellectual development of a girl which cause the profoundest anxiety to a mother. At five years old, or thereabouts, the period of babyhood is past, while the period of girlhood is not yet reached, and between the two comes a time of anarchy and chaos. The little soul is now bursting its shackles, and trying to readjust itself to a new condition. The child is ceasing to be a mere pet and plaything, and is beginning to live an individual life. Nothing is more common than to see a docile, well-trained child suddenly develop, without any apparent reason, a willfulness and insubordination entirely at variance with its previous habits. The mother, who has been dreaming of a sweet daughter who is to walk beside her all her days, making life fragrant and beautiful to her by sharing with her all her youthful hopes and joys and trusts, turns heart-sick at the naughtiness of the half-fledged termagant. For it is the good, cherubic little girl who usually manifests the change; a spoiled child is so thoroughly disagreeable all the while that any accession of badness is not noticeable. A great deal of self-commendation and unhappy foreboding would be spared the mother if she would only recognize that much of what is so very unlovely is not essentially wrong—that it is merely what is good in a state of unripeness. The fragrant blossom has withered and fallen away, leaving in its place the hard and acid embryo fruit. A wise mother will be very careful to distinguish between those qualities which promise evil in their developed form and those which are mere crudities, and her aim will be to foster all the unfolded possibilities in her child's nature, and help to bring them to a beautiful maturity.

Every one knows how tiresome and unattractive a little girl usually is when she has outgrown her infantile sweetness. The little impertinences, the saucy retorts and unflattering personalities which have won for her smiles and caresses, or at worst an admiring reproof, all at once become intolerable, and are rebuked with acerbity. The very ways which she has been taught to consider charming become subjects for displeasure when the baby roundness and dimples are gone. Her sense of justice is outraged, and the unwarped sense of justice in a child is often very strong. She becomes a little Ishmael, her hand against every man's, and every man's hand against hers. In a certain sense this can scarcely be avoided, but, if the mother's love be unfailing and her sympathy always ready, she can keep sweet the fountain of love and trust which, without that refuge, might become very bitter. Just when this new life is unfolded, a mother's wise care is most earnestly needed. The soul which has seemed to draw its life from hers is beginning to lead an individual existence. It is to the perfect development of this individuality that the mother should bend all her strength. Each human soul contains within itself the germ of its own life. To make of it all that may be made, the mother should only guide the growth, leaving it free within the limits of moral probity to grow into its fullest possibility. She cannot lop it off here and there, or suppress its growth yonder without maiming and stultifying the whole nature.

The dangerous quicksands of this period safely passed, the mother begins to breathe freely again. She again begins to see visions, and to dream dreams, till the second and more serious season of anarchy comes to try her faith. Childhood is over and womanhood is yet far away. The whole being, moral, intellectual and physical, is in a state of ferment. New motives, new principles, new emotions are battling for predominance, and, until these relative claims are adjusted, no peace can be hoped for. This second chaotic period—which comes at about 14 years of age—lasts longer, and brings a more hopeless and radical overturning of that which had seemed so firmly established. If a mother's care were needed in the earlier change, it is infinitely more needed now. New traits seem to be starting into life, new developments are manifested. Changes, not only in purposes and ideas are taking place, but changes in temperament, in disposition, in tone, are manifesting themselves. There is need of a wise hand which shall guide without galling, a tender heart which shall sustain without compromising with evil. To aid in the conflict and insure victory, nothing will help a mother more surely, nor direct her more easily in this difficult task, than the recognition that this also is merely a stage of growth necessary to a full and perfect development of her child's nature, and that to her is intrusted the privilege of fostering the growth while she shall be looking to the end with the prophetic eye of love.—Century Magazine.

An old lady who does not believe in the co-education of the sexes, was rejected the other day to find that, although the girls and boys in a large seminary seemed to be playing some sort of a game together, the school authorities had wisely hung a long net between them.

### Mrs. Carlyle as a Housekeeper.

Mr. Carlyle's bleak moorland homestead, "16 miles from anywhere," offered his bride no facilities for quening it in society. The young wife quened it in another way—conquered her woman's kingdom there down to its last inch of territory. Like this daughter of many an excellent manager, she had not been trained by her mother to any practical acquaintances with the domestic arts. The whole field of housewifery was a term incognita to her, and on good housewifery her husband's comfort and health and power to work depended. That was motive enough for her; that dignified the meanest details, and made her find a charm in all she did. Just as she had set herself when a child to learn Latin, so she set herself now to learn and to practice all that belonged to the many-sided ministry of a wife, its material as well as its spiritual part. Cervantes or Tasso might be a pleasant diversion to the tired thinker who had all the day long been earning his bread in the sweat of his brain and of his heart; but for a dyspeptic workman the bread itself must be of perfect quality, and bakers and servants did not make it so. Good brain work—so curiously is thinking man compounded—depends so much on good digestion, and this again on wholesome fars, of which one prime requisite is honest, well-made bread, such as it is the part of a true housewife to provide. The young lady who could master "Don Quixote" in the original was likely, in default of other sources of supply, to be able to make good bread herself if she gave her mind to it, and Mrs. Carlyle did give her mind to it. There is a world of meaning in the story told us of the making of her first brown loaf, of her doubts as to the result, and how she sat down by the oven door, "like Cellini with his Persens," after she had put it in to bake. The essence of true womanhood—of true ladyhood was there, homely as the incident to unpurged eyes may seem. She had her reward, too. The loaf came out all that a loaf ought to be—crusty, and light, and sweet; "and from that hour," says the chronicler, "we never wanted excellent bread." One corner of her domain, and that no unimportant one either, was conquered, and she had earned the right to bear in her household the good old Saxon title, far gone now from its original meaning, "Lady;" the last-dig, loaf-giver.

### Proverbial Philosophy.

Worry is the mildew of life.  
There is no dignity in idleness.  
Impudence is not independence.  
Do not be impatient for notoriety.  
There is no calamity like ignorance.  
This world belongs to the energetic.  
Do not despise another because of poverty.  
You can be decided without being offensive.  
A beautiful thought is a mental sun-beam.  
Do not hold the opinion of others in contempt.

It is not so hard to earn money as to spend it well.  
Do not occupy time or room that belongs to another.

The wish of our parents should be lovingly regarded.

Idleness is the refuge of weak minds, and the holiday of fools.

Do not sow wild oats unless you wish to reap that kind of harvest.

In these days we fight for ideas, and newspapers are our fortresses.

It is a good rule to find out whether it is bread or stone before you bite it.

Getting married is like buying kid gloves, time and wear prove the bargain.

Train yourself to observation, and make all men and circumstances your teacher.

To copy the weakness of a great man will not prove that you possess his excellence.

SHORT WORDS.—Horatio Seymour dwells thus strongly on the use of short words:—We must not only think in words, but we must also try to use the best words, and those which in speech will put what is in our mind into the minds of others. This is the great art which those must gain who wish to teach in the school, the church, at the bar, or through the press. To do this in the right way they should use the short words which we learn in early life, and which have the same sense to all classes of men. The English of our Bible is good. Now and then some long words are found and they always hurt the verses in which you find them. Take that which says, "O, ye generation of vipers, who hath warned you to flee from the wrath to come?" There is one long word which should not be in it namely, "generation." In the old version this word "brood" is used. Read the verse again with this term, and you feel its full force. "O, ye viper's brood, who hath warned you to flee from the wrath to come?" Crime sometimes does not look like crime when it is set before us in the many folds of a long word. When a man steals, and we call it "defalcation," we are at a loss to know if it is a blunder or a crime. If he does not tell the truth, and we are told that it is a case of "prevarication," it takes us some time to know just what he should think of it. No man will ever cheat himself into wrongdoing, nor will he be at a loss to judge of others, if he thinks and speaks of acts in clear, crisp terms. It is a good rule, if one is at a loss to know if an act is right or wrong, to write it down in short, straight-out English.



## Chaff.

INDUCTIVE.—Officer—"How's this, Murphy? The sergeant complains that you called him names?" Private Murphy—"Plaze, surr, I niver called him anny names at all. All I said was: 'Sergeant,' says I, 'some of us ought to be in a menagerie!'"

A TOPPER.—Small yet energetic snip: "Cheviot suit, sir? Yes, sir." (Measures him. Result: 6 ft. 2 inches, 40 inches round the chest). "Nothing quite your size, sir," among the readies, but will you please to step up to our designing department and see our head architect?"

ONCE, when somewhat under the influence of drink, a certain citizen of Windham, Conn., wandered off into the fields and went to sleep. On rising he forgot to put on his old cocked hat. Some boys found it and took it to him, thinking to cover him with confusion. "In which lot did you find it?" he inquired blandly. "In Mr. White's pasture, near the barn." "Well, boys, go take it right back, that is my place to keep it."

## What Volcanoes are Not.

"What is a volcano?" This is a familiar question, often addressed to us in our youth, which "Catechisms of Universal Knowledge" and similar school manuals have taught us to reply to in some such terms as the following: "A volcano is a burning mountain, from the summit of which issue smoke and flames." This description, says Prof. Judd, is not merely incomplete and inadequate as a whole, but each individual proposition of which it is made up is grossly inadequate and, what is worse, per-versely misleading. In the first place, the action which takes place at volcanoes is not "burning," or combustion, and bears, indeed, no relation whatever to that well-known process. Nor are volcanoes necessarily "mountains" at all; essentially, they are just the reverse—namely, holes in the earth's crust, or outer portion, by means of which a communication is kept up between the surface and the interior of our globe. When mountains do exist at centers of volcanic activity, they are simply the heaps of materials thrown out of these holes, and must, therefore, be regarded not as the causes but as the consequences of volcanic action. Neither does this action always take place at the "summits" of volcanic mountains when such exist, for eruptions occur quite as frequently on their sides or at their base. That, too, which popular fancy regards as "smoke" is really condensing steam or watery vapor, and the supposed raging "flames" are nothing more than the glowing light of a mass of molten material reflected from these vapor-clouds.

The name of volcano has been borrowed from the mountain Vulcano, in the Lipari islands, where the ancients believed that Hephaestus, or Vulcan, had his forge. Volcanic phenomena have been at all times regarded with a superstitious awe, which has resulted in the generation of such myths as the one just mentioned, or of that in which Etna was said to have been formed by the mountains under which an angry god had buried the rebellious Typhon. These stories changed their form, but not their essence, under a Christian dispensation, and Vulcano became regarded as the place of punishment of the Arian Emperor Theodosius, and Etna as that of Anne Boleyn, who had sinned by perverting the faith of King Henry VIII.—From "Volcanoes, their Action and Distribution," in *Popular Science Monthly*.

HOUSE-CLEANING.—The departure of the sociable, but troublesome fly is, in most households, the signal for the autumnal house-cleaning, and few of us are sorry when that signal is given. The going of this friendly insect may be hastened by opening doors and windows early on these cool mornings and chilling the little animals, when they are easily swept into a dustpan and destroyed. As the fly goes out stoves come in, and the charms of putting them up make us forget for a time summer annoyances. Everybody knows, or ought to know, that if stoves are blackened when entirely cold the operation does not need repetition for a long time, and if the zinc under them is cleaned before it is put down, instead of afterward, the work is easier. This is done by washing them with a handmop dipped in diluted sulphuric acid, one part of acid to five of water, then rinsing them, and polishing them with polishing powder of most any sort. If the zincs are painted they can be wiped off easily, and a deal of work saved. Unless rooms are very much used, carpets need not be taken up oftener than once a year. A thorough sweeping followed by wiping them with a cloth wrung from clear water will remove the dust quite thoroughly. Ammonia and water brighten the colors and take out spots. Moist sawdust or pieces of wet newspapers scattered over the carpet will gather the dust. Some housekeepers sprinkle fine salt on their carpets and then sweep them. Painting and calomining are best done in the spring. Hard-finished walls may be washed with soap-suds and wiped dry. A bit of pumice stone will remove stains from them. White paint may be washed with ammonia water or with whiting and water, which is not so trying to the hands as ammonia water. Grained work should be washed with cold tea and wiped with a soft flannel cloth. For washing windows and picture glass use soft flannel cloths with soap-suds, and after wiping dry polish with a cham-ois leather.

## Young Folks' Column.



## The Best That I Can.

"I cannot do much," said a little star,  
"To make the dark world bright!  
My silvery beams cannot struggle far,  
Through the folding gloom of night!  
But I'm only part of God's great plan,  
And I'll cheerfully do the best that I can!"

"What is the use," said a fleecy cloud,  
"Of those few drops that I hold?  
They will hardly bend the lily proud,  
Though caught in her cup of gold!  
Yet I am part of God's great plan,  
So my treasures I'll give as well as I can!"

A child went merrily forth to play,  
But a thought like a silver thread,  
Kept winding in and out all day,  
Through the happy golden head;  
Mother said: "Darling, do all you can?  
For you are a part of God's great plan?"

She knew no more than the gleaming star,  
Nor the cloud with its chalice full!  
How, why, and for what, all strange things were?  
She was only a child at school!  
But she thought, "It is part of God's great plan,  
That even I should do all that I can!"

So she helped a younger child along,  
When the road was rough to the feet,  
And she sang from the heart a little song,  
That we all thought passing sweet;  
And her father, a weary, toll-worn man,  
Said I, "I, too, will do the best I can."

Our best! Ah! children, the best of us,  
Must hide our faces away,  
When the Lord of the vineyard comes to look  
At our task at the close of day!  
But for strength from above, 'tis the Master's plan,  
We'll pray, and we'll do the best that we can.

## The Red Chipmunk.

I don't believe that Minnie was a bit bigger than you are, although, of course, I don't know how big that is. Anyway, she was old enough to take a basket one day and go out to the woods back of the house for some nuts. There were lots of them on the ground already to be picked up, and in just about 14 minutes the basket was half full. What do you think of that? Was Minnie smart, or wasn't she? That's what I want to know.

But I can tell you one thing, and that is that she was a pretty tired little girl by this time, and thought she'd rest a little while down by the brook. When she came back to pick up more nuts she thought she saw the cover of the basket move, and the next minute, pop! came a little nose right out near the handle, and what do you suppose that nose belonged to? To tell the truth, Minnie didn't know any better than you do, so she ran home with the basket, holding down the cover with one hand and her hat on her head with the other.

"Why, it's a chipmunk!" said mamma, as she peeped into the basket, "a little red chipmunk, as sure as I'm alive. He's very fond of nuts, you know, and so he jumped into the basket to get a whole lot, and take them, one at a time, to his home in the tree."

Papa came home soon after this, and put some slats over a large box, after Minnie had made a nest of soft cotton for the chipmunk in one corner.

But the next morning the box was empty. Of course the nest was there, and some nuts, and a little mug of water, too, but nothing else. And don't you know what had happened during the night? Why, the chipmunk, with his sharp teeth, had gnawed a hole in between the slats large enough to let him squeeze through, and when they opened the back door to take in the milk, he scampered out and was off to the woods in a minute.

"I'm glad of it," said papa.

"Oh, dear me, I'm not," said Minnie, "and I don't see why you are."

"Why," said papa, "perhaps he's got lots of friends, just as you have, who want to see him back home again in his own nest."

"That's so," said Minnie, drying her eyes, "and I guess I'm glad of it too, now."

And that very afternoon, when she went out again to fill her basket, she saw that chipmunk sitting on a bough, with his tail way up over his head, eating a nut as fast as he could, and looking as happy as—as—as—anything.—N. Y. Tribune Jr.

VERY small boy (to stout aunt on cob): "I say, autie, don't you try for a gate! Come along with me! I've found a capital little hole we can creep through, and be even with the best of 'em!"

## GOOD HEALTH.

## Advice to Those Using Glasses.

Men engaged in literary pursuits should read most by day and write most by night. It is worthy of note that reading causes more strain to the eye than writing, and that copying work in writing makes a greater demand upon the organ of vision than offhand composition. Twilight and a mixture of twilight and artificial illumination should be avoided for any kind of work. The pale cobalt-blue tint is the best that can be employed when protection for the eye from intense glare is sought, as in the case of traveling upon snowfields in bright sunshine. The green glass that is often adopted for the purpose, is not by any means so worthy of confidence. Reading in railway traveling is objectionable in the highest degree, for a very obvious reason. The oscillation of the carriage continually alters the distance of the page from the eye, and so calls for unceasing strain in the effort to keep the organ in due accommodation for the ever-varying distance of the dancing image. The exact fitting of the framework of spectacles to the face and eyes is of more importance than is generally conceived. If the centers of the lenses of the spectacles do not accurately coincide with the centers of the pupils of the eyes, the consequence is, that the images in the separate eyes are a little displaced from the positions which they ought to hold, and that a somewhat painful and injurious effort has to be made by the eye to bring those images back into due correspondence for accurate vision. An incipient squint is apt to be in this way produced. Mr. Carter recommends that people should look to the centering of their spectacles for themselves. This may be easily done by standing before a looking-glass with the spectacles in their place. If the fit is a good one, the center of the pupil should then appear in the center of the rim. Fully-formed spectacles are always to be preferred to folding frames, because they permit of more satisfactory adjustment in this particular, and because they are more easily kept in the right position with regard to the eyes. The only advantage which the pebble enjoys over glass for the construction of spectacles, is the immunity which it possesses against scratching and fracture on account of its greater hardness.—*Edinburgh Review*.

## The Value of Mental Tension.

A certain degree of tension is indispensable to the easy and healthful discharge of mental functions. Like the national instrument of Scotland, the mind drones wofully and will discourage most dolorous music, unless an expansive and resilient force within supplies the basis of quickly responsive action. No good, great, or enduring work can be safely accomplished by brain-force without a reserve of strength sufficient to give buoyancy to the exercise, and, if I may so say, rhythm to the operations of the mind. Working at high-pressure may be bad, but working at low-pressure is incomparably worse. As a matter of experience, a sense of weariness commonly precedes collapse from "overwork," not mere bodily or nervous fatigue, but a more or less conscious distaste for the business in hand, or perhaps for some other subject of thought or anxiety which obtrudes itself. It is the offensive or irritating burden that breaks the back. Thoroughly agreeable employment, however engrossing, stimulates the recuperative faculty while it taxes the strength, and the supply of nerve-force seldom falls short of the demand. When a feeling of disgust or weariness is not experienced, this may be because the compelling sense of duty has crushed self out of thought. Nevertheless, if the will is not pleasurably excited, if it rules like a martinet without affection or interest, there is no nerve, and, like a complex piece of machinery working with friction and heated bearings, the mind wears itself away and a breakdown ensues. Let us look a little closely at this matter.—Dr. J. Mortimer Granville on "Worry," in *Popular Science Monthly*.

SWEET-FLAG CANDY.—Sweet-flag candy is relished by all lovers of sweetmeats, and it is a valuable aid to digestion, as it will stop the disagreeable rising of gas, so annoying to dyspeptics. Being eaten greedily by children, it is often better than other medicine. A hit held in the mouth when one is caring for the sick will often counteract the effect of contagious germs. To prepare it, take fresh, healthy roots of sweet-flag, and after a careful washing, cut in slices one-eighth of an inch in thickness. Put them into a stewpan or bright basin, and pour a little more cold water over them than will cover them. Set on the stove and heat slowly; when the water boils turn it off. If the candy is desired for medicine, quite enough of the strength has been removed, but for a sweetmeat it is better if boiled up and the water turned off four or five times. Now measure the sliced roots, and to each two cupfuls allow one and a half cupfuls of white sugar, turn on water enough to cover, return to the stove and simmer slowly, stirring often until the water has quite boiled away; then turn out on buttered plates, and stir frequently until dry. The long simmering after the sugar is added makes the roots quite tender, and the candy will keep nice and fresh for years.—*Country Gentleman*.

## DOMESTIC ECONOMY.

NEW COOKING UTENSIL.—The ordinary range of cooking-stove, in which the fire-box is placed at the side of the oven, or in which the products of combustion pass over the top, have the disadvantage of an irregularly heated oven. The sides and top are hotter than the bottoms and ends or other sides, and, as a result, the bread or other food is improperly cooked—perhaps burned at the top while badly done at the bottom. To correct this defect in ovens, a simple appliance has been devised for causing the air in the oven to circulate, and thus carry the heat obtained by radiation to all parts of the oven. A sheet of metal bent into the form of the top and on one side of the oven, is supported on wire standards and placed in the ovens. In the narrow space between the sheet-metal and the hot side and top of the oven, the air is heated more than the main body of the oven, and by expansion it rises and moves over the top of the oven, toward the cooler walls. The arrangement, simple as it is, appears to be founded on a good idea, and is reported to work well in practice. The apparatus examined was portable, and is designed to be put in the oven by the cook whenever an even heat is needed.—*The Century Magazine*.

PLASTER CASTS.—First of all, when purchasing, I am very particular to select perfect ones. I then make a sizing of white glue, rather thin, and wash the bust with it very thoroughly with a brush. When quite dry I take common white zinc paint and mix with turpentine, as thin as water, paint the bust or figure over with this, using a very fine camel's hair brush, then set away to dry; repeat this latter process until the figure is perfectly white and smooth. Not a trace of the brush mark should be seen. When soiled they can be cleansed by washing. I have busts of distinguished men treated in this way which would require the closest inspection to tell from Parian marble. The painting should be done with neatness and skill, or the bust will look coarse and cheap. I have some which have been painted at least eight years, and they look white and as smooth as when first done.

AN ECONOMICAL TEA-CAKE.—An attractive and economical tea-cake, and one which might appropriately be called "children's delight," is made by taking enough white bread-dough to make a small loaf; knead into it a tablespoonful of butter or lard, two tablespoonfuls of English currants; let it rise until it is very light, then bake it in a moderately hot oven. If you have any of the tin cans in which tomatoes are put up, use one of them for a baking tin, and bake this cake in it. You will have a pretty, round loaf, and the size and appearance of the slices is also pleasing. Graham bread seems actually to taste better if baked in one of these tins.

TO RESTORE BLACK MERINO.—Soak the goods in strong soft-soap suds two hours; then, having dissolved 1 ounce of extract logwood (which is the amount required for one dress) in a bowl of warm water, and warm (not hot) water to cover the goods, which are to be taken from the suds without wringing. Allow the goods to stand in the logwood water over night; in the morning rinse in several waters without wringing; in the last water add one pint of sweet milk, which stiffens the goods a little; iron while quite damp. They will not crack, and look like new.

A DELICIOUS PUDDING.—To make a delicious pudding follow this rule, but do not tell the family of what the pudding is made until it is eaten: One cup of molasses, 1 cup of suet chopped fine, 1 cup of raw grated potato, 1 cup of raw grated carrot, 1 cup of fruit, either raisins or English currants, a little salt and a pinch of soda; steam for 3 hours; eat with sauce. The grated potato makes the pudding light, and the carrot helps to give a rich brown color.

A CHEAP CAKE.—Here is a recipe for a cheap but good cake suitable for all kinds of layer cake: One cup of sugar, 2 eggs, 2 cups of flour, half a cup of milk, half a cup of butter, 2 teaspoonfuls of baking powder; flavor with lemon or vanilla. If made with care, this will be as satisfactory as many more expensive recipes.

BUNS.—Buns, which are nice for breakfast or tea, are made thus: One pint of flour, 1 pint of sugar, 1 cup of butter, 1 cup of sweet milk, 1 teaspoonful of cloves, 1 of cinnamon, 4 eggs, 2 teaspoonfuls of baking powder; bake in square tins and frost, or you may omit the spice, and bake in bread tins.

LOAF-CAKE DOUGHNUTS.—One cup of sugar, half a cup of milk, one cup of yeast, spices and salt to taste. Stir as stiff with flour as possible with a spoon and let it rise as for bread, then mould them up and cut and let rise an hour by the fire, or till they seem light, then bake.

THE JUSTICE'S PUDDING.—Two quarts of bread cut thin, one quart boiling milk poured on the bread; let soak an hour or two; add one quart stoned raisins, one teacupful of syrup. Boil four hours in a box or bag and serve with cold sauce.





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SAN FRANCISCO:

Saturday, December 10, 1881

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## The Week.

The clouds have been busy during the last few days in the northern and central areas of the State, and the business-like rain which all desired seems to have come. It has not been so wide-reaching as could be wished, for the extreme southern counties are clear up to this date (Wednesday); however, there are clouds and winds still unexhausted. Sergeant Gorom, Signal Service Officer, gives us the results of the present storm as reported to him from the following points, up to noon of Wednesday: Red Bluff, 3.41 inches; Sacramento, 2.10 inches; San Francisco, 1.67 inches; Visalia, .09 inches. Los Angeles and San Diego clear. It is quite timely to talk of the weather at this season of the year, and our readers will find interesting paragraphs and statistics in other columns of our paper this week.

Congress has re-assembled; the President has submitted his message showing peace abroad and prosperity at home; the Cabinet officers have presented their times of official wisdom, and now we are ready for the winter in Washington, which we trust may not be the "winter of our discontent," as often is the case while Congress pummels public affairs. California has no legislative turmoil this year, but next fall what a royal season there will be for the politicians! All the offices will be empty; won't there be a scramble?

MOSES HOPKINS has filed bonds for \$26,000, 000 as executor of the estate of the late Mark Hopkins.

## The Chemical Composition of Slickens.

Our readers in the slickens region and those elsewhere who relish exact information, will be interested in the fact that we have now the results of analysis of slickens, made with especial reference to their agricultural quality, and the verdict of the balances interpreted by one who is conceded to be the highest authority on soil analysis in this country. The San Francisco citizens' committee, which recently made an examination of debris destruction, brought back with them samples of slickens, which they submitted for analysis to Prof. Hilgard, of the College of Agriculture. Prof. Hilgard has made his examination and reported thereon to Mr. Gordon, Sec'y of the committee. What use the committee will make of the report, it will be for them to determine. As the subject is of great public interest, we have secured from Prof. Hilgard the privilege of looking over the results attained in his study, and the conclusions he draws therefrom.

After analyzing the sample of slickens furnished by the committee, Prof. Hilgard adduced the result of other analyses he had made of similar material obtained elsewhere, and compared them with a sample of alluvial soil from Dixon, Solano county. This sample of alluvial soil was taken because Prof. Hilgard had no complete analyses of the alluvial soil which underlies the slickens. This will, of course, be the proper comparison to make, to show how the covering of slickens compares with the rich soil which it has buried out of sight. Such a comparison will no doubt be made ultimately, but for the present the Dixon analysis is used. The following is a description of the samples and their composition.

No. 1. Sample of "slickens" furnished by Secretary of Citizens' Debris Committee.

No. 2. (Lacy "Slickens" from Alger's Bend, Feather river, furnished by Julian Le Conte, of the U. S. River and Harbor Survey.

No. 3. Mining slum covering adobe land near Mt. Pleasant, Tuolumne county, coming from the hydraulic mines of Mt. Pleasant and Montezuma. Furnished by Mr. John Taylor, of Mt. Pleasant.

All these samples are of a pale yellow or ochreous tint; Nos. 1 and 3 are tolerably easy to crush between the fingers, and contain scarcely any sand, being a close, fine silt. No. 2 formed hard lumps of very fine texture, and when exposed to the sun in the river bed, had formed great gaping cracks.

No. 4. Soil from Dixon, Solano Co. Sent by J. M. Dudley, Dixon.

	No. 1. Slickens.	No. 2. Feather River.	No. 3. Mt. Pleasant.	No. 4. Soil Dixon.
Insoluble matter.....	72.17	61.03	73.00	67.33
Soluble silica.....	3.07	8.03		3.67
Potash.....	.27	.30	.19	.93
Soda.....	.03	.12	.21	.12
Lime.....	.79	.52	1.19	.77
Magnesia.....	.87	.77	2.32	2.29
Br. oxide Manganese.....	.03	.09	.08	.11
Peroxide of Iron.....	6.58	6.59	9.30	8.01
Alumina.....	10.42	14.23	10.55	9.16
Phosphoric acid.....	.08	.08	.08	.11
Sulphuric acid.....	.13	.07	.03	.12
Carbonic acid.....				
Water & org. matter.....	5.72	8.02	4.43	7.11
	100.15	99.85	100.36	99.73
Humus.....	Trace	Trace	.42	1.71
Available inorganic.....			.36	.56

\*This is unusually low for an alluvial soil, 20 to 25 being common percentages.

Prof. Hilgard comments upon the above results as follows: First, as to the chief elements of plant food, as compared with the Dixon soil, and still more as compared to alluvial soils elsewhere, the slickens samples are deficient in phosphates and in potash, but all seem to contain a satisfactory, and even large supply of lime. In humus, however, and therefore in nitrogen, they are altogether deficient—so much so, that a quantitative determination was not attempted in the case of Nos. 1 and 2. No. 3 had been cultivated for some years, plowing in weeds, etc., and thus had acquired a small supply of humus, but less than half of what is ordinarily adequate in such soils. It therefore fails to yield paying crops.

This, in fact, is the "key to the situation." Considered only with respect to the percentages of mineral plant food present, the mine slickens materials analyzed would represent third-rate, and perhaps sometimes even a somewhat higher class of soils; but the absence of humus or vegetable mold leaves these ingredients in an unavailable condition. It is a crude, unthrifty material, and many years must elapse before this state of things can be changed by the slow processes of nature. Practically, the farmer having land covered with "slickens" of this kind, will, for some time to come, like the European cultivator, be subject to the maxim: "No manure, no crops." By diligent cultivation, green manuring, etc., such soil may, in the course of 15 or 20 years, become able to contribute something to the nutrition of crops from its own store of plant food. This, of course, refers to cases in which the finer materials have been alone deposited, and not accompanied by floods of sand or gravel, which at times forever destroy the value of the land.

It has sometimes been noticed that certain lands were improved by the flowing in of a coat of slickens that had covered the surface to the depth of a few inches. This may occur in adobe soils, whose tilth, and in the case of gray adobe, even intrinsic productiveness, may be furthered by such addition.

This shows clearly the character of slickens as a farming material. While it is admitted that a certain amount of it may be to advantage mixed with some soil, it is of itself raw and unproductive material in its present state, and must be artificially supplied with plant food or

be allowed to gradually assume fertility by the processes which have produced fertility since the world began. This is the true slickens—the fine sediment which is the best of the stuff the miners send down. Of course, if this is crude and barren by nature, the coarse debris is incalculably worse.

## QUERIES AND REPLIES.

## Frost Observations Wanted.

EDITORS PRESS:—The report of the National Signal Service officer in San Francisco for Nov., 1881, (printed on another page of this issue—EDITORS PRESS), mentioning the leading features of the month, says "lowest temperature 44°, Nov. 19." This leaves the general reader to infer that there was no frost, which does not form above 32°; but, as a matter of fact, the sidewalks were white with frost for 14 mornings in that month. The explanation that the frost was caused by the radiation of the earth and not by the coldness of the atmosphere, does not make the discrepancy satisfactory. The method of taking the observations may be adapted to the wants of sailors on the Atlantic Coast, but is not to those of the California farmers. The winter temperature of the air and the earth may be alike in New York, but is not in San Francisco. The observer in this city has kept a list of the frosts, though they are not mentioned in the reports published in the newspapers here nor in the Signal Service volumes issued at Washington. According to his figures San Francisco had 7 frosts in 1877-78; 31 in 1878-79; 62 in 1879-80; 23 in 1880-81; and 20 in 1881-82, up to the 3d instant.

The most serious defect in the meteorological records of our State, or at least the serious defect which can be remedied with the least difficulty, is the lack of lists of frosts month by month, in the agricultural districts. Our horticulturists have much to say of "the warm belt" from 300 to 1,500 feet above the valleys in the adjacent hills or hillsides, where there is much less frost than in the flat land at a lower level. The growth of tomato vines and other plants very sensitive to frosts until February or even through winter at many places from Santa Rosa to San Bernardino, corroborated by meteorological studies by Dr. Blake, near Calistoga, Mr. Armstrong, near Santa Rosa, and many others, leave no room for doubt that there is a hillside belt in which frost is comparatively rare. But our knowledge about this belt is very incomplete, and must remain so until every agricultural county shall have public records of the number of its frosts in each valley and on its hills at various elevations, for every month from October to April inclusive. Every farmer who can write, and few in California can not, can keep a list of the frosts at his house and report them to the local editor, who will be glad to print them in a condensed shape. I have been recently preparing a study on the climate of California for publication, and I have felt the need of such figures in reference to the number of frosts.—JOHN S. HITTLE, San Francisco.

The subject mentioned by Mr. Hittell is certainly of much importance, and exact records of the occurrence of frosts in different parts of the State would be of enduring value. Mr. Hittell seems to have overlooked the fact that the dates of frosts are given in the San Francisco report which we print elsewhere. We shall be glad to print frost lists from any of our readers who have kept them, and suggest the advantage of beginning such records by all who have a taste for meteorological observations. Any list should be given in connection with a description of the location of each observing point, elevation, etc.

Speaking of the subject of frosts, it is apropos to mention the new work the U. S. Signal Service has undertaken in Florida. Gen. W. B. Hazen, Chief Signal Officer, has issued a circular of instruction announcing a plan of special frost indications for the benefit of the fruit growing interests of Florida. Whenever minimum temperatures of 40°, or less, are expected to occur at Jacksonville, Fla., special frost indications will be telegraphed to the observer of the Signal Corps in that city, who will immediately furnish copies to the press of that city and to the President of the Florida Fruit Growers' Association. Special attention will be given to the forecasting of anticipated frosts, the fruit growers desiring that the warning may, if possible, be given two days in advance. It is, in the view of the Chief Signal Officer, quite doubtful whether this can be accurately done. The forecast is to be made as early as it can be with reasonable safety. A minimum temperature of 40° is a source of great anxiety to the fruit growers, and a temperature of 35°, as ordinarily shown by a sheltered thermometer, is destructive to tropical fruits. The special announcements will be made from Nov. 15th to Feb. 1st.

Florida citrus trees have been much more hurt by frosts than have California's, and yet we have had freezes which have played havoc with young trees and nursery stock, even in the counties best adapted to semi-tropical fruit growing. The frosts, however, which are most dangerous in this State are those which come in the spring, after the vines have put out their young growth. If the frost prophet succeeds in doing good work in Florida from November to February, let him be sent to California for the spring season!

## Japan Persimmons. Loquat.

EDITORS PRESS:—I send you a box containing a cluster of Japan persimmons. They were grown on a tree which I set out three years ago. I supposed it to have been one year old at the time of transplanting. The soil is poor, not more than 20 inches to bedrock, and altogether it has had a very poor show. Last year it matured four persimmons; this year, 50, of which these I send you are a fair sample, though not averaging quite so large as the others. I should like to know how they average as to size, quality, etc., with that fruit generally raised in this country. Can you give me the name of variety? As I am not at all posted on the persimmon I would like to know if there is a better kind to raise.

I also have a Japan plum, or loquat, three years set out, which has borne no fruit as yet, but it is just now in full bloom; one of the clusters I send. Is it customary for it to bloom this time of year, or has it simply made a mistake? And lastly, I send a few orange leaves, I would like to know what the black substance on them is? I have about 100 trees and all are more or less affected, many of the leaves curl similar to the peach.—J. R. MARSTON.

The persimmons are the handsomest we have ever seen, and the bearing quality of the tree is

quite notable. The cluster contained 12 persimmons, and the length of twig around which they cluster is not more than 10 inches. The largest of the fruit is 9 inches in circumference, and there is not much difference throughout the group in this respect. The shape is flattish round; color, deep red with black clouds. We cannot determine the varieties of these fruits. The loquat blooms are very beautiful and densely perfumed. Who will tell whether it is blooming in proper season? We have the trees growing nicely, but they have not bloomed yet. The orange leaves are touched with something resembling a blight. The microscope shows the epidermis degenerated, but from what cause, we could not determine, except that there are no insects or vestiges of them to be seen.

## Artificially Hatched Chickens.

EDITORS PRESS:—I think it would be an interesting matter to hear the experience of those who have tried hatching chickens by artificial means. One person has told me that a cock and a hen hatched by the patent incubators will not produce fertile eggs. This assertion does not seem reasonable, but has it any foundation in facts? Do incubator chicks mature as early and grow as large as those hatched by hens?—C. M. MORSE, San Mateo, Cal.

Our correspondent is right. It is time that we heard fully of the characteristics of chickens brought out by the incubators, for there have been many in use during the last two years. As for the reproductive quality of such fowls we have no doubt whatever that they possess it, but we have not reached that point in our own experiments yet. Others, no doubt, have, and we shall be glad to hear from them. As for early maturity and hardness of such chickens we have had already abundant experience to satisfy ourselves. We took a lot of Plymouth Rock chickens hatched out by the Eclipse incubator in March last. The roosters are capable fellows. The pullets began laying in October and three-fourths of them are now laying nicely. What has been the experience of others?

## Roadside Tree Planting.

EDITORS PRESS:—Does the State of California encourage tree planting by paying certain sums of money to the planter?—W. E. KING, Watsonville, Cal.

There is provision for paying money for trees planted and cared for along the public highway, but not on private grounds. The Political Code Section 4,080, says:

"The Board of Supervisors under such regulations as they may adopt, must encourage the planting and preservation of shade and ornamental trees on the public roads and highways, and pay to persons planting and cultivating the same for every living tree thus planted at the age of four years, the sum of one dollar."

There is no specification of kind of tree save that it be "shade and ornamental." We suppose the Supervisors of any county would be obliged to pay such money for thrifty trees four years old, on due application of the grower with proofs.

## Grape Grafting.

EDITORS PRESS:—I grafted 175 Orleans Raisin cuttings on wild roots of the *Vitis Californica* the last days in March, 1881; all started to grow and made a growth of three ft., except nine which were either planted in too gravelly ground, and dried out for want of moisture or were grafted too carelessly. I used the English cleft graft firmly tied with old calico, planted them so that the grafts came even with the top of the ground, and hoed earth over the grafts. They have been cultivated like the other vines and were not irrigated.

I believe that all the Reisling kinds will grow well on those wild roots, and as soon as I can find out that they are phylloxera proof in France I will graft lots more. I would like to get some green White Reisling cuttings. Please inform me where I can get them, or cuttings of some other kind of white grape which is as good or better for wine.—DR. H. C. OTTMEYER, Heidelberg, Cal.

The success of the grafts on the wild roots is interesting. Will some reader answer Dr. Ottmeyer about the Reislings or other white grape?

## East India Millet.

EDITORS PRESS:—Will you please inform me through the PACIFIC RURAL PRESS if there is any East India millet in the market, and if it has to be sowed every fall?

I was reading in a paper some time ago that if it were mixed with alfalfa when fed to stock the alfalfa would not blast the stock.—BRUNN, F. JONES, Jr., John, Colusa Co.

East India millet (*Penicillaria spicata*) has to be sown every year. The seed can be had, probably, from any of the seedsmen advertising in the RURAL.

## Pea Fowls Wanted.

EDITORS PRESS:—Do you know where there are any pea fowls to be bought? If so, please let me know in your paper.—WILLIAM HAWES, Millville, Shasta Co., Cal.

There are pea fowls here and there, and some one who has them for sale may write to our correspondent. Pea fowls despite their melody and other undesirable points, are excellent insect eaters, and could be made good use of by orchardmen and gardeners. Quite a trade might be had by advertising, perhaps.

## The Goat Business.

EDITORS PRESS:—What has become of the Angora goat business in California? I hear but little in regard to it now. Not a single breeder advertises in the Press at present. How will a small band of high grades pay, compared with a like number of sheep? Is there a reliable market for the mohair in the United States? If not, where is a market, and what is it worth? How will the goats thrive in a rough mountainous country where there is not much but brush for them to subsist upon? What is the average life of the goat in years? What can thoroughbred bucks and ewes be had for?—C. B. CALDWELL, Lakeport, Cal.

These subjects are open for discussion.

BULLS OR BEARS.—The Stockton Independent says: "Mr. Hunsucker, of Atlanta, made a small bet yesterday, that wheat would be worth two cents a pound before next harvest. He says he has sold his crop, but he is determined to bear the market, just to please the friends who have their crop still on hand." We should say that anything tending to elevate the price of an article was "bulling" the market, not "bearing." We do not think holders of wheat as a rule, would be "pleased" to have anyone "bearing" the price.



## Irrigating Water Wheels.

[Written for the Press by ALBERT WILLIAMS, JR.]

A very simple expedient for raising and distributing water from main irrigating ditches is illustrated by the accompanying engravings. In many cases where the ground is nearly level a lift of from 4 to 10 ft. is sufficient; and this may be cheaply and effectively attained by the use of an undershot wheel, carrying self-emptying water boxes, like the one shown, or constructed on the same principle with modifications. This system is one of the many ingenious contrivances in which modern mechanical progress has been forestalled by the Asiatic races, by whom it had been employed for centuries previous to being borrowed, or, more probably, re-invented, in this country. It is now adopted quite extensively in many places where the conditions are favorable, and gives very satisfactory results.

Where artificial irrigation is a necessity, as in the greater part of this State, and in the neighboring States and Territories, there may be a choice of one or more methods of bringing water upon the land cultivated, with usually a preference determined by the topographical conditions. If water is to be pumped from beneath the surface of the ground, the windmill system, so common and so effective in California, is probably the best means of obtaining water and raising it to a height sufficient for its distribution; and when, as is often the case, the water is brought by main feeding ditches from rivers, creeks, etc., and from the feeders distributed through the smaller secondary ditches, windmills can be advantageously applied in raising the water, if it is necessary to do so, in order to obtain a head. A good windmill is, however, a matter of considerable expense—is apt to be a complicated structure, requiring frequent attention, and of course is entirely dependent upon the weather. There are large areas of territory where the winds are inconstant. If it blows too hard, the improved windmills easily regulate themselves, but if there is no wind at all, there can be no power; and the various plans of storing the force or the water, so as to allow for periods of calm, do not always accomplish the desired end.

There are many cases where the irrigating water wheel comes into play successfully. To define them, the requirements may be stated as:

First—That the water should be brought by ditches from some constant source, as a river, reservoir, lake or other body of water.

Second—That it should have, at the point of delivery, a considerable velocity, say two miles an hour, or more. With higher velocities the results, up to a reasonable limit, are better.

Third—That there should be sufficient volume of water to allow space for the buckets to work in.

Fourth—A surplus of water over the amount required to be delivered at any given point.

Fifth—That it should be necessary to lift the water only to a moderate height—the system working better with a six-ft. lift, for instance, than if it be required to raise the water 12 ft.

Given all the above conditions, the undershot water wheel may be safely relied on, and wherever it can be used at all, it can be used advantageously and economically. It is far from being a perfect mechanical contrivance, and is admittedly wasteful of power; but if the water raised is sufficient for its purpose, the balance not utilized except as a means of driving the wheel may be disregarded, or may be brought into service in irrigating lower portions of the land or in working similar wheels at various points down stream.

In the cuts, Fig. 1 is a side elevation showing the general method of construction. Eight pairs of arms, carrying plain flat buckets like those of a steamboat paddle-wheel extend from a hub rotating on metal bearings. At either end or both ends of each bucket are fixed water-boxes which fill themselves on entering the water, and on being brought to the highest point of rotation empty themselves into a receiving trough. This trough supplies the distributing ditches, etc., and its inner end is so placed that it comes under the projecting buckets of the wheel without interference with the motion of the arms. The current of water in the channel underneath forces the buckets down stream, the latter delivering in the opposite direction at the top. By using a double set of buckets, one at each end of each bucket, the water may be delivered on both sides simultaneously. A little experimenting will indicate the proper size of the boxes, which depends upon the velocity and volume of water in the channel as well as the amount to be delivered.

Such a wheel can be readily constructed by any mechanic, and will cost from \$25 to \$50, according to size and workmanship. It may be made altogether of wood, with the exception of the bearings, but for the larger sizes (of from 8 ft. to 15 ft. or upward) it is advisable to brace well with wrought-iron tie rods. The water boxes may be made of wood, but perhaps the most convenient arrangement is a set of tin cracker-boxes, or some similar metallic receptacles—the sizes chosen to be in direct ratio with the force of the current. It is not usual to paint the wheels unless iron enters largely into the construction, in which case red lead may be used.

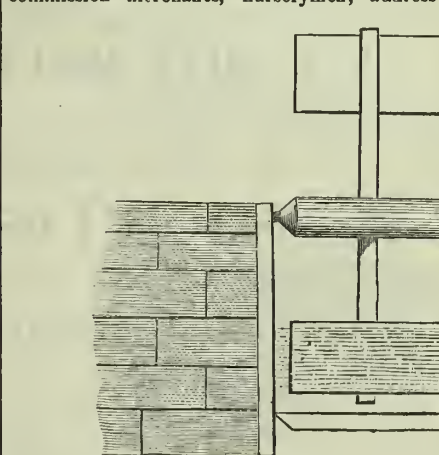
A large number of wheels similar in general construction to the one shown, are in use in the

Boise river valley, Idaho. At Boise City where the gardens are remarkable for their beauty and constant verdure, irrigation is conducted by a series of these wheels, which, from their simplicity and effectiveness fully meet all requirements.

## Fruit Growers' Convention.

As we go to press, on Wednesday, the fruit growers' convention, which began yesterday, is still in progress in Sacramento. Reports by telegraph announce that the meeting is well attended and that all the fruit growing regions are represented. We shall give below an outline of the proceedings so far as they are reported, and shall be obliged to defer consideration of the topics under discussion until a future issue. The meeting was held in the Assembly Chamber in the State Capitol, and was called to order by Dr. S. F. Chapin, of San Jose, who nominated Prof. C. H. Dwinelle as temporary President, and he was elected. Senator Wm. Johnston was then elected temporary Vice-President, and J. H. Whalsh, Secretary of the State Board of Horticulture, and E. F. Smith, Secretary of the State Board of Agriculture, were elected Secretaries. The following Committee on Permanent Organization and Order of Business was chosen: A. S. White, of Riverside; R. B. Blowers, of Woodland; M. T. Brewer, of Sacramento; N. R. Peck, of Placer; John McMullen, of Solano, and Matthew Cooke, of Sacramento.

This committee retired, and returned afterward and recommended that the temporary officers of the convention be declared the permanent ones, and that the order of business be an address by the President; report of the Chief Horticultural Officer; appointment of committees on ways and means, fruit growers, fruit shippers to Eastern States, fruit shippers to the west of Omaha, fruit packers, commission merchants, nurserymen; address



UNDERSHOT IRRIGATING WHEEL—FRONT VIEW.

of welcome by Mayor J. Q. Brown; essay on insect pests by Dr. S. F. Chapin; general discussion. The report of the committee was adopted. All speeches were limited to five minutes.

An essay was read by Matthew Cooke, upon the introduction and spread of insect pests in the State, and the means of their extermination. Mr. Johnston moved that the address of Mr. Cooke be referred to a committee of five, and that they report upon it immediately after the opening address in the afternoon. Carried.

The committee to whom the report of the Chief Horticultural Officer of the State, Matthew Cooke, was referred, reported as follows: "The convention has doubtless listened with great pleasure, and still greater instruction, to the many valuable and useful suggestions therein contained, not alone to the producers of the fruits on the coast, but likewise to all shippers, consumers, and all others having in hand the well-being of that inestimable source of our coast's wealth at heart. The committee trust that the report may be so placed before the public of the State that it may not fall as dead matter, but that its full merit and usefulness may be perpetuated by becoming a text-book to be studied and learned in the interest of the great good that has called us together. Your committee further recommend that the report be published as soon as practicable for general circulation." The report was discussed and unanimously adopted, and the address ordered printed for general circulation.

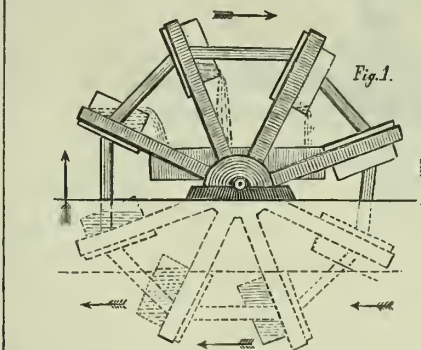
Mayor Brown delivered an address of welcome to the convention. Dr. Chapin, of Santa Clara, read a paper on scale bugs destructive to fruit and fruit trees, which was ordered published. Discussion of remedies was then had by Nelson, Chapin, Jessup, Dwinelle, Peck, Woods, Fraser, Cooke, Johnston, Vizelich, Gillett, McMullen, Haley and Williamson, and each gave his experience as to remedies, experiments, etc.

In the evening the members of the convention met at the warehouses of M. T. Brewer and examined a large display of insect pests exhibited under the microscope.

LARGE PLANTING.—Dave Turner, of San Bernardino, will plant 14 tons of peach and apricot pits this season.

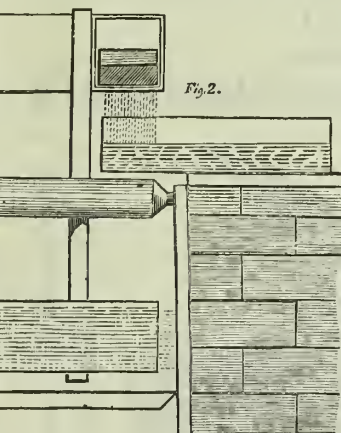
## The Growth of the Canning Interest.

The fruit canning interest promises to take another grand step forward during the coming year. The immense establishments in this city are talking and planning enlarged facilities. New canneries are projected in all parts of the State. Sacramento, Gilroy, Napa, and as many more points in the upper half of the State have the enterprise under way, and there may be expected other canneries at the south to share the success attained at Santa Barbara, Los Angeles and Colton this year. In a recent review of the canning industry, the *Journal of Commerce* gives the following interesting statistics of its growth in this State: The exports of canned goods from



End View of Irrigating Wheel.

January to September 1881 were 183,940 cases; same period 1880, 153,354 cases. The shipments by sea are destined to all parts of the world, but the larger share goes to Great Britain. China and Japan take quite a respectable portion, as also do the Sandwich Islands. Our canned goods are shipped to all parts of Mexico, Southern and Central America, to Si-



UNDERSHOT IRRIGATING WHEEL—FRONT VIEW.

beria, and to far-distant Australia. They have reached Sourabaya in Sumatra, Batavia in Java, and even to Calcutta, in far-distant India. More or less are shipped to all the Pacific Islands. In fact, there is hardly a port on the Pacific where they may not be found.

THE DANGER IN PARDONS.—Much money is spent to convict a criminal; he is lodged in the State's prison and the people breathe freer. Before long a pardon is wrested from the Executive and the wretch begins again to prey upon the community. What a record is this of a man who was shot while housebreaking last week: Louis Ramsey, in 1873, was arrested for burglary, convicted and sent to San Quentin for one year; in 1874 he was returned to the prison for two years for a burglary committed in Sacramento. In 1877 he was sent to the County jail in this county for petit larceny, and in 1878 he went to San Quentin for seven years for burglary. On the 24th of last August, he was sent to the House of Correction for four months for having brutally beaten his mistress, because she had left him to marry Prozzio. He was released from the House of Correction last Saturday, and two days later was shot while robbing a drug store. If this man had been held to the seven years he earned in 1874, the community would still have three years of respite from his villainy. But he was pardoned and the leniency of the executive has already cost the State thousands of dollars. There should be a re-investment of the pardoning power and that speedily.

SAYS the Los Angeles Express: Business is booming at Wilmington. Five deep-water vessels now discharging coal, and one receiving a cargo of wheat, with six coasting vessels unloading 1,600,000 ft. of lumber, keep Admiral Banning's fleet in active service day and night.

LAPHAM'S bill for the punishment of attempts to take the life of the President, or others charged with the duties of the office of President of the United States, makes punishment, upon conviction, imprisonment for life, such imprisonment to be by solitary confinement or hard labor, in the discretion of the court.

## The Occurrence of Blackleg.

We are having an unusual share of cattle diseases this fall in different parts of the coast, and this should stimulate the interest of our farmers in the movement toward the dissemination of true veterinary information, which seems to be gaining head at the East. We were lately assured that the State of Pennsylvania will have a veterinary college or a veterinary department in some established State institution. There should be something more definite known concerning the maladies which occur periodically on this coast. For example, in Nevada, the stock growers have lost much through a disease which has been called "blackleg," and of which we gave a description some time ago. The *Reno Gazette* says that cattle men in the Stein Mountain country, and in Harney and Warner valleys, have arrived at the conclusion that the disease with which young cattle and calves have been dying is not the blackleg, as at first supposed, but a disease very similar to the mountain fever. The Lakeview, Oregon, *Herald*, says:

Those who have watched several different cases closely, inform us that the disease does not possess the peculiarities of blackleg. The first intimation of the ailment is the abrupt swelling of the neck, followed by a sleepy, sickly appearance of the victim. Then the legs begin to swell, and the brute refuses to take nourishment of any kind. The disease does its work quickly. The victim lives but a few days after it refuses to eat and drink. It seems to have been confined chiefly to the young cattle, but the statement that it affects only those in good order is incorrect. A few are yet dying, but the prevalence of the disease is not now so general. Bleeding freely is said to have proven effectual when the brute is first taken, but it seems to have little effect after the disorder has passed the incipient stages. There has been no remedy yet discovered, but various treatments have been resorted to.

It seems outrageous that a disease should be permitted to run along from month to month, destroying property without any authoritative description of the trouble and no adequate remedy. We should certainly have trained veterinarians who, at the State expense, could study the disease and prescribe for it for the general good.

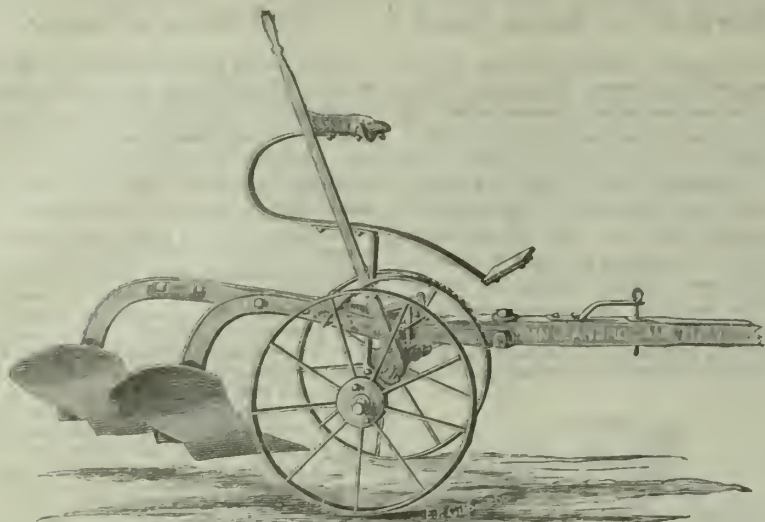
We just learn from the *Visalia Delta*, that blackleg has appeared in Tulare county, and many cattle have died in the foothills northeast of Visalia. One observer describes the symptoms as follows:

The shoulders and breast commence to swell, as though the animal had been kicked. These parts are sore to the touch, as the animal cringes. Lameness accompanies this symptom, and the animal is weak, sluggish, and refuses to eat. A froth issues from the mouth. Another describes them as follows: The shoulders are very sore to the touch, the animal hobbles about like a foundered horse, and when standing braces its feet outwardly. After death blood issues from the eyes and nose. Some state that on cutting the animal open after death they discovered that the lungs were diseased, and they incline to the belief that the malady is pneumonia. All agree that the stomach appears as though it had been scalded, as the lining would easily peel and tear, and that the bowels, in their action and after death, seem to be healthy. The horns in life are warm, but whether or not they were warmer than should be, could not definitely be ascertained. This is an important symptom, as it would go far toward establishing the nature of the disease—whether it is fever or a pulmonary complaint.

Fielding Bacon, who is authority in such matters, assures the *Delta* that the disease is blackleg. This epidemic started in Texas some time ago, and swept through the intervening country to California, killing large numbers of cattle in Colorado and Arizona, and it has now extended to Oregon, where it is doing its work. Mr. Bacon has a son in Arizona, who gives particulars of the disease, and Mr. Bacon corroborates him. The symptoms are identical with those in the cases under consideration—the swollen breast, great soreness and tenderness, staggering, the terrible condition of the stomach, thirst, and the fact of its attacking fat young cattle. He says that the other vital organs may, in very severe cases, be implicated through sympathy, and that this accounts for the diseased lungs in the case mentioned. The bowels are natural. It is principally a disease of the stomach, and is so rapid in its work that the bowels have not time to become affected. It is, says Mr. Bacon, unknown in the section, this being its first appearance here. The animal has little fever, but great thirst. Mr. Bacon, who was sought by the *Delta*, in this matter, earnestly requested the publication of the only known remedy for this terrible disease. He says it is practiced wherever it is known, and will effect the recovery of nearly every animal taken. It consists simply in giving lime-water freely. This is so simple a remedy that all should know it and apply it; furthermore, it is perfectly harmless. The lime-water may be somewhat stronger than that required for persons, as cattle stand it more. The judgment and taste must be exercised, as the decoction must not be so absurdly strong as to burn the throat and stomach of the animal. Some persons at Townsend thought this disease might be blackleg, but were not sure, as the legs did not appear black. That is unnecessary. Sometimes the legs will become so sore as to slough. The cause of the disease is undoubtedly not local, but the infection prevails in the atmosphere, and travels great distances. Mr. Bacon utterly scouts the idea that it is a lung disease.

A DISPATCH from San Luis Obispo says: The railroad station for Central City has been located one-half mile west of the town. The cars will be running there in 90 days. A preliminary survey will be made on to Los Alamos, Santa Ynez, and to Lompoc, and, if the route is found practicable and reasonable concessions are made by the land-owners, the road will be extended to Lompoc; also to Gaviota, or some other more desirable point.





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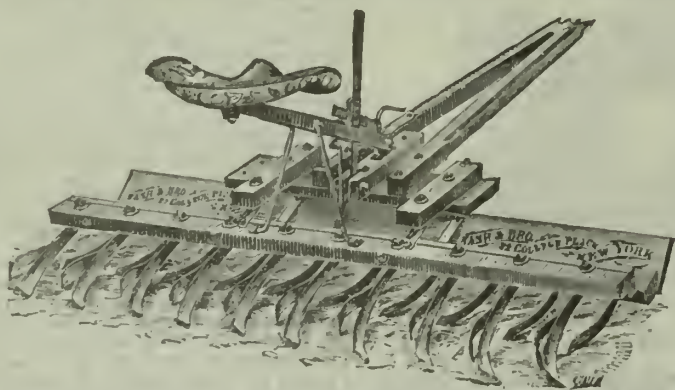
BLACK'S GANG PLOWS	\$15.00
PIEL'S	25.00
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The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,  
22 College Place, New York City.

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Will make your Hens Lay, keep them in the best possible condition and ward off disease. When fed according to directions, sick and drooping fowls are never seen. It furnishes the needed material for forming bone, muscle and feathers, and is

The Eclipse Self-Regulating Incubator. - The Eclipse Self-Regulating Incubator is now in actual use in most parts of this State, and giving general satisfaction. They are a success, and being such are invaluable to all who attempt to raise chickens; are easy to manage, and cost merely a trifle to keep in operation, and will do much better work than can be

Invaluable for Young Chicks and Moulting Fowls. It comes packed in various sized packages, and being a powder, is easily mixed with the customary feed. Give it a trial. Send Stamp for Circular and Testimonials.

Price.—Single pound, 50 cents; Two and a half pounds, \$1.00; Six pounds, \$2.00; 20 pound keg \$6.25. Address,

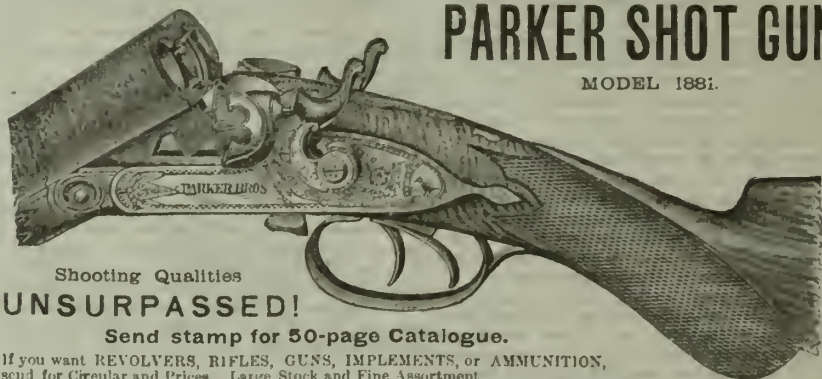
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General Pacific Coast Agt.  
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**MONEY IN CHICKENS AND EGGS.** Done with hens, with a small portion of the labor and risk. The "Eclipse" is the only entirely self-regulating incubator known; is the only one that will bear investigation, so it is the only safe one to purchase. Send stamp for Circular of California Testimonials (not Eastern.)



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Our Combined Machine for Horse Power consists of both Earth-boring and Rock-drilling tools. The Earth Auger is used till rock is reached, when the rock-boring tools are attached, and the boring continued till an abundant supply of pure water is obtained.

Artesian Well and Prospecting tools for steam power a specialty. Our tools are equal to, if not better, than those of any manufacture in the United States, and prices below the lowest. Catalogues mailed free. Address,

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PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn cattle and Berkshire hogs. A choice lot of young stock for sale.

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As IMPROVED and PERFECTED for 1881 will work equally as well on loose or wet land as in hard or dry soil, and are what every farmer needs to destroy vegetation on the summer fallow. Will save sowing and put the land in the best possible condition for early sowing.

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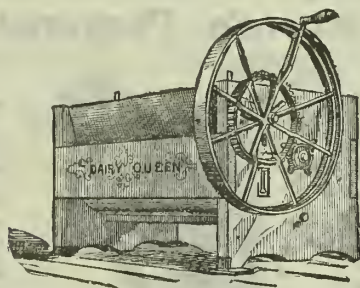
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Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



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It took the First Premium at the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars, address the Inventor and Sole Patentee,

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Blue or Red Gum trees. Monterey Cypress, Acacias, and Pines of all sizes or the seed of each kind, very cheap for cash. Trees in condition to ship long distances. Send \$1 in stamps for samples of each kind, with prices. GEO. R. BAILEY, Berkeley, Cal.

50 Lithographed Chromo Cards, no 2 alike 10c. Name in fancy type. Conn. Card Co., Northford, Ct.

## GEO. BULL &amp; CO.,

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Celebrated Straw and Wood-burning Engines, Separators and Horse-Powers.

Also a complete assortment in stock of the J. I. CASE PLOW CO.'S Center and Side draft Wood and Steel-beam, Racine Chilled, Breaking, Vineyard, Sulky and Gang Plows and Harrows.

Every plow or implement sold is warranted to give unexceptional satisfaction, or money refunded. Send for Catalogue and Price List, or call and examine stock and prices at the store,

No. 31 Market St., S. F.

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Special inducements offered to Dealers, Farmers and Ranchers.

## TREES! TREES! TREES!

—AT THE—

CAPITAL NURSERIES, SACRAMENTO,

—AND—

Orange Hill Nurseries,

Penryn, Placer Co., Cal.

We desire to call attention to our stock of native fruit trees, viz: Petite Prunes, Silver Prunes, Yellow Egg and Coe's Golden Drop Plums, Bartlett Pears, Apricot, Apples, Cherries, Peaches, etc. Also 100,000 Rooted Grape Vines of leading kinds, such as Muscat, Tokays, Hamburgs, Zinfandel, Seedless sultana, etc. Also ornamental trees and plants, such as Magnolias, Arbor Vitas, Pines, Cypress, Palms, etc. Orange and Lemon trees, best budded varieties. Also Elms, Maples, Poplars and Mulberries for avenue and street planting—in fact everything usually kept in first-class Nurseries. We have many new and rare Fruits and Plants, for description of which our Catalogue will be mailed free to any address. Office and Tree Depot, 1 and Seventh streets, near Court-house, Sacramento. Address all communications CAPITAL NURSERIES, P. O. Box 407, Sacramento, or ORANGE HILL NURSERIES, Penryn, Placer county, Cal. WILLIAMSON & Co., Proprietors.

## Short Horn Bulls For Sale.

The undersigned now have for sale a few choice Thoroughbred and high grade bulls from the best milk strains. Our herd consists of "Young Marys," "Daisies," "Imp Britannias," etc. Prices Reasonable.

HYDE & MOORE, Visalia, Cal.

## Improved Patent Rotary Force Pump for Pumping Water by Horse Power.

This is a Durable and Compact apparatus for pumping, that will force water 100 feet and 2,000 to 4,000 gallons an hour. It can be moved from one well to another for irrigating. For further particulars, address,

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## Poultry and Stock Book

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address WILLIAM NILES, Los Angeles, Cal.

## HOPE FOR THE DEAF

Dr. Peck's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address, H. P. K. PECK & CO., 553 Broadway, New York.

## SPERRY'S FLOURING MILLS,

AUSTIN SPERRY, S. W. SPERRY, Prop'rs,

Millers and Commission Merchants!

And Dealers in FLOUR, GRAIN, BRAN, GROUND BARLEY, MIDDINGS.

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San Francisco Office—No. 22 California Street.



H. T. DORRANCE,

Manufacturer and Importer of

SADDLERY AND HARNESS,

CALIFORNIA, LADIES' AND IMPORTED SADDLES, Whips, Robes, Team, Concord, Buggy, Coach and Trotting Harness, Horse Blankets, Linen Covers, Etc.

No 185 Hunter Street, - - Stockton, Cal

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E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

## The La France Steam Fire Engine.

Circulars furnished on application.

## GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000, In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$500,000.

Reserve Fund and Paid up Stock, 25,760.

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

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WINDMILLS! HORSE POWERS! PUMPS AND ALL KINDS OF PUMPING MACHINERY BUILT TO ORDER.

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Send for Circulars.

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## ALTA SOAP CO.

MANUFACTURERS OF

## TOILET &amp; LAUNDRY SOAP

OF EVERY DESCRIPTION.

Office and Factory 109 & 111 Oregon St., below Front, between Washington & Jackson, S. F.

## California Washer.

This machine is an improvement on the celebrated "Humboldt." For Families or Hotels it will pay for itself in less than six months. Lace curtains and other delicate fabrics can be washed without injury. Price \$15. Manufacture, 431 Fourth St., S. F. Local or traveling Agents wanted. G. M. PURSELL, Patentee.

## California Improved Rotary Churn,

PATENTED AUGUST, 1881.

A Box Churn with dashers, or can be used without dashers. Can be run with reverse motion with one man or two. A trial will convince that this is the best Churn in use. For Churns and Agencies, apply to

E. L. PRIEST & CO.,

629 Market St., Oakland.

## STILES' GRAIN MILL.

This Mill grinds by corrugated friction rollers. It will grind eight tons to one-horse power per day, and one-half-horse power will run it and do work in proportion. It can be run by a common windmill. Any orders received by W. C. STILES, Nevada City, will be filled at once.

## GOLDEN GATE WASHING MACHINES.

The principle used attacks every spot and place in the fabric with force, and will cleanse the most delicate fabrics without injury. The rocking motion used takes but small power, so that a youth can do a washing. Strong, Durable and Ornamental. Agents Wanted on Liberal Terms. Address JOHN D. WINTERS, Davisville, Cal.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



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Carriage Manufactory.

ALL KINDS OF CARRIAGES AND WAGONS FOR SALE.

Cor. Main & American Sts., Stockton, Cal.

Makes to order all kinds of Carriage and Buggy Work, Express and Thoroughbred Wagons and Stage Work. Painting and Trimming done to order.

Jobbing done with Neatness and Dispatch.



## Weekly Market Review.

[CONTINUED FROM PAGE 389.]

appears to be reflected to some extent upon the lower grades, only odd parcels of which can be reached at what buyers will admit to be easy terms. Since Thanksgiving the attendance of customers has increased somewhat, and occasionally a fair amount of negotiations are opened, though business has scarcely the lively form hoped for and anticipated, and is unevenly distributed. Some dealers are getting a large proportion and others scarcely any at all. The buyers in attendance appear to confine their operations to not fighting the cost to any extent, and negotiations are progressing smoothly. There has been some addition to the stock of fleeces, but they are not sorted up and on the market as yet. Holders are in no hurry with them. Mediums are still much in favor, and appear the best sustained. Carpet wools are rather slow but now in large stock, and generally held with much firmness. Foreign wools continue quiet.

Boston, Dec. 3.—The Wool market is steady, the demand fair and prices about the same. Sales of the week have been 200,000 lbs., and include all grades and qualities. Ohio and Pennsylvania fleeces have been selling at 42¢@44¢; 43¢ is about all the manufacturers are willing to pay for good average XX. Michigan and Wisconsin fleeces have been sold at 40¢@42¢, principally 41¢@42¢. No. 1 Ohio and Michigan have been selling at 44¢@45¢. Combing and delaine fleeces are quiet and prices unchanged. Sales of fine delaine and fine combing have been made at 46¢@50¢. Unwashed and fine combing sell at 29¢@32¢. In unwashed considerable has been done. Sales amount to upward of 800,000 lbs., and include considerable Texas, most at 28¢@30¢. Territory and Western fleeces have brought previous prices. California Wool is quiet; Fall is dull at low prices. A lot of 70,000 new Fall sold at 18¢, which was 1¢ less than cost. Pulled Wools are firmer. Considerable choice super sold at 45¢@46¢. Foreign Wool is firm, but has been quiet.

## London Wool Sales.

LONDON, Dec. 5.—At the Wool sales to-day 6,456 bales were sold, consisting chiefly of Sydney and Port Phillip. There was a good demand, and prices firm.

## The Foreign Review.

LONDON, Dec. 5.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Young Wheat continues to look well. On account of bad weather, parcels arrive in very poor condition and they meet with increasingly difficult sale. Inferior Wheats are everywhere cheaper. The better sorts, however, are so scarce that they maintain recent rates. Flour is rather freely supplied. Inferior sorts are irregularly cheaper. Barley is very much depressed and prices drooping. The trade in foreign breadstuffs is very slow, and there was nothing doing up to Wednesday. There was a slight improvement on Friday in London, owing to the moderate supply. American choice spring and Red Winter grades of Wheat were inquired for together with the finest White, and were selling rather more freely at Monday's rates. Foreign Flour retains late rates, the supply being small and irregular. There was a small supply of Maize on Friday, and rates closed one-third dearer, mixed American fetching 20 to 30s ex ship. Grinding barleys are rather tedious of sale, despite the small supplies in consequence of large quantities being damaged. Ten fresh cargoes arrived off the coast during the week. Sales of English Wheat during the week were 47,133 quarters at 44s 11d per quarter, against 44,278 quarters at 44s 10d per quarter, during the corresponding week of last year.

BAGS—Bags are unchanged.

BARLEY—Barley is doing little this week and prices are stationary.

BEANS—Peas and Small White Beans are looking up again, and are quoted about 5c higher per cwt. Bayos have advanced slightly.

CORN—Corn is quiet, with a fraction better for all kinds.

DAIRY PRODUCE—The Butter market is unchanged. Cheese is coming forward a little, and is firmly held at an advance of 1c per lb.

EGGS—Eggs are more abundant, and 40c is now the top for fresh Californians.

FRESH MEAT—Beef is still a shade higher. The Meat market is firm.

FRUIT—New crop California Oranges are now selling about \$1 per box better than old. Other fruits are few and unchanged.

HONEY—There is no change.

HOOPS—Hoops are quiet, with some dealers disposed to quote 2c lower.

OATS—The interest in Oats continues, and all the lower grades are doing better. We note sales: 1,000 sks choice Oregon, \$1.70, and 400 sks common, \$1.60.

ONIONS—There is great difference in price as wet Onions sell as low as 50c; White choice dry lots bring \$1 per cwt.

POTATOES—There has been a slight advance in all kinds as shown in our list.

PROVISIONS—The trade is fair without change in price.

POULTRY AND GAME—Fowls are doing better, the advance being about 50c per dozen. Dressed Turkeys have the advantage just now.

VEGETABLES—Some Artichokes go at 50c per dozen. Other Vegetables are unchanged.

WHEAT—Dealers are disposed to make \$1.76½ the top of the market, but admit a chance of improvement at once. Sales are exceedingly small.

WOOL—The market is reported weak, and dealers reduce quotations about 1c per lb. on Southern and San Joaquin.

## Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., December 7, 1881.

FRUIT MARKET.	
Apples, bx. ....	50 @ 1 25
Bananas, bunch. ....	2 50 @ 4 00
Cocconuts, 100. ....	6 00 @ 7 00
Cranberries, bbl. ....	12 00 @ 14 00
Figs, bx. ....	50 @ 1 25
Grapes, ....	50 @ 75
Limes, Mex. ....	6 50 @ 7 00
do, Cal. box. ....	1 50 @ 2 00
Lemons, Cal. bx. ....	1 50 @ 2 50
Sicily, box. ....	6 00 @ 7 50
Australian. ....	— @ —
Oranges, Cal. ....	2 25 @ 3 00
do, new crop. ....	3 50 @ 4 00
do, Tahiti M. ....	— @ —
do, Mexican. ....	— @ 30 00
do, Lorato. ....	— @ —
Pears, bx. ....	50 @ 1 25
Pineapples, doz. ....	7 00 @ 8 00
Plums, bx. ....	50 @ 75
Strawberries, ch. ....	8 00 @ 12 00
DRIED FRUIT.	
Apples, sliced, lb. ....	6 1/2 @ 7
do, quartered. ....	6 @ 7
Apricots. ....	15 @ 17
Blackberries. ....	14 @ 16
Citron. ....	28 @ 30
Dates. ....	9 @ 10
Figs, pressed. ....	4 @ 6
do, dried. ....	4 @ 6
Nectarines. ....	14 @ 15
Peaches. ....	11 @ 11 1/2
do, dried. ....	14 @ 18
PEARS.	
Hayo, ctt. ....	1 75 @ 2 25
Butter. ....	3 00 @ 3 25
Castor. ....	3 50 @ 4 00
Peas. ....	3 50 @ 4 00
Red. ....	1 75 @ 1 85
Pink. ....	1 75 @ 1 85
Larga White. ....	3 00 @ 3 25
Small White. ....	3 50 @ 4 00
Lima. ....	4 75 @ 5 00
Field Peas, bly. ....	50 @ 75
do, green. ....	2 00 @ 2 25
BROOM CORN.	
Southern. ....	3 @ 6
Northern. ....	4 @ 6
CHICORY.	
California. ....	4 @ 4 1/2
German. ....	3 1/2 @ 4
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb. ....	32 1/2 @ 35
do, Fancy Brands. ....	— @ 37 1/2
Pickle Roll. ....	— @ 37 1/2
Prin. new. ....	32 1/2 @ 35
Eastern. ....	20 @ 25
New York. ....	— @ —
CHEESE.	
Cheese, Cal. lb. ....	14 @ 16
EGGS.	
Cal. Fresh, doz. ....	35 @ 40
Ducks. ....	— @ 35
Oregon. ....	38 @ 38
Eastern, by ex. ....	32 1/2 @ 35
Pickled bera. ....	— @ —
Utah. ....	— @ 40
FEED.	
Brant, ton. ....	15 00 @ 18 00
Corn Meal. ....	— @ 32 00
Hay. ....	9 00 @ 15 00
Middlings. ....	— @ 24 00
Oil Cakes Meal. ....	— @ 25 00
Straw, bale. ....	62 1/2 @ 67 1/2
FLOUR.	
Extra, City Mills. ....	5 25 @ 6 25
do, Country Mills. ....	4 75 @ 5 00
do, Oregon. ....	4 75 @ 5 12 1/2
do, Walla Walla. ....	4 50 @ 5 00
Superfine. ....	3 50 @ 4 25
FRESH MEAT.	
Beef, 1st quality, lb. ....	6 @ 7 1/2
Second. ....	4 1/2 @ 5 1/2
Third. ....	4 @ 4 1/2
Mutton. ....	4 @ 5
Spring Lamb. ....	6 1/2 @ 7
Pork, undressed. ....	5 1/2 @ 6 1/2
Dressed. ....	6 1/2 @ 7 1/2
Milk Calves. ....	7 1/2 @ 8
do, choice. ....	— @ 8 1/2
GRAIN, ETC.	
Barley, feed, ctt. ....	1 45 @ 2 10
do, Brewing. ....	1 55 @ 2 25
Chevalier. ....	1 55 @ 1 57 1/2
do, Coast. ....	1 42 @ 1 45
Buckwheat. ....	— @ 6 1/2
Corn, White. ....	1 42 @ 1 45
Yellow. ....	1 45 @ 1 47 1/2
Small Round. ....	— @ 6 1/2
Oats. ....	57 @ 62 1/2
Milling. ....	1 55 @ 1 57 1/2
Rye. ....	2 40 @ 2 45
Wheat, No. 1. ....	1 67 1/2 @ 1 71
do, No. 2. ....	1 60 @ 1 65
do, No. 3. ....	1 45 @ 1 50
Choice Milling. ....	— @ 70
HIDES.	
Hides, dry. ....	13 @ 13 1/2
Wet salted. ....	9 1/2 @ 10 1/2
HONEY, ETC.	
Beeswax, lb. ....	23 @ 25
Honey in comb. ....	15 @ 20
Extracted, light. ....	9 @ 10
do, dark. ....	7 1/2 @ 9
HOPS.	
Oregon. ....	24 @ 25
California, new. ....	26 @ 30
Wash. Ter. ....	25 @ 26
Old Hops. ....	— @ —
NUT-JOBBER.	
Walnuts, Cal. ....	10 @ 11
do, Chile. ....	7 1/2 @ 8
Almonds, bly. ....	8 @ 10
Soft shall. ....	14 @ 15
Pistons. ....	10 @ 11
Pacans. ....	13 @ 15

## Domestic Produce.

[WHOLESALE.]

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BEANS & PEAS.	
Hayo, ctt. ....	1 75 @ 2 25
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Almonds, bly. ....	8 @ 10
Soft shall. ....	14 @ 15
Pistons. ....	10 @ 11
Pacans. ....	13 @ 15

## Commission Merchants.

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## Wool and Grain

Commission Merchants.

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Liberal advances made on all consignments, and prompt personal attention given to all sales.

J. H. CONGDON & CO.,  
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CONSIGNMENTS SOLICITED.

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## WOOL and GRAIN

Commission Merchants,

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SAN FRANCISCO.

PETER MEYER.

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MEYER BROS. &amp; CO.,

—IMPORTERS AND—

Wholesale Grocers,

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TOBACCO AND CIGARS.

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Special attention given to country traders.

P. O. Box 1940.

HATCH &amp; BARCLAY,

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COSTIGAN, COHEN &amp; CO.

COMMISSION

Grain and Wool Brokers.

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DAVIS &amp; SUTTON,

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Commission Merchants in Cal. Produce

REFERENCES.—Traders' National Bank, N. Y.; Ellwanger &amp; Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk &amp; Co., San Francisco, Cal.

## Moore's Prepared

SQUIRREL



POISON.

The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors,  
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Fura and Cheap preparation for the cure of Scab in Sheep.

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[Illustrated in RURAL PRESS, Dec. 3, 1881.]

Awarded the first premium over the Axford or National and others at the Petaluma fair of 1881.  
Furnishing ample heat, easily managed and nothing to get out of order.

PRICES:

200 Egg capacity. .... \$80.00  
300 Egg capacity. .... 75.00  
600 Egg capacity. .... 90.00

I. L. DIAS,

Manufacturer and Proprietor,  
Box 242, Petaluma, Cal.

WIESTER &amp; CO., 17 New Montgomery St., S. F. Agt's

## F. MANSELL &amp; CO.,

Sign and Ornamental Painters,

Removed to NO. 434 PINE ST., S. F.

(Opposite their old stand.)

## JAMES HANNAY'S NURSERY,

East San Jose, Cal.

I offer for sale, at low prices, a well assorted, healthy, and well grown stock of one and two-year-old Nursery Stock. Prompt attention given to all orders.

Address

JAMES HANNAY, San Jose, Cal.

H. H. WILSON & SON,  
513 Clay St., S. F.  
Importers and Dealers in Guns, Rifles,  
Pistols, and Fishing Tackle, etc.

50 All Gold, Chromo and Lithograph Cards. (No two alike). Name on, 10c. Clinton Bros., Clintonville, Con.

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Market St.

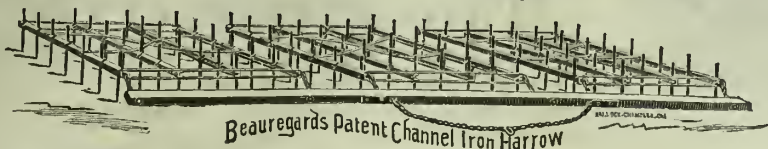
## CHRISTMAS MUSIC.



# BEAURECARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to  
Break off,  
or Nuts to get Loose.



Is the Boss of the Field.  
It combines Strength,  
Lightness of Draft and  
Durability.

**Light, Strong, Durable, Cheap, and Indestructible. Best Iron Harrow made. Good for a Lifetime.**

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality, combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

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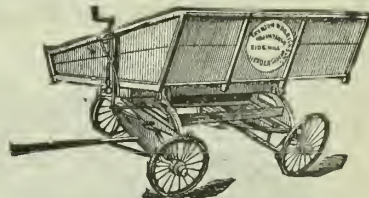
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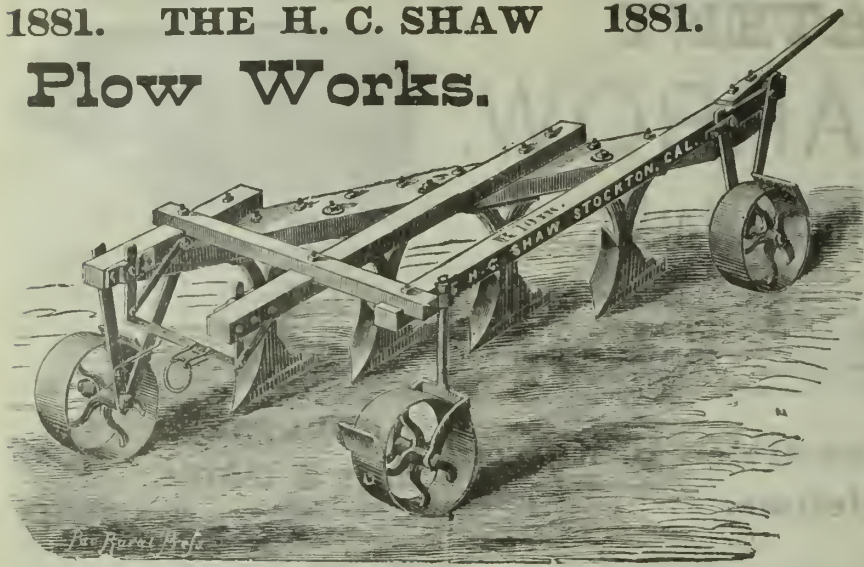
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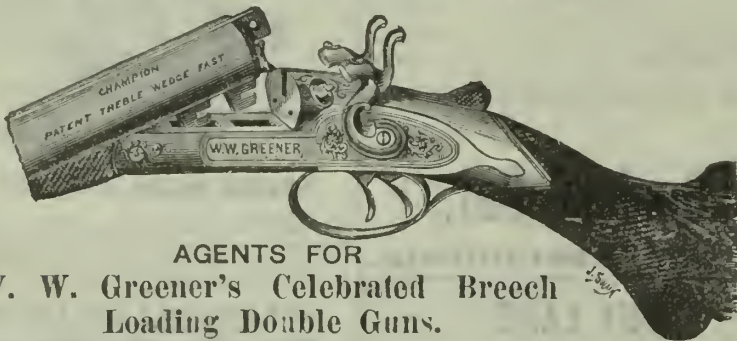
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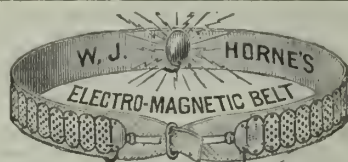
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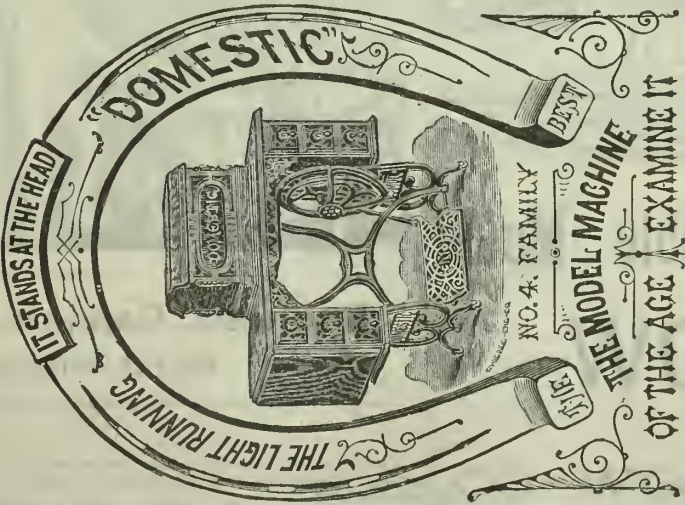
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Silver Prunes, Yellow Egg, Coe's Golden Drop, Petite Prune de Agen.

The above trees are all selected and on Peach Roots and free from scale and other injurious insects.

Orders taken now for above trees in lots to suit.

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This Harrow fills a long desired want among farmers. As it is built in sections for one or six horses, and can be cleaned while in motion without lifting the harrow. Address T. J. HUBBELL, PATENTEE, Mayfield, or McKENZIE &amp; CO., San Jose, Manufacturers.

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Farms, Stock Ranches, Dairy Farms, Fruit Farms, Vineyards, Chicken Ranches and homesteads of every class and description in this and adjoining counties for sale or rent on reasonable terms. State requirements and obtain suitable particulars from the Real Estate

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## The Famous "Enterprise,"

PERKINS' PATENT  
Self Regulating

## WINDMILLS,

Pumps &amp; Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned run in babitted boxes.

Positively self regulating with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information

HORTON & KENNEDY,  
GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale. San Francisco Agency, LINFORTH, RICE & CO., 323 & 325 Market Street.

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Quickly and  
Permanently

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## CURED

and all their attendant evils. It does not merely afford temporary relief, but is a permanent cure. Mrs. B. P. Lee, of Belmont, O., says of it: "I am surprised at the speedy effects of your remedy. It is the first medicine in six years that has loosened my cough and made expectation easy. I now sleep all night without coughing." If your druggist does not keep it, send for treatise and testimonials to H. P. K. PECK &amp; CO., 853 Broadway, New York.

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ADAPTED TO

Buckwagons, Buggies and Light Business Wagons.

Weight carried to the extremities of the Axles. Long, soft, double sweep springs. No side sway or pitching motion. It is jointed, relieving all strain.

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1507 Polk St., San Francisco, Or Charles Whitmore, Traveling Agent for the Pacific Coast.

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## PIONEER BOX FACTORY,

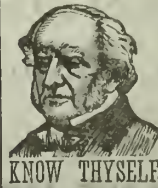
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The Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled the "Science of Life or Self-Preservation," bound in finest French muslin, embossed, full gilt, 300 pp. Contains beautiful steel engravings; 125 prescriptions. Price, only \$1.25, sent by mail; illustrated sample, 6 cents. Send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch street Boston.

## Tempest Windmill Patent,

Self-Regulating and Improved Gear.

Using the Celebrated "Davis Wheel." Took First Premium at Stockton Fair, 1881. Water troughs always on hand. Address,

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# The Randall Pulverizing Harrow.

THE MOST CONVENIENT, EFFECTIVE, DURABLE AND RELIABLE HARROW MADE.

Rotary, Vertical Plate Wheel Harrow!

## A CULTIVATOR EQUALLED BY NO OTHER.

Unrivalled for its power, incomparable rapidity and effectiveness for surface tillage of all tenacious and tough soils. Is often a substitute for the Plow, cutting from six to twelve feet in breadth. It is deservedly conceded to be

**The Most Popular and Profitable Farm Implement in Use.**

THE RANDALL PULVERIZING HARROW in the field work can be turned about as readily as a cart.

Its Double Gang arrangement, makes all the wheels or discs equally effective when in motion.

Its combination of mutually acting vertical plate-wheel gangs is attached to a horizontal frame, and the Harrow is guided when in motion by a pole in such a way as to secure a complete and effective forward and horizontal action of both gangs as well as the lateral or sidewise lifting and crushing action of all the plate wheels. The flexible pole secures a steady and uniform action, saving it from jumps and side bounds.

Its concave plate wheels are best quality steel and are self-sharpening by use.

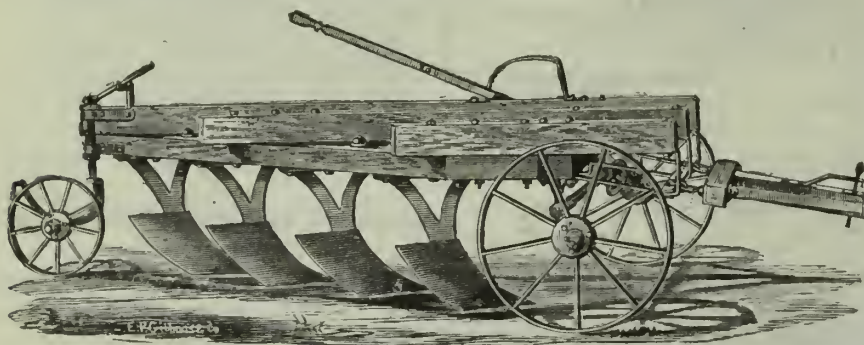
Each steel wheel or disc makes a groove for its passage through the soil, by clearing, crushing and lifting from the groove all the soil, and rolling it in a furrow one side.

It turns below the surface, top manure, old stubble and straw, and rolls under and buries the small stones, which the "old drag" hauls to the top. Every inch of it does full, honest work, and don't need a "lap" or "skip" to make it work "good," like the corner-going drag. And the best of all among its good deeds is, it does what no toothed drag can do, to-wit: It takes the soil from below and rolls it upward to the surface, pulverizing and exposing it to enriching sun and air. Good tillage requires this, and this is what no other harrow can accomplish so effectively and speedily as the RANDALL PULVERIZING HARROW, with its double solid gangs of plate wheels.

DESCRIPTIVE PRICE LIST OF THE DIFFERENT SIZES OF RANDALL HARROW.

NUMBERS.	WIDTH OF CUT.	NO. OF DISCS.	SIZE OF DISCS.	WEIGHT.	PRICES.
No. 7.	6 feet.	12	16-inch.	325 lbs.	\$60.00
No. 8.	8 feet.	16	16-inch.	383 lbs.	75.00
No. 9.	10 feet.	20	16-inch.	525 lbs.	110.00
No. 10.	12 feet.	24	16-inch.	600 lbs.	120.00

San Francisco, **BAKER & HAMILTON,** Sacramento.



## The San Leandro Reversible Mould GANG PLOW,

MADE BY

**SAN LEANDRO PLOW CO.,**

San Leandro, California.

WE CALL ATTENTION TO THE

### IMPORTANT IMPROVEMENTS

That we have made in the (so called) Stockton or Reversible Mould Gang, so extensively used in the southern half of our State.

FIRST—We use wrought iron wheels 30 inches high in the place of the small cast iron ones commonly used.

SECOND—We use a rear caster wheel running in the furrow instead of one running on the side. In front, where it can never act as a caster unless the mate to it slides. All our wheels have separate boxes that can be replaced when worn out. The caster wheel can be made rigid if desired, so that it runs in line with the other wheels.

THIRD—Our Plow has a crank axle with lifting lever, so that the depth of plowing can be instantly adjusted, or it may be raised entirely out of the ground.

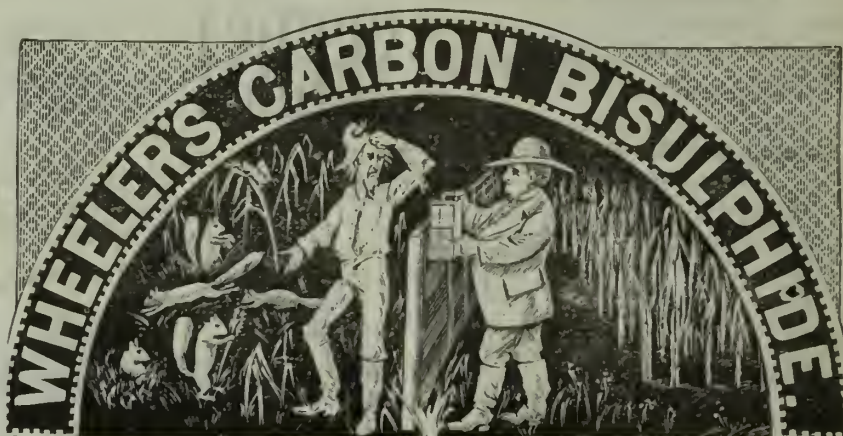
FOURTH—It has a tongue which may be used if preferred, or it may be laid aside and the Plow used with a chain in the ordinary manner.

FIFTH—The standards have wrought iron cent is cast in them reaching from top to bottom, the upper end of the wrought bar terminating in a nut by which the standard is fastened to the beam. These standards cannot be broken with a sledge hammer.

We make the following sizes: Three, four, five and six-gang, 8 inch, and three, four, five and six-gang, 10-inch.

**SAN LEANDRO PLOW CO.,**

San Leandro, - - - California.



Prepared especially for killing

**Squirrels, Gophers, Rats, Ants, Moths,**

**WEEVILS, PHYLLOXERA, SCALE, LICE, Etc.**

Sold by Druggists and dealers in general merchandise. May also be obtained direct from the manufacturer.

**JOHN H. WHEELER.**

Manufacturer, also, of Sulphocarbonates, Disinfectants for Vine Cuttings, Diseased Vines, Trees and Plants in general. Vineyards treated for Phylloxera; Insectors for Bisulphide Sulphur for Vineyards, and all kinds of Fertilizers furnished.

Office, 111 Leidesdorff St., San Francisco.

### PURE BRED POULTRY.



Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.



I have a large stock of the above varieties for Sale Cheap, considering the quality of stock. For further information, send 3 cent stamp for new circular and price list to **R. C. HEAD, Napa, Cal.**

### TURNER'S NURSERY,

San Bernardino, Cal - - - P. O. Box 275

I have a few thousand left of my half-yearling or June Budded Trees, from 15 to 18 inches, consisting of

**Lemon Cling, Smock's Free, Crawford's, etc.**

**Also, Royal and Large Early Apricot.**

Price, \$15 per 100 this season. I am also prepared to make contracts for the season of 1882-83.

**DAVE TURNER.**

### LOS GATOS NURSERIES.

I offer the trade this season a LARGE and GENERAL ASSORTMENT of

**FRUIT TREES AND SMALL FRUITS.**

My trees are healthy, stalky and well grown. Prices low down. Address **S. NEWHALL,**

San Jose, Cal.

### Adams' Patent Pillow Sham Holder

Thousands have proved it the best. Can be adjusted to any ordinary bed. Black walnut and nickel plate, \$2.25; cedar and brass, \$1.75. Sent by mail with directions. G. W. WATKINSON, General Agent, 405 Tenth St., Oakland, Cal. The trade supplied.

### Hunter's Eccentric Patent Coupling.

For carriages, pumps and whiffletrees and other couplings. No bolts, no rattling and no unhitching. State and County rights for sale. Address **HUNTER & FRANCIS, Merced, Cal.**





Volume XXII.]

SAN FRANCISCO, SATURDAY, DECEMBER 17, 1881.

Number 25

### A Titled Jersey Cow.

We are pleased to give portraits on this page of one of the most famous Jersey cows in the country. She is Coomassie, the property of Mr. S. M. Burnham, Sangatuck, Conn. This is the cow to which we alluded in our issue of May 21, 1881, as an illustration of the fact that the United States has already the best of the Jerseys, and that the skill and wisdom which is employed in breeding them in this country bids fair to bring the Jersey men to us to regain their best blood, as the English Short Horn breeders have had to come. Alluding to the purchase of Coomassie on the island for \$1,050, the *Bulletin of the Jersey Cattle Club* said:

From the Jersey men's point of view the exportation of Coomassie and the exportation of other of their finest cows, will make the year 1890 memorable as one of disaster. No money is too much for us to pay to gain possession of the best animal. No money can compensate the farmers of the Island of Jersey for the loss of their best animals. Coomassie was one of the very best cows in Jersey. She is now one of the best in America. Here influence for good he e-if she breeds—will prevail through all future time. The loss of the future influence of her blood on the stock of the Island will never cease. Our fortune is not to be made, nor is the pre-eminence of the race as developed in Jersey to be undone, by the importation of any single cow; but, happily for us, and unhappily for Jersey, the importation of Coomassie indicates that the best blood will follow the longest purse, and that as fast as animals of remarkable excellence are produced there they will be purahased here. This result is probably inevitable.

Such was the welcome which this cow was met with; now we may speak more directly of her style and deeds. "Coomassie" is numbered 1442 in the Foundation Stock of the Jersey Herd Book, and 11,874 A. J. C. C. H. R. She was calved in 1871, and brought to this country in Jan., 1881. She is a buckskin fawn, with much white, with a very yellow skin, an enormous curviline escutcheon and an absolutely perfect shaped udder. She is low on the leg, fine in bone, and has a large and capacious body. Her success in the show ring on the island of Jersey was continuous and unprecedented, comprising five first prizes over the entire island, and four first prizes in Parish shows, with different judges in every competition, thus stamping her as a perfect type of the Jersey cow. Her excellence, however, is not confined to her good looks, as she has butter records for the years 1878, 1879 and 1880, of 16 lbs. 11 ozs., 16 lbs. 7 ozs., and 16 lbs. 9 ozs., respectively, in 7 days. Her granddaughter, Ona, made 17 lbs. 4 ozs., in 7 days, at 3 years old, and 7 months later made 11 lbs. 4 ozs. in the same period. Another granddaughter, LaRouge, made 14 lbs. in 7 days, at 3 years, five months after calving and after a quarantine of 3 months. Two of her great granddaughters have made 10 lbs. 14 ozs. and 10 lbs. 8 ozs. of butter in a week 6 and 7 months after dropping their first calves at 2 years. Another milked over 16 qts. in her first calf and made 11 lbs. 13 ozs. of butter in 7 days.

The engravings on this page do not do the cow justice if we may judge by photographs, for which we are indebted to the courtesy of Mr. Burnham. They are the most life-like representations of an animal we ever saw, and were taken by Schreiber, of Philadelphia, by the "instantaneous" process.

"Coomassie" is not a stranger in California. Mr. Henry Pierce told us last spring that he had two of her grand daughters, and we hardly know yet what more he may have for the telegraph reported him as a large buyer at the sale recently held in New York city.

NATURAL SKIMMED MILK.—We lately had an item about an English cow, which gave milk so poor that she brought her owner into arrest for selling watered milk. Sometimes it is the nature of the cow; sometimes the feed will have a marked effect upon the quality. It is recorded that in 1868, milk, "just as it came from the cows," was delivered to a cheese factory in Tompkins county, N. Y., which was quite as effectually skimmed as if it had been done by the hand of a dairymaid. The cream that rose upon it, to the thickness of a caseknife blade, was just as white as chalk and about as tasteless. This reduction in cream was brought about by the food used by the cows. They lived upon carex, a coarse sedge that flourishes in swamps and wet places and starts up in the spring in advance of pasture grasses.

### THE RAILROAD AND THE FRUIT BUSINESS.

We lately mentioned the fact that the Los Angeles Chamber of Commerce had appointed a committee, consisting of J. De Barth Shorb and J. M. Griffith, to interview the railway managers concerning the rate for overland shipment of fruits and the manner of shipment thereof. The committee visited Mr. Towne, the General Superintendent, and report that Mr. Towne assured them that the necessary fruit cars would be furnished by the company to carry the fruits to market, and that he would make it a personal condition with all connecting roads that the fruits should not be transferred from fruit to box cars in transit, and as far as possible insist that no unnecessary delay shall occur in forwarding fruit to points of destination. That he had dispatched a special agent East to confer with the officials of all connecting roads, with the view of obtaining their necessary consent to a pro rata reduction

### CINCHONA CULTURE.

The latest reports from the English cinchona plantations continue the announcement of success in the East Indian ventures. The plantations of the cinchona succirubra which are now in existence are so extensive as to suffice for present and probable requirements, so far as the febrifuge is concerned. They contain more than 4,000,000 trees, and from them 267,335 lbs. of red bark were obtained during the year. The yield per acre (1,510 lbs.) is not, however, considered to be very good; 9,296 lbs. of the febrifuge were made during the year, and 8,653 lbs. were consumed, 5,500 lbs. being used in the Government services and 3,150 lbs. sold to the public. The demand for the febrifuge steadily increases, a satisfactory proof of its value, and the total amount manufactured from the commencement to March 31, 1881, is 36,639 lbs. Financially, the enterprise must be regarded as a complete success. The actual profit on the

### Early Maturity of Cattle.

In all domestic animals bred and fed for their flesh, the early maturity or the quickest approach to marketable size and condition is of the greatest importance but it is often overlooked. Perhaps it is nowhere more noticeable than in swine, and yet some people are unmindful of the fact that by getting an improved breed they can turn off their stock and get their money months before they could realize upon the increase of the scrubs which they breed and feed. In poultry, in lambs—in short, as we have said, in everything grown for its flesh, there is money in having that which quickly attains size and condition.

In the matter of cattle the fat stock shows which are now being held annually in Chicago give much data for estimating the results which should be expected from animals and show what the different breeds are able to do in the way of quick growth. The *Breeders' Gazette*, a new stock journal started in Chicago by J. H. Sanders, has in its issue of Dec. 1st, a valuable table of the characteristics of the different prize animals from which we take the following:

Names of Animals.	Age in days.	Wght in lbs.	Average gain per day from birth.
SHORT HORNS AND GRADES.			
Boysdon.....	1421	1930	1.35
Mozie.....	1309	2150	1.84
Abe Renick.....	1362	2200	1.61
Geneva's Pride.....	2424	1865	0.76
Major.....	719	1565	2.17
Eched.....	880	1500	1.70
Lady of Aberdeen.....	1873	1875	1.00
Airdrie Boy.....	1055	1855	1.75
Miss Molly Bates 4th.....	2157	1785	0.82
Muir.....	1085	1895	1.74
Talhot.....	1324	2085	1.57
Red Lord.....	1045	1765	1.68
Washington.....	620	1250	2.01
Quiddesset.....	862	1450	1.68
McMullen.....	1237	2095	1.61
Oakley.....	994	1755	1.82
Lady Peerless.....	1268	1520	1.19
Barney.....	1268	1995	1.57
Nels Morris.....	3123	2900	0.92
Tim.....	2333	2760	1.15
Conover.....	2059	2800	1.36
Phil Sheridan.....	1176	2130	1.81
Wild Bill.....	872	1935	2.21
John Sherman.....	872	1845	2.11
DEVONS AND GRADES.			
Conqueror.....	1190	2145	1.80
Will.....	1224	1965	1.60
Washington.....	1242	1930	1.55
Kansas.....	1054	1925	1.82
Maid of the Mist.....	2243	1560	0.69
Lady Elliott.....	1326	1335	1.60
May Queen II.....	1777	1410	0.79
Betty Back.....	2059	1925	0.93
Bailey.....	622	1280	2.05
DEVONS.			
Buck.....	1328	1230	0.92
Broad.....	1268	1075	0.81
John.....	928	925	0.99
Jerry.....	969	975	1.00
Tom.....	882	1030	1.16
Jim.....	614	835	1.36
Bill.....	690	690	1.15
Max.....	614	850	1.33

### IMPORTED JERSEY COW COOMASSIE (IN TWO POSITIONS.)



of freight charges, and to the speedy and uninterrupted transmission of fruit shipments, and upon the return of this agent he hoped to be able to make the reduction asked for. Upon these points of information the committee comment as follows: "From the deep interest manifested by Mr. Towne, and from the expression of his earnest desire to promote and encourage the fruit interest of Southern California, your committee feel assured that the reductions on present rates to San Francisco and Eastern markets will be made in time to meet the demand of this year's crop." This is a conclusion which must be realized or the fruit interest will receive a check which would be unfortunate at this period of its growth.

### THE SACRAMENTO HORTICULTURAL MEETING.

From all accounts which come to us, we infer that the Sacramento convention of horticulturists was an occasion of great interest, and there was an excellent representation of those engaged in the fruit growing interests. We defer for the present farther report of the proceedings, as we are promised documents and other matters which will enable us to make a much more complete review of the meeting hereafter.

A FEW miles west of Las Vegas, N. M., is a buried forest. The trees are petrified and crystallized into solid stone. The bark, grain and knots of the trees are shown. The trees can be taken out almost perfect, and make fine lawn ornaments.

year's working was 8% on the capital of the plantation. This does not, however, represent the whole gain of the year. The price of quinine was very high, and the cost of the 5,550 lbs., which would have been used by the Government, had the febrifuge not been available, would not have been less than £48,000, while the cost of the febrifuge was only a sixth of the amount, representing a saving of at least £40,000.

HOGGING OUT MORNING GLORIES.—Have our pestered farmers tried the penetrating hog as a morning glory extractor? An Iowa man writes to the *Rural New Yorker* that the way to clean out the weed is to fence in the infested patch and allow some hogs to run in it. The more the better and the speedier the work. Of course, the hogs must not be rung or have their noses cut. They will root up a square rod two ft. deep for a mouthful of the roots of morning glories. The above plan will be found a good rid-dance for bad rubbish, and it doesn't take long. By having a sufficient number of hogs to turn in early in the spring the lot might be entirely cleaned in time for corn or other spring crop. Has any California farmer tried hogs, and with what results?

THE *Tribune's* Washington special says: The statement is made that 10 of the experts on insanity summoned in the Guiteau case have consulted together and agreed that the assassin is sane and legally responsible for his crime.

These tabulated weights and ages show what a great difference there is in animals in the matter of growth. As they were all in competition at a fat stock show, it is to be presumed that they all have had liberal food, and had something of an equality in chance for growth. In the matter of breeds, there is still something of advantage in the Short Horns over the Herefords, although the contest is rather close. The Devons are left quite in the rear.

The figures we have given are well worth study; and as many of the animals recorded in the table are grades, it will be pertinent for those breeding common stock to compare the ages and weights of their own animals, and see how much they might possibly gain by introducing a little of the quickly maturing blood.

DEPARTMENT STATISTICIAN.—We are glad to learn by the *Prairie Farmer* that Hon. J. R. Dodge has been restored to the charge of the statistical branch of the Department of Agriculture, a position which he occupied continuously under Commissioners Newton, Capron and Watts, and for some time under Gen. Le Duc. Mr. Dodge's services in that capacity are known and appreciated throughout the country. During the last two years Mr. Dodge has had charge of the special statistics of agriculture of the tenth census. His recall to the Department of Agriculture is a matter of congratulation to the country, as well as to the Department.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### The Debris Question.

EDITORS PRESS:—While the report of the committee of San Francisco merchants has advanced the public discussion of the debris question a stage, it has failed to present a fair and equitable statement of respective rights. It was calculated to create an impression that will be prejudicial to the right settlement of this question, unless removed, and detrimental to the people of the valley who are now suffering injury from the flow of the debris.

It is a mistake to say that a company of merchants, having large dealings with the hydraulic companies, or having an extensive trade in the regions where the influence of those companies is paramount and powerful to withdraw that trade from them, could be really disinterested. They might have desired, and undoubtedly did desire to do exact justice; but yet they were under an undefined moral constraint which prevented them from boldly stating what must have been, and what, as a matter of fact, was their convictions and sense of what was equitable. This is plainly apparent in their report. The committee were in honesty compelled to give their graphic description of the destruction in the valley, and of the gross injustice committed there. But after they cease to treat of the valley, their argument is plainly a defense of hydraulic mining, and an effort to manufacture a standing ground for that industry in public expediency and in equity. They find that rights of property in the valley are being violated by the wholesale, and that the valley will be devastated; that the whole stretch of the country from Marysville to the mouth of the Sacramento river will be ruined and blasted, yet they cannot decide upon any definite action; yet they cannot find grounds upon which to arraign hydraulic mining; and they cannot bring themselves to determine whether it is not required by public policy and public justice that hydraulic mining should stop operations temporarily until their operations can proceed without farther injury. The committee think it treading upon delicate ground to decide that the hydraulic companies must forego their profits for a season, but fail to perceive that in refraining from declaring for such stoppage they consign the valley to suffer constant moral and legal injury. By implication they aver it equitable that the citizens of the valley suffer damages in order that the hydraulic companies may not suffer a loss of profits. They in effect, sanction the doctrine that the hydraulic companies, in preying upon the citizens of the valley, are excusable if not justifiable.

In their first resolution the want of a straightforward declaration of right is apparent. The principle that rights of property must be protected, they recognized mentally; but to have resolved that would have been self condemnation, since it would have been to resolve that the hydraulic companies must stop operations, and they were really engaged in finding an excuse for the operations of those companies, and a pretext for their continuance. Therefore they resolved—"That all property and property rights ought to be respected and protected." That word "ought" involved a material reservation. They resolved, not that this protection of property rights is essential, unavoidable or inevitable, if republican institutions are really the defenders of liberty and of right; and if republican institutions are not to be the machinery of oppression and plunder, but the vindicators of the rights of the small as well as of the great. But they resolved that in general, property rights ought to be protected, yet that considerations or circumstances might outweigh this general consideration, and property could at times be excusably violated and courts and government should condone it; and by implication the case in point is an instance where the exception is applicable. That is, when the profit of wealthy companies is concerned, it is doubtful whether property rights ought to be too severely insisted upon and too rigidly vindicated. This may be so, but if there is limitation to the application of this principle; if the principle is to apply to the poor and to the moderately wealthy, but is to be relaxed in its application to the powerful, we would ask whether the fabric of government made by the constitution makers of the revolution is going to stand?

Finally, the committee's findings as to the magnitude of hydraulic mining, and their recommendations and resolutions, are all turned to evade the inference, which seemed inevitable, from their findings in the valley, that public expediency and justice absolutely required the abandonment of the method of mining by the hydraulic process. They adopted the highest figures given them as to the magnitude of hydraulic mining, and presented the industry, in its relation to the prosperity of the region in which it is situated, in the most rosy light, and "resolved" that the "encouragement of the hydraulic mining interest"—which, in their words, is about to "blast and render sterile that entire section of country, blotting out its towns and cities, and rendering it a perfect Sahara"—is "desirable and a duty." Finally, they adopted the expedient of dams, a scheme that, it is safe

to say, will become infamous in the eyes of the people of this State before this question is settled. These citations show the justice of the position that the committee could not be, and were not in fact, disinterested and impartial, although they might have wished to be.

It shows what little reliance can be placed upon the instrument constituted by their report as a guide to public thought, opinion or action. If it was ever anticipated, and it was anticipated that the report of the committee should point out indisputably the condition of the equities, and should indicate the definite public action required in policy and justice, that anticipation has failed. The only thing accomplished by the report has been that the representation as to the destruction in the valley can no longer be disputed. The report of the committee confirms the most radical statement as to that destruction. The public recognize in their report reliable evidence as to the condition of the valley, which may not be disputed. Anyone who hereafter denies the ruin in the valley, will stand condemned before the public of perjury.

One other thing has been accomplished: a clear recognition of the hydraulic companies responsibility. This is involved inextricably and indisputably in the proposition, and in the resolution that they must defray the expenses of building and maintaining dams.

Otherwise the findings, recommendations and resolutions of the committee are encumbrances to be cleared away before justice is done, public expediency is satisfied and this debris question finally settled. Those recommendations and resolutions are, all of them, unjust to the people of the valley, and must be examined and exposed. This may seem a sweeping assertion, but reflection will convince that it exactly expresses the relation they bear to the safety of the valley and to the solution of this question.

Oakland, Cal.

### Woodland.

EDITORS PRESS:—The glorious rain has come at last! On Saturday, Dec. 3d, a very gentle rain began to fall just before night, which gradually increased all that night, continued all the next day, and on Sunday night it rained heavily. Pools of water stood everywhere in the streets, and generous streams ran down the gutters. It was a real old fashioned soaker, and the farmers smiled as they remarked, "California is herself again."

This is really the first rain of the season in this vicinity. There have been showers which laid the dust and started vegetation a little by the roadside, but the ground remained too dry and hard to plow, and the farmers were waiting with much impatience and some anxiety for a generous rain which should enable them to move the soil. In riding from Woodland to Cacheville, a distance of five miles or more, we saw nothing but one continuous stretch of stubble fields—not a single field being sowed, or even plowed. We were much surprised at this, as a recent trip through Solano and Napa counties showed all the teams busy with the plow and harrow, and in Napa county the seeding was probably one half done before the 1st of December. This shows that the November rains, which were light everywhere, almost missed Yolo entirely, though we understand they were heavier in the northern part and that some seeding has been done there.

We noticed very little summer fallowing in Yolo county, while in Solano it is extensively followed, and in the Montezuma hills it is almost the universal rule. By this excellent method of farming these rolling hills of Solano, which for a long time were regarded as almost worthless for wheat raising, have gained a high reputation as a wheat producing section, and nearly all the farmers in the Montezuma hills are getting rich. They never fail of a good crop, and it is mainly due to their superior methods of farming.

But to return to Yolo. This county has great advantages in the three items of climate, soil and market, and is destined to become one of the richest sections in the State. The climate is just the golden medium between the chilly rawness of the coast and the excessive heat of Colusa and the great interior. Every part of the county is already penetrated by railroads, making all produce easily and cheaply marketable, and the soil is immensely productive. There is wealth enough in the soil of Yolo county, when put under high cultivation and half of it set out with orchards and vineyards, to sustain a million people in comfort and luxury. Much interest is now centering in the vineyard business, and we are glad to learn that the raisin grape is being regarded with much more favor than the wine grape. This is probably due largely to the remarkable success of Mr. Blowers, of Woodland; and Mr. Briggs, of Davisville, in raisin growing. This, of course, excites people. "Much land is being quietly bought up with a view to vineyard planting this winter. But what vine to plant is the vexed and vexing question. Many hesitate to plant out common cuttings for fear of the terrible phylloxera. This is the one drawback to the business. Some will take the chances on California cuttings, some will import cuttings from St. Louis at a very greatly increased expense, relying mostly on the example and statements of the French.

Woodland is destined to be one of the most

beautiful towns in our State. The location is most beautiful, and the town is being more substantially built than any other in the State, as far as we know. Everything is built of brick, a wooden building not being allowed within the fire limits. Water works have been erected, and the water, secured by deep boring, is very soft and pure. This is a wonderful relief to the people, who used to use the wretched surface water from the shallow wells.

Woodland is now making a rapid growth, many costly and substantial buildings having gone up the past year. It is claimed that the last census develops the interesting fact that Woodland is the wealthiest town in the United States in proportion to the number of its inhabitants. It has many wealthy citizens, and their wealth has been made here rather than elsewhere. Some very beautiful private residences have recently been erected.

W. C. D.

## HORTICULTURE.

### Fruit in Santa Cruz County.

EDITORS PRESS:—The Farmers' Association met at the court house on Saturday, Dec. 3d, at one o'clock P. M.; President J. S. Mattison in the chair. The minutes of last meeting read and approved. The committee appointed to confer with the County Horticultural committee, with regard to the insects injurious to fruit trees, requested further time, which was granted. Dr. Anderson presented some specimens of the codling moth in its different stages.

J. S. Mattison read the following extract from the report of the State Horticultural society:

"Santa Cruz county is excellent for small fruits and berries. Apples, pears and plums, figs and cherries are a failure. Mildew on pears, curled leaf on peaches, codling moth, woolly aphis and caterpillars damaging fruits, too much water in the ground. But the mountains above the fog line is proven to be choice for the raising of all fruits of the temperate zone."

Dr. Anderson was requested to reply, and did so as follows:

At the last meeting of the State Horticultural society, Dr. Strentzel, chairman of a committee to report information from the various fruit growing counties of California, speaks thus of Santa Cruz county as just read by Mr. Mattison:

Now it seems to me that such information either originated in the minds of the committee or was furnished by somebody who was not well informed in regard to Santa Cruz county. That mildew, curled leaf and some insects do exist, that we could just as well spare, is true; but, so far, we are remarkably free from these things (entirely so from the codling moth), and they can scarcely be mentioned as of any importance in orchards not entirely neglected. As to figs and cherries and "too much water in the ground," the remark might apply just as rightfully to any other county as to Santa Cruz, for there are exceptional localities in every county. There are many places where figs and cherries grow and bear beautifully.

In looking at the report as a whole it seems somewhat imperfectly digested, and doubtless other counties may have similar complaints with Santa Cruz in regard to the information furnished. It would seem better if this committee would ascertain facts with certainty before spreading such statements among the people.

There being no further business the association adjourned to the first Saturday in January, 1882.

ROGER CONANT, Secretary.  
Santa Cruz, Cal.

The Reports to the Horticultural Society.  
We give now the full text of the letters received by the Horticultural Society, from correspondents in Santa Cruz county, in order that readers may see from what data the conclusions of the committee were drawn:

James Waters, Watsonville

The following apples succeed best: Early: Red Astracan, Gravenstein, Lyman's large summer. Fall: Twenty-ounce, Fall pippin, King of Tompkins county. Winter: Bellefleur, White Winter Pearmain, Yellow Newtown pippin, Smith's cider; soil, sandy loam.

The following pears succeed best: Early: Bartlett, Buerre hardy. Fall: Flemish beauty, Doyenne Boussock, Buerre diel. Winter: Winter Nelis, Glout Moreau, Vicar of Wakefield. The best shipping pears are Bartlett, Buerre hardy, Winter Nelis. Soil, sandy loam.

The following peaches do best: Early freestone, Amden's Junc, Alexander Hale's early, Early clingstone, Newtonington cling, Late freestone, late Crawford, Late clingstone, Large White cling. All varieties curled last year. Soil, sandy loam.

The following plums do best: Early: Golden Drop, Washington. Late: Jefferson, Columbia, Duane's purple. Soil, sandy loam.

The following apricots do best: Blenheim Royal, Large Early. No nectarines are satisfactory.

The following cherries are healthiest, best bearers, and most profitable: Gov. Wood, May Duke, Black Heart, Black Tartarian.

Prunes: Burgundy, Hungarian, Fellenberg and German prune.

Of small fruits, the following do best: Currants, red cherry, gooseberries, Houghton's seedling, and some English varieties. Blackberries: Wilson's early, Lawton and Kittatinny. Raspberries: Early prolific, Brandywine, Delaware, Herstine, Reliance, Queen of the Market,

new Rochelle and Gregg. Strawberries: Cinderella, Cumberland Triumph, Continental, Crescent seedling, Duchess, Forest Rose, Great American, Huddleston's favorite, Miners' great prolific, Longfellow, Monarch of the West, Pioneer, Sharpless.

Almonds, English walnuts, chestnuts, oranges, lemons, olives and figs not a success.

The Pajaro valley is well adapted to the cultivation of apples, cherries, plums and prunes. For several years pears have not done satisfactorily, the past season the crop being a total failure. In some varieties the fruit is scabby, or rough on one side, covered with mildew. The Easter Beurre has been affected in this way for several years, making the fruit wholly worthless. Bartlett, Beurre Hardy, Winter Nelis, Glout Moreau and some other varieties do very well.

Apples, cherries, plums and prunes are regular and constant bearers, and the fruit first-class. The crop this year of cherries, plums and prunes was unusually large and fine. Have no codling moth, or have not seen or heard of any.

Our cool and foggy weather is not very well adapted to the cultivation of peaches, though some varieties do quite well. Nearer the mountains they are very much better.

This valley is the home of the small fruits, strawberries, raspberries and blackberries. They bear very large and abundant crops of fruit, the last two without irrigation, though with one or two wettings the quantity and size of the fruit is very much improved. I had two fine crops of strawberries this year from a patch of Cinderellas planted last February. The vines were exceedingly full when the rains set in. They were irrigated about twice a month. I doubt if there is any place in the State that can beat us raising small fruits.

J. W. Gally, Watsonville.

Apples—All early apples do well on the trees but not on the market—they are too late. All fall apples do well except the Rambo, which makes a fine clean tree, free from aphids, but the fruit is small and no account. Of winter apples the following are best: Bellefleur, Newtown pippin, Vandevere, Smith's cider, Northern Spy, Baldwin, Wine Sap, Swaar and Rhode Island Greening. The soil is rich, deep, black, clayey loam, underdrained at 12 ft. by sand.

Pears—Early pears are no good. All fall pears do well. Winter Nelis is the best winter pear—all others second. The Winter Nelis is the best shipping pear.

Peaches—Early freestone peaches are not early in this valley, and lack color and flavor compared with those from Vacaville and the mountains. Early clingstones lack color and flavor, but the trees grow well and bear abundantly. Of late freestone peaches, the Crawford are large, fine and firm—fair to eat and fine to can. Late clingstones are inclined to be insipid and watery. New varieties are being tried. Late Crawford and the earliest freestone varieties are comparatively free from curl. Curl on these valley lands does not seem to modify the size or yield of any peach as new leaves take the place of the curled. Soil same as above.

Plums—This is a plum valley. We can raise any kind of plum—plumb up to the handle. If there is any exception, it is Coe's golden drop. Soil same as above.

Apricots—All apricots grow well, bear abundantly, but lack high color—not enough sunshine.

Nectarines—Nectarines grow and bear well.

Cherries—The following are healthiest, best bearers and most profitable: Old-fashioned black hearts, Gov. Wood and Early Richmond. Tartars do well enough, but I have seen better. The old murello pie cherry grows gigantic and bears awfully. The bigareaux do well.

Prunes—All prunes do well. Plums and prunes are at home here.

Small Fruits—The red dutch currant is preferred. No gooseberries do well—they all go to wood. The Lawton and Kittatinny are the best blackberries. The Lawton is best if not irrigated; with irrigation, the Kittatinny, but we don't irrigate. All raspberries do well. All the modern improved strawberries are raised with and without irrigation. We get bigger berries with water, but better ones without it.

Nuts, Etc.—Almonds not grown. English walnuts are not very satisfactory. The chestnut succeeds moderately. Oranges and lemons not grown. Olives not tried. Figs—Plenty of leaves, but fruit will not hang on.

Remarks—Making out reports is not really in my line, but then, as a first effort, if this report is not, at once, sociable and satisfactory, I have missed my object. To epitomize (so to speak) the whole matter, permit me to say that this Pajaro valley as a fruit field is a place for apples, late pears, cherries, plums, prunes and berries (except goose). Our best paying fruits for the San Francisco market are those of mid-summer and midwinter, because Vacaville, the up-country and the southland, get away with us on spring and early summer sales. But all this only applies to the really valley lands. On the mountains and hills which bound this valley, on three sides, there are certain spots of favorable thermal exposure which have been lately slightly tried; notably, in the matter of peaches, with fine satisfactory results. Let me commend, gratuitously if need be, your society to a stricter attention to exposure. California's climate is as "spotted" as her soil is, or as her many virtues are. We have no scale bug, no codling moth, but we have the woolly aphis and several other aphides, besides the web caterpillar and several other caterpillars, periodically. P. S.—"Sales" and "market" in foregoing refer to San Francisco market. South of us is some market



for our early fruit—good growing market, but not yet equal to production.

J. H. Logan, Santa Cruz.

Apples—Best early are red Astracan and Gravenstein. Best fall are Fall Pippin, Belle-fleur and R. I. Greening. Best winter are Newtown Pippin, Baldwin, Pearmain. Soil, friable loam, some places clay, others chalk rock subsoil.

Pears—Early, Bartlett; winter, Winter Nelis. Soil, friable loam.

Peaches—Early, Briggs' Red May. This variety is entirely free from curl. Curl killed two Chinese cling trees last year. Lemon cling and strawberry were affected, but recovered. Soil, same as above.

Plums—All do well. The best early are yellow egg and green gage. Best late are Ickworth's Imperatrice and Coe's late red.

Cherries—The hearts and bigarons make best growth.

Prunes—French, Hungarian and German do well.

Small Fruits—The cherry currant and Houghton gooseberry are preferred. Of blackberries, the Lawton has the longest canes and most productive. Kittatinny has the best fruit. Of raspberries, red Antwerp, Cutbert; in fact, all red varieties do well. Black Caps, including Gregg, are a failure in this vicinity so far. Of strawberries, the sharpless is the most satisfactory for the table. Crescent seedling is the greatest bearer.

Nuts, etc.—Almonds are grown to some extent, but are shy bearers. English walnuts bear fair crops. Oranges so far a failure for fruit, but not fully tried yet. Figs do not succeed very well. It is too cold in summer for them.

Remarks—My personal experience in fruit raising is limited, as my orchard is only one year old. The answers I have given you do not give my own experience, but gives the result of my inquiries. I am taking a good deal of interest in fruit growing, and hope to be able in a few years to answer your inquiries as to all kinds of fruit from personal observation. I am preparing a hillside of northeast exposure with woods, loam soil, for small fruits, such as raspberries, blackberries, gooseberries, currants, etc., and will irrigate by the sub-irrigating system. Will try about 15 varieties of blackberries and an equal number of raspberries. Generally, in the vicinity of Santa Cruz, the peach is of poor flavor, but is a good bearer. The apricot so far a failure as a bearer. Apples are generally good, pears, cherries, plums, and all small fruit, except Cap raspberries and grapes are good. Have never seen finer berries than our reds. Higher up in the hills—out of the reach of fogs—all kinds of fruit do splendidly, including Cap raspberries and grapes. The grapes and peaches from the orchards and vineyards in the mountains from 6 to 20 miles from here are exceedingly satisfactory.

C. C. Miller, Santa Cruz.

Apples—All kinds succeed in this county.

Pears—All kinds do well wherever tried in this county. The Winter Nelis is the best shipping pear.

Peaches—The Early Crawford does well and Briggs' May succeeds admirably. Briggs' May was the only variety entirely exempt from curl last year.

Plums—All kinds do well.

Apricots—Are rather uncertain near the coast.

Prunes—Hungarian and "Petite" prunes do well—but the German casts its fruit.

Small fruits—Of raspberries, Gregg, Brinkle's Orange and Antwerp succeed splendidly. Of strawberries, Sharpless, Crescent Seedling, Miner's Prolific, Seth Byden, Monarch, Juncunda and Forest Rose all grow to perfection and yield enormously.

Nuts—There are some almonds grown but they are shy bearers.

Remarks—My location is one mile north from the Bay of Monterey, on a plain 100 ft. above the ocean and near the foot of a hill. The soil is made from the wash of the hill and is composed of sand, clay and decomposed chalk in about equal proportions—underlaid with chalk rock at a depth of one to two feet. My small fruit is irrigated once a week by sprinkling with a hose. From six square rods of ground, planted to red raspberries, I gathered the past season 1,350 boxes, holding two-thirds of a pound of berries to each box—in the aggregate making 900 pounds, which would be at the rate of 36,000 boxes per acre, weighing 12 tons. The yield has been about the same for the past two years.

Evan Russell, Santa Cruz.

Apples—The apples which do best are the following: Early: Red Astracan, Carolina, Red June. Fall: Cooper, R. I. Greening, Spitzenberg. Winter: Newtown Pippin, Smith's cider, Rome beauty, W. W. Pearmain. Soil, heavy loam, not adobe.

Pears—Early: Bartlett, Dearborn's seedling. Fall: Seckel, Flemish beauty, Beurre Clairgeau. Winter: Winter Nelis. Soil, heavy loam.

Peaches—Peaches do not succeed on this ranch. Trees die out from excessive rains.

Plums—The best plums are purple favorite and yellow egg.

Cherries—May Duke, Black Tartarian, black heart, ox heart. There are on my place small plots of ground which are very stony, and these cherries, of all kinds, seem to do well, and on other places they are all killed by the excessive rains.

Small Fruits—Houghton's gooseberry is best.

Lawton and Kittatinny blackberries do equally well on the soil or on sand. Lawton is the sweeter fruit. Longworth's strawberry does best.

Remarks—I shall give you a short list of plums and apples which do not do very well in my land: Plums—Imperial Ottoman, Washington, Lombard, Coe's late peach plum, Duape's purple. Apples—Baldwin, Winesap, E. Spitzenberg, Rox. russet, Danver's winter sweet.

M. P. Owen, Soquel.

Apples—Early harvest, Red Astracan. Fall: Gravenstein, F. bellefleur, F. pippin. Winter: R. I. Greening, Baldwin, W. Pearmain, Newtown Pippin. Soil, alluvial bottom and sandy clay upland, with mixture of clay and gravel subsoil.

Pears—Early: Bartlett, Dearborn's seedling, Madeline. Fall: Beurre hardy, Seckel, Fall butter. Winter: Easter Beurre, Winter Nelis, Vicar of Wakefield. Soil, variable, from sandy loam to clay upland.

Peaches—Briggs' May, Early Crawford, Early Hale, early clingstone, lemon cling, late free-stone, Late Crawford. Briggs' May free from curl, next Early Crawford, and Hale's early cure least.

Plums—Nearly all varieties do well. Early: Imperial gage, Bradshaw's E. golden drop. Late: Ickworth's Imperatrice, Quackenboss. Soil, variable, from bottom to hilltop.

Cherries—The following are the best and best bearers: May Duke, Gov. Wood, Black Tartarian, Royal Ann, Black heart.

Prunes—Fellenberg, petite d'Agen, Hungarian, German, St. Martin.

Small Fruits—But few currants or gooseberries have been tried. Lawton, Wilson and Kittatinny are the best blackberries. Red Antwerp is the raspberry most grown. Longworth prolific, Sharpless, Crescent seedling. Figs are not a success.

Remarks—Nearly every kind of apple, pear, cherry, plum, prune, quince, strawberry, blackberry and raspberry that have been tried here do well. Several varieties of peaches do well. Grapes on the highland do well. But the people of this section have paid so little attention to fruit and nut growing, that it is hard to tell what will not succeed. But apples, pears and prunes are a decided success, and there is no doubt but the olive and walnut will succeed, and the almond in some places, in the hills. For blackberries, raspberries and strawberries this region is excellent.

### Tree Planting and Shallow Soils.

EDITORS PRESS:—I send you a sample of 24 almonds from a tree two years old from seed and grown in our heavy adobe soil. The tree is very thrifty, and is about seven ft. high and about two inches in diameter at the ground. I planted this tree as an experiment, and for the benefit of those who wish to plant trees on the same kind of soil, I will tell you how I planted this and others: I first dug a hole about three ft. in diameter, to the hard pan, which is about three ft. here. I then broke the crust and bored a hole in the bottom about three ft. deep with a 7-inch post-hole auger. I then filled this auger hole with sand, and as I fill the hole up with the dirt I fill with sand in the center up to the surface, where I plant the seed or tree. This sand will allow the dampness to come up from below, and serves as a drain if there is too much water on the surface.

I think one reason our fruit trees are so short lived here is the want of drainage. The water stands too long around the roots where we irrigate during summer. This tree of mine has not had any water run nearer than eight ft. of it, and I think it will now do well without any water. It takes some hard work to plant in this way, but it will pay.

I have a few Japanese persimmons growing very nicely that are planted in the same way, and my experience in growing persimmons is that they will not grow to do any good unless planted in this way, as they send their roots straight down in the soil. Yours truly, J. Stockton, Cal.

GLYCERINE.—It is from the candle-factories that the enormous supply of glycerine comes, which is now a very important article of trade. A few years ago it was wasted; now it is sent to the manufacturing chemist, who purifies it by distillation and filtration through bone charcoal, and puts it upon the market. It is put to a great variety of uses, many of which depend upon its peculiar properties of nonvolatility and absorption by atmospheric moisture. Harness makers and leather workers use it in making leather pliable; it is put into gas meters because it does not freeze except at a very low temperature; modelers keep their clay studies moist with it; tobaccoists sweeten chewing tobacco with it, and ladies apply it to their hands and faces to soften the skin. Much of it goes into the manufacture of the terrible explosive, nitro glycerine, which is made by treating it with a mixture of sulphuric and nitric acid, or concentrated nitric acid. Not less than 3,200,000 pounds of glycerine are produced by the candle factories and utilized every year in this country, and yet so late as the year 1854 it was counted as worthless and run off into the sewers.

## THE APIARY.

### Beekeeping in Southern California.

From the opening address of J. E. Pleasant, of Anaheim, President of the Southern California Beekeepers' Association, at the meeting in Los Angeles in September last, and which is kindly sent for publication in the RURAL PRESS, we make the following interesting extracts: The year of 1881 will be recorded by the California beekeeper as almost a total failure in his occupation; but should that discourage him? Should that make him give up a business in which he has been for some time perfecting himself, and for which, perhaps, he is peculiarly adapted? No. Such disasters should only stimulate the courageous to stronger efforts and untiring industry. Perseverance, dexterity and economy will bring us success in almost every legitimate business in which we engage.

One of the most important subjects for us to discuss is, overstocking our range with bees. Can it be done? I say that it can, with bees as well as with animals. I am well aware that during our sage and sumac harvest it would require a large number of colonies to gather all the nectar from the millions of flowers that bloom in our mountains, but as this great flow of nectar does not continue very long, it is unwise to have more bees than can go on with brood rearing after the sage, sumac and buckwheat cease to bloom, or before they come in bloom. I think that it is admitted by some of our principal apiarists that a given point can be overstocked, and those that are fortunate enough to count their colonies by the hundreds divide them into separate apiaries.

This season of drouth, though very hard on the majority of beekeepers, will, I hope, teach us this: not to put our money on the market all at once, but to hold for more remunerative prices. When the producer crowds his produce on the market, the effect is to impoverish himself and enrich the middleman. I know of last year's honey which was sold in Los Angeles for less than five cents per lb. That honey is here yet, and cannot to-day be bought for less than 10 cents per lb. Who is to blame for this? The capitalist who is ready to invest and risk his money? I emphatically answer, No. It is the beekeeper who ruins himself. The question naturally arises, How can this be helped? I say, by co-operation. We should agree upon a living price, both for producer and consumer; governed, of course, by the supply and demand.

When it comes to the quality of honey southern California need not blush to compare her honey with that which is produced in any other part of the world. It is acknowledged in all markets where it has been tried that California honey is unsurpassed. We have the quality and, on an average, the quantity. I am now talking to the army of beekeepers of southern California, among whom we are proud to claim: J. S. Harbison, of San Diego, whose fame is world wide as being the largest honey producer in the world. C. J. Cox, also of San Diego, who is our Vice-President of the National Beekeepers' Association. R. Wilkins, of Ventura, who has made apiculture a study for many years before coming to this State, and in the short time he has been among us, made himself famous by his untiring and successful efforts to introduce California honey into European markets. Frank Flint, of Santa Barbara, A. W. Hale, of San Bernardino, N. Levering, C. N. Wilson, J. A. Haskel, Capt. Butler, R. Hall, J. W. Wilson, of Los Angeles county. Having an army of beekeepers headed by such men whose names I have mentioned there should be no such word as fail. Again, then, let me urge you to unite. Let us join hands like brothers, and stand shoulder to shoulder, for by so doing we encourage each other and gain new strength to overcome obstacles which impede our way to the goal for which we are all striving. Having the best honey in the world, let us put it on the market in a good, neat and suitable package, thereby creating such a demand for our honey that the doleful cry of overstocking the market will be changed into the cheerful inquiry of, How is the demand to be supplied? To me the future prospect of the California beekeeper was never more promising than now. In the near future apiculture will not be a game of chance, as it has been in the past. A few good seasons and proper management will enable us to issue from darkness into light; therefore, let us "faint not! for to the steadfast soul come wealth and honor and renown."

In looking over this assembly, I see but a few of the fair sex. Why is it so? Are we all bachelors, or, worse still, woman haters? No! most fervently I hope that neither charge can be laid at our door. Let us in the future induce many ladies to attend, and also invite them to take part in our discussions. You all are aware that in England the President of the British Beekeepers' Association is Lady Burdett-Couts-Bartlett, a lady whose fame is world wide; while here, in the United States, one of our best apiarists is also a lady. I am confident that by exerting ourselves we could induce the ladies to grace our conventions.

ALWAYS ALIVE.—The PACIFIC RURAL PRESS, a paper that is always alive to anything that affects the interests of the farmer or dairyman.—*Petaluma Argus.*

## THE FIELD.

### Bluestoning Seed Wheat.

EDITORS PRESS:—I saw an article in the PRESS of Oct. 15th, and also in the paper of Nov. 26th, on bluestoning wheat, and with your permission, I will give you a few words on the subject. I knew a good farmer a few years ago, who never had any smut and never used bluestons. His method was to make a strong salt brine and stir in lime until it was about like whitewash. He would then put about 60 lbs. of wheat in a sack and dip it in the solution, and let it stay in long enough to get thoroughly wet, and then set it out to drip. As this is seed time, it would be well for some of our farmers to try a few bushels of their seed wheat in this way, and sow it in different parts of their fields, and note the result.

I know of another man that had about 150 acres of summer-fallow land, and the seed was all out of the same granary and the bluestoning, sowing and barrowing was all done by one man, and was all as near alike as it was possible to do it. I helped thresh the wheat. One-half the field did not have a grain of smut, and the other half of the field was about half smut. This was 1866. Will some scientific man please tell why it was so; and if any person doubts my statement, I will refer to the man that owns the ranch, and also to the man that threshed the grain, as they still live here. J. C. B. Stockton, Cal.

## MISCELLANEOUS.

### Astronomical Progress.

Like the sand of the sea, the stars of heaven have ever been used as effective symbols of number, and the improvements in our methods of observation have added fresh force to our original impressions. We now know that our earth is but a fraction of one out of at least 75,000,000 worlds. But this is not all. In addition to the luminous heavenly bodies, we can not doubt that there are countless others, invisible to us from their greater distance, smaller size, or feeble light; indeed, we know that there many dark bodies which now emit no light, or comparatively little. Thus, in the case of Procyon, the existence of an invisible body is proved by the movement of the visible star. Again, I may refer to the curious phenomena presented by Algol, a bright star in the head of Medusa. This star shines without change for 2 days and 13 hours; then, in three hours and a half, dwindles from a star of the second to one of the fourth magnitude; and then, in another three and a half hours, reassumes its original brilliancy. These changes seem certainly to indicate the presence of an opaque body, which intercepts at regular intervals a part of the light emitted by Algol.

Thus the floor of heaven is not only "thick inlaid with patines of bright gold," but studded also with extinct stars; once, probably, as brilliant as our own sun, but now dead and cold, as Helmholtz tells us our sun itself will be, some 17,000,000 years hence.

The connection of astronomy with the history of our planet has been a subject of speculation and research during a great part of the half-century of our existence. Sir Chas. Lyell devoted some of the opening chapters of his great work to the subject. Houghton has brought his very original powers to bear on the subject of secular changes in climate, and Croll's contributions to the same subject are of great interest. Last, but not least, I must not omit to make mention of the series of massive memoirs (I am happy to say, not yet nearly terminated) by Geo. Darwin, on tidal friction, and the influence of tidal action on the evolution of the solar system. I may, perhaps, just mention, as regards telescopes, that the largest reflector, in 1830, was Sir W. Herschel's, of four ft.; the largest at present being Lord Rosse's, of six ft.; as regards refractors, the largest then had a diameter of 11½ inches, while your fellow-townsmen, Cooke, carried the size to 25 inches, and Mr. Grubb, of Dublin, has just successfully completed one of 27 inches for the Observatory of Vienna. It is remarkable that the two largest telescopes in the world should both be Irish.—*Sir John Lubbock, in Popular Science for December.*

HINTS TO USERS OF THE TELEPHONE.—Most people, when they take up the telephone handle to listen to what the person speaking to them is saying, cram it so tight to their ear that no particle of the sound can escape. They seem to think that if they let any of the sound escape it will all go. This is a mistake, and the reason why those not familiar with its use have such difficulty in hearing what the person at the other end is saying. Too tight a pressure against the ear causes a humming and confusing noise. Hold the receiver close to the under part of the ear, leaving an opening at the top, and the words will be heard much more distinctly. Another hint: Don't yell into the telephone as though you had decided on bursting your windpipe. Speak clearly in your natural tone of voice, keeping the lips about an inch from the telephone mouth. If you do this, you will save yourself and your correspondent a great waste of time and trouble.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Meeting of National Grange No. 3.

The following report of the Committee on Transportation was unanimously adopted:

The principle underlying our government is equality of rights and privileges. With this duly maintained the citizen may come and go at will, may labor at his pleasure, engage in any pursuit, enter any market he may choose, and perform any act, so long as his course of life, his pursuits, or his acts, do not affect injuriously the rights of any other citizen. And any other person, or association of persons, or corporation within the broad domain where this fundamental principle is observed, is bound to respect these rights and privileges of the citizen, or become amenable to the power of the whole people, which must be put forth when necessary to preserve the freedom of all. It is not the mere right to exist in safety that constitutes the independence of this people; it is the broader right to gather the full rewards of labor untaxed except for the maintenance of Government, and the execution of purposes embracing the good of all. There can be no unequal burden laid upon any citizen, or his industry, by the Government, which is a violation of the principles on which the republic is founded, nor can there be any power under the Government so great as to secure immunity for its acts when that power is exerted to oppress any person or to invade his rights. Such unjust use of power is, in the instant of its exercise, a menace to the people, for it is insidious in its growth, in its very nature rapacious, and tends in its development to the subversion of civil rights and the destruction of the whole governmental system. Such power now exists, untrammelled, except by the disagreement of the few men who wield it, and the chief industry of this people suffers by its exercise, while equity and justice stand abashed by its audacity, unnerved, and for the time inept to relieve the oppressed. It is the corporate power of railroad transportation companies threatening the priceless possession of freedom. For its aggrandizement every industry is subject to tax gauged by the desire of a few men whose rule is selfish policy. The law of the land interposes no check upon its rapacity, no foil to its schemes, no safeguard beneath which the citizen may shield his right. Production may go on in accelerated ratio under the stimulus of improved machinery, and the intense application of a busy people ambitious to hasten the development of a continent; but the monstrous power that grasps every product of industry with remorseless purpose to squeeze from it the last trace of value, under the edict to tax "what the traffic will bear," leaving a coarse residuum for the subsistence of a people for whom the diabolical rule establishes slavery, more galling than poverty, for from this there may be relief in earnest effort and frugal management, for that increased toil and pinching economy, serve only to augment the gains of relentless rapacity. Time passes, and this power of corporations emboldened by success, challenges restraint while it fortifies every point not already impregnable in possession. To-day, as last year, it is "intrenched in the several State capitals, domiciled in the central citadels, confident and strong, sways the commerce of a continent, and dominates its industries with cold neglect of the golden rule that is the vitalizing spirit of good government, and with cynical contempt of the common honesty and homely virtues that support the structure of civil liberties. A power within the State, accelerating in its growth, licensed by its own inordinate greed, usurping as desire advances, limitless in audacity—how long will it be before the State itself will be a supplicant to its creature that lays lustful hands upon the shrines of authority yet preserved, swaggers in every precinct of the legislative domain, with its mammon defies the crime, and has towering scorn for the people and especial contempt for the class that suffers most in its cruel exactions—farmers!"

Since we brought this indictment this insolent power has made persistent and unscrupulous effort to place its attorneys in the United States Senate and on the bench of the State courts. In the former effort, in one case at least, it has met defeat through the influence exerted by our Order, and in the latter, success has been delayed, perhaps averted, by the vigilance of awakened sentiment favoring the preservation of the priceless treasure of free government. Yet we now ask the question, still pertinent as when addressed to you a year ago:

"Shall there be an organized effort by the people to recover the rights fleeced from them by the creatures of their generosity? Will they mark the limit of concession and thereafter guard its boundaries? The time is opportune, their strength equal to the requirement—do they lack the purpose? Will American farmers join in positive earnest, determined effort to secure just protection, through the peaceful medium of laws, wise in their design and just in their operation, whereby railway corporations shall be gently but firmly restrained within the limits so defined? If they will, the day is near at hand when their industry will be free to distribute its profits through all channels of trade in just measure, according to deserts, and they will themselves share equitably in the blessings that reward free, untrammelled labor in the primary vocation of man."

Since these words were written the baneful power against which they were inscribed has been alert to every means of its aggrandizement, and to-day its foremost representative stands defiant before the court of justice in a powerful state, perfecting consolidations to extend a rule that smother the living principle of natural rights. With the extension of a hard bondage enforced by ponderous capital, crushing in its weight, there is the pooling system to establish a community of plunder, through which this power essays to guard its members against individual rapacity in the division of spoils. Of this system the pooling commissioner Mr. Fink, chosen by the partners in theft has been constrained to say recently:

"When the people understand the subject better they will either by the force of public opinion, or through local enactments, compel railroad managers to work the railroads of this country in harmony with each other and prevent selfish railroad companies from endeavoring to gain some advantage over each other, and from standing in the way of the proper management of the roads in the interest of the public."

By the mouth of its chosen witness is this power condemned. As the representatives of the chief industry that fills the channels of commerce with its products, sustains manufactures, feeds and supports every useful labor, and maintains the credit of our country at home and abroad, we have painful sense of wrong in the monstrous abuse of power wielded by corporations that defy restraints even in their combinations to secure to themselves equitable distribution of plunder. There is but one present means of restraining their rapacity: that is the water ways, and against them they exert every force in their command, in utter disregard of the interests of commerce. Let us move to the preservation of our rights in these water ways while they are yet left, for until there is awakened sentiment favoring equality of rights and privileges—the saved heritage of freedom—there is no other restraint upon the rapacity of corporations that have power to throttle industry, except as it yields its profits to their demands—corporations that betray absorbing greed for the gains of all labor, to the full limit of opportunity, with no humane regard for humble workers whose coarse bread has no flavor of sweetness except what they can not extract, and whose toil is never freshened by generous consideration of the inestimable blessings wrought from the bosom of the earth, and gathered to the luxurious enjoyment of magnates who levy tribute with no sympathetic regard for the millions days' labor, whose proceeds they gather to coffers already bursting with the products of other weary millions of days, absorbed by a process that will go on still, until the toilers diverted from their hopeless tasks bring forces of numbers and intelligent effort to the correction of an abuse that degrades their manhood. The question of self-preservation rises above law when that resource fails. But law has not yet been tried. Let us invoke its aid while there is yet time. We are not destroyers. Our province is peace—our effort creates. But we have reached a dilemma from which we shall not be extricated without law. (Quoting the words addressed to you last year, we ask: "What shall we do? Let us exert the force inherent in our numbers. Direct this through the ballot in such a manner that every legislator, State and national, shall reflect the will of the people and all their interests rather than of corporations. Secure in these bodies due representation of the chief industry of the land. Let farmers organize in utter disregard of the restraints that political parties impose, and let them keep steadily in view the governing purpose to purge the body politic of the venalities that handicap material progress. They may co-operate with all persons and all associations that work in the interest of free and enlightened administration of justice, but for themselves they must move for the protection of natural rights against the monstrous greed of corporate power that riots in the chaos of principles overturned and confused by its wanton assumptions. They must invoke order, law, peace, justice for all, lest revolution intervene to clear away with rude hand the web of tyranny that now fetters industry and retards development."

J. H. BAUGHMAN, Ohio.  
W. A. ARMSTRONG, New York.  
J. M. LIPSCOMB, South Carolina.  
A. B. SMITH, Kentucky.  
T. T. SMITH, Minnesota.

Unanimously adopted. Committee.

### The Commissioner of Agriculture and the Pacific Coast Interests.

The following letters are of much interest and are self explanatory:

SAN FRANCISCO, Nov. 15, 1881.  
ANOS ADAMS, Esq., 33 CALIFORNIA STREET, SAN FRANCISCO.—Dear Sir:—Feeling some anxiety regarding the attitude of the Commissioner of Agriculture towards our coast and the special service which I deemed was required for our wants, I wrote to him about it, and received the following very satisfactory reply. Knowing your interest in the subject I take the liberty to send it to you and ask you to return it by mail.

Yours very truly,  
HORACE DAVIS.

SAN FRANCISCO, Nov. 19, 1881.  
HON. HORACE DAVIS, SAN FRANCISCO.—Your letter of the 15th inst., including one from the Commissioner of Agriculture, Gen. Loring, are at hand. I am much pleased, as I know all who are engaged in agriculture in this State will be, to learn the Commissioner proposes to visit the coast the coming season; and, if advised of the time of his visit, I will guarantee, on behalf of many of our leading farmers, that they will give him a hearty welcome to our State. It is certainly gratifying to know that the Commissioner will ask of Congress an increased appropriation for the interests of agriculture. Without referring to how the previous appropriations for this purpose have been used, I beg leave to suggest that future appropriation for that purpose be placed at the disposal of a Board, or Committee, to be composed of Prof. Hildgard, of the Agricultural Department of the University, the Secretary of the State Horticultural Society, and a member of the State Board of Agriculture, to be by them used, as in their judgment, the interest of agriculture on the Pacific coast demands.

Thanking you for the interest you have universally manifested in the agriculture of the State, I am,  
Respectfully yours,  
ANOS ADAMS,  
Manager of the Granger Business Association.

### The Grangers' Bank.

An advertisement in another column calls attention to the coming annual meeting of the stockholders meeting of the Grangers' Bank.

We have frequent occasion to mention the service which this institution has done for the farmers of this coast by popularizing agricultural securities, advancing the home storage of grain, and reducing the rate of interest. The following paragraph from the *Patron* pays a merited tribute to Mr. Montpelier and his work:

From what we have learned from Mr. Montpelier, the cash and manager of the bank, we are satisfied that a very favorable report will be made of the business and earnings of the bank for the past year. Through the business tact and enterprise of Mr. Montpelier, the loans made on warehouse receipts for the accommodation of farmers have grown into proportions which must be truly gratifying to all who aided in the promotion of this Grange enterprise. It has done great good in lowering and equalizing the rates of interest which were current at the time of its establishment. By its work and influence the farmers of the State are no longer under the thumb of the money-sharks and grain manipulators. Instead of paying from 15% to 20% interest for money, as was usual six or eight years since, the farmer can at present borrow money on grain in his own warehouse, at from 5% to 8% per annum, without fear of having a demand made for the money borrowed at a moment's warning, and when the grain market is the most depressed.

POINT OF TIMBER GRANGE.—According to a letter in the *Martinez Gazette*, this Grange is progressing finely. "They have with commendable public spirit added 15 ft. to their hall, making it for general purposes the best in the county. The entire addition forms a stage, and may be used as a supper-room, ante-room, or for exhibition purposes. The large drop curtain was painted for the Grangers, and is a scene in Switzerland. The other scenes were painted to suit the dimensions of the stage. The Grangers deserve much credit for their diligence in perfecting the above improvement, which was used for the first time for the Sunday School entertainment, on Wednesday evening, Nov. 23." We understand that the Grange building was done by the amateur carpenters of the Grange, the only expense being for the materials used in construction.

STOCKTON GRANGE.—EDS. PRESS: On Saturday, the 31st inst., Stockton Grange will meet at 10 o'clock, A. M. Several candidates will be present to receive the 3d and 4th degrees. We will have a harvest dance and feast. We cordially invite all the Grangers in the State to visit us at this time, and we will use our utmost endeavors to make it pleasant and agreeable to all. Bro. and Sister Dewey will govern themselves accordingly.—Wm. G. Phelps, Sec., Stockton Grange.

### Grange News.

We condense the following from the *Patron*: Temescal Grange, at its meeting, Dec. 3, conferred the 3d and 4th degrees, had a fine harvest feast, and recommended Bro. Joel Russell for appointment as District Lecturer for Alameda county. Worthy Master Baggio reported that he had presented to the Oakland City Council the petitions signed by the members of the several Granges of Alameda and Contra Costa counties, praying for a free market at which farmers could sell their produce without paying a city license. It being the date fixed for the election of officers, that business was declared in order. C. Baggio was re-elected Worthy Master, and A. T. Dewey, Worthy Overseer, for the ensuing year. A special meeting was called for the third Saturday in this month, to complete the election of officers.

Plymouth Grange met with Sutter Creek Grange, Amador county, held a meeting and harvest feast, Nov. 19. During the session the Wheatland resolutions, called up from the table, where they were laid some weeks ago, were discussed, and were rejected. This is probably the only Grange in the State that rejected those resolutions.

At Walnut Creek Grange meeting, Dec. 3, a motion by N. Jones, that we endorse resolutions passed by Wheatland Grange, Aug. 9th, 1881, and that the Secretary be requested to inform the Secretary of the State Grange of the same, passed unanimously. Some thought it quite late to pass these resolutions; but it may not be too late to do some good.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### LOS ANGELES.

THE INSECT QUESTION.—*Commercial*: A lively commotion occurred at the session of the Supervisors yesterday. A petition, signed by a number of prominent horticulturists, was presented praying the Board to carry out the provisions of the mandatory act passed by the last Legislature, entitled, "An Act to Protect and Promote the Horticulturists of the State." The act directs the Supervisors of any county to appoint "three commissioners to be known as a County Board of Horticultural Commissioners," upon the receipt of a petition of five or more fruit raisers, stating that trees or vines are infested with, or threatened by, noxious insects. Such a petition was yesterday presented to our local Board, and ably supported by General Stoneman and Mr. J. De Barth Shorb; Messrs. Eagan, Rogers and Hannon also favored it, while Chairman Prager violently opposed it, stating that he was superior in his Supervisory vote to any Legislative enactment. The question was finally passed by the following vote: Ayes—Hannon, Rogers and Eagan. Noes—Prager and Cooper.

HORTICULTURAL SOCIETY.—*Express*: Those who are interested in the affairs of the Horticultural Society, will be glad to learn that recently, at a meeting of the trustees, presided over by Judge Widney, an arrangement was made by which the people of Los Angeles have been given another opportunity to preserve the pavilion for public uses. Only a few days were left of the equity of redemption, and the mortgage, on being applied to, declined to extend the time. Through the efforts of Judge Widney and other gentlemen, the \$5,000 were raised, and an assignment was had of the mortgage to parties who agree to wait 60 days for their money. It is proposed to re-incorporate the association with provisions which will make it forever impossible hereafter to mortgage or otherwise encumber the property, so that if our public-spirited citizens come to the rescue on the present occasion and save the property, it will be saved for all time.

#### NAPA.

MAILING FLOWERS. *St. Helena Star*:—Mr. Shuneman has shown us a specimen of preserving flowers by enclosing them in the cavity of a hollowed-out potato. He hollows out the two halves of a potato, leaving a thin shell, lets it stand a day to dry, then lays in the flowers and ties the halves together. These enclosed in any perforated box (to let in the air) may be mailed long distances and will keep fresh a long time. The samples shown us (violets, lemon verbena, pansies and heliotropes) had been enclosed seventeen days and still looked as fresh as if just picked. This process is designed particularly for the convenience of sending flowers by mail and Mr. S. proposes to utilize it now by sending some Christmas flowers to Germany, there being at his old home no green thing at Christmas time. The only exception he knows to this capability of preservation is the heliotrope, which is slightly discolored by the process.

#### SACRAMENTO.

FRANKLIN GRANGE, election Dec. 3, 1881. J. B. Bradford, M.; J. W. Moore, O.; Mrs. E. S. Johnston, L.; Lake Freeman, S.; C. W. Gannon, A. S.; Mrs. Annie Bradford, C.; J. F. Freeman, T.; Mrs. S. G. Bradford, Secretary; C. Benedix, G. K.; Miss Annie Bradford, Pomona; Miss Mata Johnston, Flora; Miss Cora Utter, Ceres; Miss Belle Johnston, L. A. S. SAN DIEGO.

THE HORTICULTURAL COMMISSION.—*Union*: The Horticultural Commission of this county, consisting of Messrs. W. C. Kimball of National City, J. M. Asher of San Diego and O.

S. Chapin of Poway, met recently and drew lots for these several terms. Mr. Kimball drew the long term (three years) and was assigned to the territory embracing National City and vicinity; Mr. Asher drew the next longest term (two years), and will have charge of Cajon valley and adjacent territory; Mr. Chapin drew the short term (one year), and will look after the country north of the San Diego river. Mr. Kimball was elected President, and Mr. Asher Secretary.

GAME AS PESTS.—*Bear Valley cor. Union*: I came here from the East a little more than two years ago, and in that short time, by sad experience, I have learned that our California game law is one of the "humbags" of law. Admitting that our State game laws are just and right in certain localities, they are to the farmer a lamentable nuisance in other sections. Our State being so large and so diversified in its climate and other characteristics, what is really to the welfare of one section may be largely detrimental to the welfare of another section. To the various sporting clubs, which principally hold forth in San Francisco, and are mainly instrumental in maintaining the game laws of this State, we of Bear Valley would extend a hearty welcome to come and assist us, at any and all times of the year, in ridding our ranches of such nuisances as rabbits, quail and deer. If they have their doubts on this subject let them locate on a ranch and try the various pursuits followed on our ranches, and if at the end of one year they don't come to our views we will give them all we own.

#### SAN JOAQUIN.

ARTESIAN WELL.—*Independent*: J. W. Johnson, of the Oasis ranch, 20 miles northeast of Stockton, is engaged in sinking an artesian well on his place, which is 300 ft. above Stockton level. The first 700 ft. the bore was nice inches in diameter, but then a boulder was encountered and the size was reduced to seven inches. The well is now down 920 ft. and piped from top to bottom with seven-inch pipe. The last 120 ft. the auger has passed through solid blue clay, without any perceptible changes. It is confidently expected that when this layer of clay shall have been passed, flowing water will be found. At the depth of 240 ft. plenty of pure soft water was obtained, but it did not flow. From the surface down, the island is composed of a conglomeration of rock, sand, gravel and sea shells which rests on a hard pan of several feet in thickness, below which the water was found. It is a heavy undertaking, but if successful, will be of immense value to Mr. Johnson, who owns a very large body of land surrounding the hill where the experiment is being tried.

#### SANTA CLARA.

SUN-DRIED PRUNES.—*Mercury*: Mr. W. E. Ward, an experienced fruit drier, brought us on Saturday a box of French prunes, sun-dried, which he enters the lists in comparison with any prunes prepared by artificial processes. They have evidently been prepared with extra care, as they are certainly of a most superior quality. Mr. Ward claims that he can beat any artificial drier in existence, not only in the matter of economy, but actually in quality. He has dried some 12 tons of prunes the past season.

#### SHASTA.

SHASTA COUNTY'S FRUIT.—*Redding Independent*, Dec. 8: The last number of the *PACIFIC RURAL PRESS*, a very excellent journal for farmers and horticulturists, contains a report by a committee of the State Horticultural Society, on the fruits adapted to the different parts of California, summarized principally from reports sent to the society by correspondents in the different counties. Shasta county is mentioned in the article as follows: "Apples, pears, plums and almonds do fairly; walnuts, very well." Now this is very well as far as it goes; the fruits mentioned do thrive well—more than "fairly." Yet the correspondent from this county must have been of very limited information, for the statement is not by any means a fair representation of the county's resources. He should have mentioned that oranges, figs and other semitropicals grow luxuriantly and mature their fruit in a large portion of the county; that peaches are raised here that bring fancy prices in the San Francisco market; that no better apricots can be raised anywhere in the State. In fact, it would be difficult to name a fruit which Shasta county cannot produce in quality to equal any place in the State. Grapes are not mentioned in any of the counties, that being considered rather a separate branch of industry. Small fruits thrive well, blackberries and strawberries excelling. Cherries, as in all other counties, can be raised with best success only on a limited area, as this fruit requires a very peculiar soil and surroundings. We can safely say, however, that we have as much land suitable for cherry culture as any other county. We do not write this for a mere criticism of the report of the committee, which doubtless gave us the benefit of the best information at hand, but to give a fuller and more correct idea of the fruit resources of Shasta county. We make no unwarranted statements; all these facts can be readily shown to anyone who will take the pains to investigate our resources.

#### STANISLAUS.

OUR FRUITS.—From the proceedings of the State Horticultural Society, we clip the following short and sweet paragraph with reference to Stanislaus county. "Stanislaus—Apples, to be of any account, must be irrigated; pears do better; peaches curl, but bear well; plums a



failure; apricots very successful; cherries not good; irrigate." Perhaps the individual who gave that information has tried the experiment; but, if not, so far as apples, peaches and pears are concerned, he is entirely mistaken. Some of the finest apples and peaches we ever saw in California are raised in Stanislaus county without irrigation. They come from the foothills, and have no occasion for irrigation. As to pears and apricots, we presume they would require irrigation to produce them in the valley, but we have not seen any produced here. We have, within half a mile of Modesto, a gentleman who has an orchard, and who produces the finest qualities of apples, peaches, quinces, blackberries and nectarines. He occupies a place on the river flat, that seldom overflows; but the soil is exceedingly rich. He fails on apricots, cherries and pears. It is the opinion of many people who have had experience here, that irrigation, while it adds to the quantity of fruit generally, destroys the quality. There may be such a thing as "judicious" irrigation, but it has not been brought to a science by the average California fruit grower. Grapes, blackberries, strawberries, lemons and oranges are undoubtedly better produced by irrigation. Peaches grow in this valley without irrigation, and are highly flavored; and were it not for the hot sun and winds of June, cherries would do well in the sandy soil, with irrigation. For the raisin-grape, this section of the valley is peculiarly fitted. We have none of those hot, scorching north winds familiar to the Sacramento and northern parts of the San Joaquin valleys. Our winds are from the bay, and contain a dampness from the ocean breezes which destroys the withering qualities of the dreaded norther. With the wind, and the lateness of the season in August and September, when the heat of the sun is past, the raisin-grape matures with a bloom and without a spot from atmospheric influences. We believe this county furnishes a field for most varieties of fruit, superior to any soil away from the fog-belt, without irrigation.

## TULARE.

**POISONOUS PLANT.**—*Delta*, Dec. 9: In its last issue the *Delta* discussed the cattle disease that has been prevailing at Townsend, in this county, and published the positive opinion of Fielding Bacon that the complaint is an epidemic termed "black-leg." J. B. O'Connor, of Visalia, a resident of this county for the past 21 years, and one of the most experienced practical stock-raisers in the State, takes an entirely different view of the case, and is equally as positive as Mr. Bacon. He says that the animals are poisoned by a weed the botanical name of which he does not know, but which is commonly known as "mountain fern." It in nowise resembles any of the fern species. He describes its appearance and peculiarities as follows: It is only found among the rocks in the foot-hills and concealed under chaparral bushes. It grows entirely in the shade, and in secluded and narrow crevices. Hence it follows that only young cattle, which have small heads and no horns, or sheep or goats, can reach it; "but," says Mr. O'Connor, "it will kill any four-footed animal that eats it." Sheep and goats of any age are surely killed by eating it. The remarkable peculiarity of the plant is that in the spring, when it is green and tender, it is perfectly harmless, and any kind of stock can eat it with impunity. It is only in the fall, when it has become dry, that it proves fatal when eaten. It grows in bunches or tufts containing from six to a dozen plants. The plant is from 4 to 6 inches high, and is about the size of a knitting-needle. It has no branches, but has, on two opposite sides, a row of leaves extending from the bottom to the top, and about an inch and a half apart, and placed with singular regularity. The leaves are about the size of a finger nail, are not pointed, have a smooth edge and surface, and are attached to the stalk by a short stem. In the spring the leaf is a dark green. The stalk is tender, straight, smooth and of a lighter shade than the leaves. In the top of the plant the bloom appears. It is small and whitish, with a yellow cast. In the fall, when the plant is dry, it has a more singular appearance than ever, as the stalk is purple and semi-transparent. In place of the bloom is the seed. The plant does not grow on the plains, and is scarce unless there has been an abundance of rain in the mountains. Mr. O'Connor has not heard of the existence of this plant in any other part of the State. He says that it is fatal only to fat stock. On dissecting sheep that had died with it, he found the fat invariably yellow, and the stomach appearing as having been hoiled or scalded. He says the symptoms are identical with those described as belonging to the cattle that died at Townsend. To assure himself that the plant was the cause of the terrible slaughter of his sheep in 1876, he tied a fat sheep where it could reach the weed, and the animal died. His attention was first called to this weed by Mr. Bird, who had suffered considerable loss by it. Mr. O'Connor further states that in 1876 he drove 4,000 sheep into the mountains in the spring, and grazed them at Sleek Rock on the way. On his return in September, he fed at the same place, and lost, before he could get away, 1,515 sheep. This weed grew in abundance at that place. He says that Andrew Van Valer had a similar experience at the same place with goats in 1866, when he lost 200 or 300 in the same way. Mr. O'Connor himself saw 50 of these goats in one pile. This is certainly an interesting and important subject, and one that should be investigated without delay. The plant should be secured and submitted to a botanist for classification and a knowledge of its properties. Mr.

O'Connor says he knows of no remedy for the poison, as it was useless for him to attempt the saving of a thousand sick sheep at once.

## VENTURA.

**FRUIT.**—*Signal*, Dec. 10: Our attention has been called to the fact that in the report of the committee to the State Horticultural Society, on the fruit interests of the several counties, Ventura county was not even mentioned. Whose fault this is, we cannot say, but it is something to which we object, and which should be remedied. It is well-known that the fruit interest of Ventura county is its chief interest. Everything in the shape of fruit flourishes here, many varieties attaining their greatest perfection. We don't irrigate apples, pears, plums, peaches, apricots, nectarines, grapes, blackberries, raspberries, almonds, walnuts, etc., all of which flourish in various parts of the county. Oranges, limes and lemons need irrigation, but apricots here attain their greatest perfection. Ventura county is strictly the home of the apricot, of which over 200,000 trees have been put out the past year. Of apples we can grow any variety with success. In fact, there is scarcely any fruit in the catalogue that we cannot grow in some part of Ventura county. Of course we cannot get our fruit into the market as early as some of the upper counties, but we can get more perfect fruit, for the reason that it ripens more slowly. It was a great mistake not to have been mentioned by the Horticultural Board, and we cannot say who is to blame. The Board sent out circulars to prominent citizens of the several counties, and whether they overlooked Ventura, or whether there was neglect on the part of the persons applied to in this county, we cannot say. Certain it is that it was a bad break and should be remedied.

## That Ozone Advertisement.

A flaming advertisement of "ozone," as a universal preservative for fruits and other perishable articles of food was sent us by an Eastern advertising agency, and we declined to insert it because we had very strong suspicions that it was not what it claimed to be, and might result in loss and disappointment to our readers. Since we refused to publish the advertisement, we notice that it has appeared in a number of California papers, both in San Francisco and the interior. To show what is thought of the ozone business at the East, we quote as follows from responsible Eastern agricultural journals:

The *Western Rural* says, "Nearly every agricultural paper in the country, and some other reputable journals, are advertising something which is called 'Ozone,' and which is a fraud from beginning to end. The advertisement was not sent to the *Western Rural*, for the advertising agency which is sending it out, and which seems to have a perfect understanding of the thing the moment it was presented to us. We have given it a pretty thorough investigation, however, and for the protection of our readers caution them against having anything to do with it. The advertisement of the firm controlling it is fraudulent upon its face, and newspapers which claim to be respectable should be ashamed to insert such stuff in their advertising columns. The readers of a journal have the right to expect better treatment and better protection."

R. B. W., of North Bend, Ohio, writes to the *Country Gentleman*, as follows: "Believing that you would not knowingly insert an advertisement of misleading or fraudulent character, I could but feel sorry to see an extended notice in your columns of 'The King Fortune-Maker, Ozone.' In response to various inquiries, I have taken pains to investigate this subject, and by unmistakable chemical tests I find that the preservative in question is not 'simply and purely ozone,' while sulphurous oxide, a very different kind of gas, is a prominent constituent. Moreover, it is not 'applied by an entirely new process,' for the fumes of burning sulphur have been used for years as an antiseptic. The proposition that 'ozone is the antiseptic principle of every substance,' sounds absurd to any one who knows the use of creosote, carbolic acid, salicylic acid, vitriol, salt, etc.; and farther proof may be required to show that 'there is nothing that ozone will not preserve.' Many statements in regard to the efficacy of the process advertised are doubtless true; but it would be desirable to have some expert testimony upon the flavor of preserved fruits and vegetables. For some reason, the use of sulphurous oxide has not become popular as a preservative agent for foods, although the antiseptic properties of this gas have long been known."

The editor of the *Country Gentleman* comments as follows: The letter of R. B. W. was received at too late date to omit the advertisement referred to from the present number. It will not appear hereafter.

**PURCHASING AGENCY.**—Attention is asked to the advertisement of Mrs. M. S. Harmon in another column. We know Mrs. Harmon to be a lady of taste and good judgement, and of wide experience in the selection and purchase of household goods, apparel, and the multitude of articles covered by the term shopping. Her announcement may be of value to many of our readers living at a distance from city stores.

GERMANY is about to enter into negotiations with England concerning the ceding of Heligoland to Germany. It is reported that England will offer no insurmountable resistance to the cession of the island.

RAIN TABLE FOR SACRAMENTO—PREPARED BY THE LATE DR. T. M. LOGAN AND DR. F. W. HATCH. Arranged according to the seasons, showing the amount in inches of each month, during thirty-two years, and for each rainy season, to Dec. 1, 1881; also the quantity for every month, and the annual amount of rain.

MONTHS.	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881
January	0.250	0.000	1.000	0.003	0.000	0.000	sp k	sp k	sp k	sp k	sp k	0.025	0.003	0.000	0.000	0.000	0.004	0.080	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.056	0.000	0.000	0.000	0.000	0.300	
February	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
March	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
April	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
May	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
June	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
July	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
August	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
September	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
October	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
November	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
December	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
January	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
February	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
March	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
April	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
May	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
June	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
July	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
August	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
September	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
October	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
November	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
December	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
January	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
February	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
March	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
April	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
May	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
June	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
July	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
August	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
September	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
October	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
November	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
December	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	
January	0.250	0.000	1.180	0.000	0.005	0.005	0.000	0.000	0.005	0.010	0.005	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014													

**USEFUL INFORMATION.**—We know of no single book which contains so much practical information on the myriad minor subjects which come up for solution in the operation of a farm than can be found in the "Farmers and Mechanics Manual," a new publication by E. B. Treat of N. Y.; author George E. Waring of R. I. We have said minor subjects because the work will not of course expect to find in a book the way to grow great crops in California, but in all accessory labors concerning the measurement of land, the computation of weight of crops from measurements easily made, the flow of water in ditches, conduct of water in pipes, the use of hydraulic rams, strength and measurement of masonry contents of cistern, area of circles; the strength of material, lumber required in different styles of fencing, the keeping of accounts, and in fact data for determining the points involved in most all conceivable contrivances and computations likely to be called for in farm practice. In this way it will be found valuable for continual reference and should have a place as a "working book" on every farmer's shelf. The "Farmers and Mechanics Manual" will be sent postage paid for \$3 by A. Roman, 120 Sutter St., S. F.

THERE are 300 postoffices to be filled by the President, and there are already five applicants for each vacancy.

## News in Brief.

COL. JOHN W. FORNEY died at Philadelphia this week.

THE smallpox excitement at New Tacoma, W. T., has about subsided.

THERE are 164 failures reported in the United States during the past week.

THE diphtheria destroyed 2,000 lives in the province of Nova Scotia last year.

THE tenants on four large estates in Ireland have joined the no-rent movement.

FROM pew rents and other sources, Beecher's church has an income of \$57,000 a year.

SMALL-POX is increasing in Chicago, and the people are flocking to be vaccinated.

SENATOR MILLER has introduced a bill to make the Tulare high-tree grove a public park.

THE Trades Assembly of S. F. protest against the employment of convict labor in manufactures.

THE Northern Pacific has 2,000 men at work on Clark's fork division, M. T. They expect to work 4,000 men during the winter.

STOCKTON wants three narrow-gauge railroads running out of that city—one to New Hope, one to Farmington, and one to Lockford.

DURING the week ending Dec. 10th, 395,480 standard dollars were put into circulation, against \$485,496 for the corresponding week last year.

SERGEANT STEWART, of the Eighteenth Infantry, Fort Assinaboine, M. T., while on escort duty lately, had one hand and both feet frozen.

IT is announced that fierce competition in telegraphic communication with America and India may be looked for from the new company to be launched next month.

DETERMINED efforts are to be made in Congress to secure the forfeiture of railroad lands in cases where the conditions of the law have not been complied with.

THE Madera Flume and Trading Co.'s mills, near Fresno flats, have cut over 11,000,000 ft. of lumber during the past season, of which about 4,000,000 ft. are still at the mills.

AMONG the measures introduced by the Pacific coast delegation in the House were bills to restrict Chinese immigration, by Berry, and to protect farmers from debris, by Berry and Page.

CREDITORS of Lord & Williams, of Tucson, Arizona, representing \$39,000 have refused the proposition of H. B. Claffin & Co., to take the assets of the firm and pay 50% of the indebtedness.

THE hearing in relation to the contempt of five mining companies, defendant, in the suit of Marysville vs. The North Bloomfield Co. et al., set for Saturday, has been continued to the 22d inst.

LEVÉE work is nearly complete along the Yuba river and around Sacramento, and it appears high enough for protection. There is a better feeling of safety, and business is generally improving.

HON. B. B. REDDING, W. F. Good and I. D. Redding, of San Francisco; W. C. Belcher, of Marysville, and J. D. Crooks, of Tehama, are the directors of the new bank of Benicia.

THE old Whitehall gold mine, in Spottsylvania county, Va., has been bought by a company, among the members of which are Senators Call, of Florida, Jonas, of Louisiana and others. Gold was first found there in 1809. Nearly \$2,000,000 worth of gold has been taken from the mine.

A NOVEL STYLE OF STEAMSHIP.—A project which is likely to assume great proportions at an early date came to light in Wall street recently. It contemplates a sweeping revolution in ocean steamship building, and it has the support of leading influential capitalists, principally Massachusetts men. Vessels are to be constructed without masts, and there will be literally nothing whatever above deck except the top of the pilot house and funnels. One of the projectors being interviewed, said: We have stepped forward to solve the problem by having our vessels covered, as with a shell, from stem to stern. This will place us above all danger of rough seas. Sweeping over us with whatever force they may, they can do no damage. No spars are torn out; no freight goes overboard; no lives are lost; everything is safe beneath the roof. The cost of the larger vessels will range from \$550,000 to \$650,000—at least one-third less than ordinary vessels of the same size. They are all to be built in this country. One of the objects of the enterprise is to bring back to the United States our lost commercial supremacy.

COTTON DUCK FOR ROOFING.—The use of cotton duck for roofing purposes is exciting a good deal of interest just now among agents of cotton mills now being built. The Lawrence Duck Co. have one-half of one of their mills roofed with duck, and though it was put on over a year ago, it now appears as good as new. The Pacific mills have also tested it with the most satisfactory results. These two roofs have been tested recently by experts, who found the material to have retained its bright appearance without any deterioration or apparent injury to the fiber. The Globe Yarn mills of Fall River have also adopted it for their new mill, and it is also in use by some few other companies.—*Boston Transcript*.

NEW COLORING MATTER.—A Vienna chemist has succeeded in producing a new coloring matter on silk, which is a nice blue by day and a beautiful pink by artificial light. The alcoholic solution of this color is dark violet in a refracted, but red in direct light.





## John Jankin's Sermon.

The minister said last night, says he,  
 "Don't be afraid of givin';  
 If your life ain't nothin' to other folks,  
 Why what's the use of livin'?"  
 And that's what I say to my wife, says I,  
 "There's Brown, that mis'rab'le sinner,  
 He'd sooner a begger would starve, than give  
 A cent towards buyin' a dinner."

I tell you our minister's prime, he is,  
 But I couldn't quite determine,  
 When I heard him givin' it right and left,  
 Just who was hit by the sermon.  
 Of course there couldn't be no mistake,  
 When he talked of long-winded prayin',  
 For Peters and Johnson they sat and scowled,  
 At every word he was sayin'.

And the minister he went on to say,  
 "There's various kinds of cheatin',  
 And religion's as good for every day  
 As it is to bring to meetin'.  
 I don't think much of a man that gives  
 The loud Amens at my preachin',  
 And spends his time the followin' week  
 In cheatin' and overreachin'."

I guess that dose was bitter  
 For a man like Jones to swallow;  
 But I noticed he didn't open his mouth,  
 Not once, after that, to holler.  
 Hurrah, says I, for the minister—  
 Of course I said it quiet—  
 Give us some more of this open talk;  
 It's very refreshin' diet.

The minister hit 'em every time;  
 And when he spoke of fashion,  
 And a-riggin' out in bows and things,  
 As woman's rulin' passion,  
 And a-comin' to church to see the styles,  
 I couldn't help a-winkin'  
 And a-nudgin' my wife, and says I, "That's you,"  
 And I guess it set her thinkin'.

Says I to myself, that sermon's pat;  
 But man is a queer creation;  
 And I'm much afraid that most of the folks  
 Wouldn't take the application.  
 Now if he had said a word about  
 My personal mode o' sinnin',  
 I'd have gone to work to right myself,  
 And not set there a-grinnin'.

Just then the minister says, says he,  
 "And now I've come to the feller  
 Who've lost this shower by usin' their friends  
 As sort o' moral umbrellars.  
 Go home," says he, "and find your faults,  
 Instead of huntin' your brothers';  
 Go home," he says, "and wear the coats  
 You've tried to fit the others."

My wife she nudged, and Brown he winked,  
 And there was lots o' smilin',  
 And lots o' lookin' at our pew;  
 It set my blood a-billin'.  
 Says I to myself, our minister  
 Is gettin' a little better;  
 I'll tell him when meetin's out, that I  
 Ain't at all that kind of a critter.

—Harper's Bazar.

## To Let—Kipple Grange.

Mr. Pixley was a real estate agent. Mr. Pixley had had a goodly number of houses on his list in his time, but never one so persistently, unalterably, perseveringly on his list as Kipple Grange. Year after year it had figured on his books as a "Desirable Country Residence, to be had on Reasonable Terms;" year after year it still hung hopelessly on his hands.

Nor was Mr. Pixley the only real estate agent who had wrestled, so to speak, with Kipple Grange. Other land brokers and rent collectors had had their "try" at it, with equally satisfactory results. It had been advertised in newspapers, and posted up on bulletin boards, and still it remained "Kipple Grange—To Let."

"Hang the old place," said Mr. Pixley, vehemently scratching his bald head. "I wish it would burn down, or blow away, or something! It's a disgrace to a business man to keep such an eyesore on his list. I've a great mind to put Miss Briggs into it to keep it in order until I can get a better tenant. She wants a place cheap. I'll let her have Kipple Grange for nothing."

So, when Miss Briggs came tiptoeing into the real estate office—a faded, melancholy, little old maid, leading her terrier dog by its string, and wearing a green veil to neutralize the spring winds—Mr. Pixley told her that Kipple Grange should be hers for the present, at least.

"You'll probably find it lonely," said he. "I dote on the country," said Miss Briggs. "And very much out of repair," he added. "I don't doubt but that it will do for me," said the little old spinster, her faded eyes brightening.

"Probably, also, there's a ghost about the premises," jocosely uttered the agent.

Miss Briggs shook her head with a sad smile. "It's live people I'm afraid of, not dead ones," she replied.

"Well," said Mr. Pixley, "Kipple Grange shall be yours this quarter, if you'll fix up the garden a little, and give the place a live-in sort of look. Of course it will be for sale, and I shall expect you to do your best for our interests."

And Miss Briggs courtesied and said "Yes, she would," and withdrew greatly elated in spirit.

Upon the same day, the 25th of April, Mr. Beggarrall, the real estate agent of Dorchester, let Kipple Grange to old Mr. Hyde, who was a naturalist, and a botanist and an entomologist, to say nothing of half a dozen other *ists*, and who wanted a quiet country home, with woods and meadows in its vicinity, wherein to prosecute his beloved sciences.

And Macpherson & Co., of Long Island, made a bargain with the Rev. Mr. Bellairs, an invalid clergyman, who was in search of country air and complete repose. Mrs. Bellairs was a pattern housekeeper, and gloried in the prospect of grass bleaching, new-laid eggs, wild raspberries and plenty of plums and apricots for preserving purposes.

And, strangely enough, it occurred to none of the real estate agents to let the other two know of his action.

"There is never any demand for Kipple Grange," said Macpherson & Co., indifferently. "I'll write to Pixley and old Mac when I get time," said Beggarrall.

"There's no hurry about Kipple Grange," thought Pixley. "If Miss Briggs keeps it from tumbling all to pieces, she will do very well."

Meanwhile Mrs. Kipple herself, the plump widow whose grandfather on the husband's side had bequeathed her this impracticable piece of property, began to think of running down to look at it herself. "They tell me there's no such thing as letting it," said she. "I've a mind to go down and see for myself. One really pines for the country now that they are selling lilac blossoms and pansies in the street, and I'm quite sure a change of air would do me good. I'll take Dorcas, my maid, and a few cans of peaches and sardines, and we'll picnic at Kipple Grange just for the fun of the thing."

"It never rains but it pours," says the ancient proverb; so, upon this windy, blooming April day, when the sunny meadow slopes were purpled all over with wild violets, and the yellow narcissus was shaking its golden tassels over the neglected borders of Kipple Grange; the old brick house, which had stood empty for six good years at least, became, all of a sudden, alive.

It was an ancient, mildewed structure on the edge of the wood, an old red house, whose front garden, tangled over with rose briars, and grown with the fantastic trunks of mossy pear trees, and apples that leaned almost to the ground, sloped down to the bank of a merry little rivulet. Here the tiger-lilies lifted their scarlet turbans in the July sunshine and the clumps of velvety sweet-williams blossomed first and sweetest. Great, cream-hearted roses swung against the tumble-down wall, and love-in-a-mist, London pride, and all those rare, old-fashioned flowers of our ancestors ran riot, sprawling across the grass-grown paths, and packing themselves into the angles of the fence where the honeysuckles had trailed and the scarlet poppies looked like drops of blood. The old garden of Kipple Grange was like a horticultural show gone mad at midsummer. And even now it was sweet with tufts of crocus, blue velvet iris and daffodils, while at the rear rose up the silent hemlock wood, still and scented and emerald green, in the twilight.

Miss Briggs, with her terrier dog, her band boxes and her poor little hair trunk, studded with brass nails, had got there early. She opened the windows to let in the yellow glow of the April sunset, kindled a fire with straight sticks on the deep-tiled hearth and was sitting on a starch box turned upside down, and was drinking cold tea and feeding her dog with occasional scraps of canned beef and baker's bread.

"It seems rather lonely here," said the little old spinster to herself, "and the rooms are very large and dreary-looking; but I daresay I can hire a little furniture in the village, and the garden is really superb; I never saw such tulip roots in my life. And the little brook, twinkling at the foot of the wall, is an idyl in itself."

Miss Briggs, who had a good deal of poetry in her starved soul, set down the can and reached over to look out of the window at the golden western sky.

"So quiet, too!" said she; "so secluded!"

But, to her amazement, even as she looked, she perceived the figure of a stout, old gentleman, bald and spectacled, and carrying an immense flat traveling case under his arm, who was picking his way among the rose briars that lay prone across the path, stopping here and there to examine the growth of the silver-green house-leeks on the garden wall.

Miss Briggs, who was somewhat near-sighted, jumped at once to the conclusion that this interloper was a tramp. She hurled the tin can recklessly down into the budding currant bushes.

"Go away," she cried.

Mr. Hyde peered upward, with one hand back of his ear, "Eh?" said he.

"Or I'll set the dog on you," squeaked Miss Briggs, encouraged by the shrill bark of the terrier.

"Woman," said the scientist, "who are you?"

"I'll let you know," said Miss Briggs, waxing more and more excited in her great indignation. "How dare you trespass on my premises?"

"How dare you trespass on mine?" returned the old gentleman curtly.

"He's a madman," thought Miss Briggs, and she remembered, with a thrill of terror, that there was no key to the big front door, and the bolt was rusted into two pieces.

At the same moment the sound of whooping

voices was heard, through the wide, echoing halls, and three chubby lads rushed hilariously in, tumbling over one another as they came.

"Hurrah!" they shouted; "hurrah! Ain't this a jolly old cavern of a house! My! here's a fire; and here's an old woman!"

Miss Briggs, who had drawn her head in from the window, stared at the three cherry-cheeked invaders, who returned her gaze with interest.

"Boys," said she severely, "what are you doing here?"

"Why," said Master Bruce Bellairs, aged 11, "it's our house. And pa and ma are helping unpack the cart at the south door. And I've got a redbird, and Johnny's got a brood of Brahma chickens in a basket, and Pierre has a monkey."

"But boys," said Miss Briggs, with a little hysterical gasp, "this is my house."

"No, it ain't," said the three Master Bellairs in chorus; "it's ours. We've rented it for a year, and pa and ma are unpacking down stairs."

"Is that your pa?" asked Miss Briggs, with a sudden inspiration, as she pointed to the old gentleman in the yard, who stood stock-still, like the Egyptian obelisk.

"No, indeed?" said Pierre very contemptuously.

"Nothing of the sort," said Johnny.

"Our pa ain't such a guy as that," chuckled Bruce.

"I think I must be asleep and dreaming," said Miss Briggs, as the door opened, and a stout, blooming matron entered upon the scene, with a kerosene lamp in one hand and a basket of carefully packed china in the other, while from her finger depended a bird cage.

"My good woman," said the Rev. Mrs. Bellairs, "I suppose you have come here to see about a situation. If you can bring your references as to character—"

"You are entirely mistaken, madam," said Miss Briggs, with energy. "I am here because—"

But, at that moment, Mrs. Kipple herself, with Dorcas, her maid, entered the room. She was a tall, handsome woman, dressed in elegant mourning, and she used an eyeglass as she talked, and somehow she seemed to take up a good deal more room than anybody else. Mrs. Bellairs set down the kerosene lamp and the bird cage, Miss Briggs' terrier stopped barking, and the three boys instinctively retired behind the starch box.

"Who are you all?" said Mrs. Kipple, surveying the scene through her eyeglass. "And how came you to be here?"

"I have taken this house," said Miss Briggs, with dignity.

"So have I," declared the bald-headed old gentleman, who had by this time made his way up into the ruddy light of Miss Briggs' fire, and stood there, closely hugging his flat travelling case.

"Dear me!" said Mrs. Kipple, "this is very singular. And I have come here because the house wasn't rented at all."

And then ensued a general chorus of explanations, laughter, and deprecation, whose general effect was heightened by a single combat between Master Pierre Bellairs' monkey and Miss Briggs' terrier.

"What are we to do?" said Miss Briggs, plaintively looking at the hair trunk studded with brass nails.

"Do?" said Mrs. Kipple, briskly. "Why, there is but one thing to do that I see; the house is big enough for us, and half a dozen families to boot. Let us live here together."

"I am sure I have no objection at all," said Mrs. Bellairs.

"Neither have I," said the old gentleman, setting down his flat travelling case with a sigh of relief.

"Birds in their little nests agree," quoted the Rev. Mr. Bellairs, who had by this time entered upon the scene, with one joint of a bedstead balanced across his shoulder, "and it really seem to me as if we might do the same thing."

So Kipple Grange was let, and good, earnest Mrs. Kipple and Dorcas established themselves in two sunny rooms giving to the south, where the apple boughs brushed against the lozenge-shaped panes of the casement. The Bellairs family settled down all over the rest of the first floor, in a miscellaneous, cosmopolitan sort of a way, mixing up birds, old china, sermon paper, patch-work and theology in a manner which amazed the precise soul of gentle Miss Briggs. The scientific man perched himself on the top floor, where he could have a good outlook with his telescope, and set up his cases of specimens without let or hindrance. And Miss Briggs herself made a homelike little home on the second story, and devoted her whole energy—and not without some degree of success—to keeping peace between Chico, the monkey, and Nip, the terrier.

Mrs. Kipple, however, got tired of rural felicity, and returned to the city in the autumn.

Mr. Bellairs received a call to a Delaware parish, where peaches were thicker than blackberries, and the climate was as soft as that of Italy, and he accepted it promptly.

"What shall we do now?" said Miss Briggs, who was disposed to take a timorous view of things.

Mr. Hyde pushed the spectacles on the top of his head. "Don't you like the house?" he asked.

"Yes," Miss Briggs admitted, "I like the house."

"And don't you consider the situation salubrious?"

"Certainly," said Miss Briggs. "Then," said Mr. Hyde, looking at the edge of his geological hammer, "why don't you stay here?"

"What, all alone by myself?" said Miss Briggs.

"No," said the scientific gentleman; "with me!"

"Good gracious!" cried Miss Briggs.

"We both like the place," said Mr. Hyde, "we like the situation, and we like each other. Why shouldn't we settle down here for life?"

"But I have never thought of such a thing," said Miss Briggs, in trepidation.

"Think of it now," said Mr. Hyde, in accents of scientific persuasion, as he laid down the hammer and took her black mittened hand tenderly in his.

And Mr. Bellairs married them before he went away, and Kipple Grange has never been to let.

## Children.

(Written for RURAL PRESS by LAURA J. DAKIN.)

Now, dear young mothers, how can we help our little ones to grow up most loving, lovable and altogether noble. Sometimes they become selfish and undutiful because we are not thoughtful, patient and kind. And we fail in these virtues because we may not have learned to govern ourselves in our dealings with them. Perhaps we have never taken care of baby children till we have them of our own. Then we ask how to dress them, what to feed them when they have to be fed, and how to care for them when they are sick; but do not ask how we can best help them to be good, cheerful and happy; and no word has ever been said to us about it.

Perhaps we have been trained to keep a home in order; to cook, wash and iron, to make and mend; but have we even thought how we shall manage the little ones when they are just large enough to turn the door knob and come rushing in leaving the door swinging wide. There are two ways to get them to shut it. Call out sharply: "Go right back and shut that door. Haven't I told you 20 times never to leave it open?" In nine cases out of ten, all the happy thoughts or childish plans he was coming to confide to you, give place to a sullen inward rebellion; and he may go with a slow step and shut the door with a bang, or he may wait till he gets a whipping before he will do it. But your happiness is spoiled and so is his. Now if we could give them a glad welcome instead—

"Ah! here you are my dear childie. Have you had a good play?"

"Yes, mamma, splendid!"

"Did you forget something when you came in?" this said in a low tone, with a merry smile; and perhaps, with the little boy hugged close in the motherly arms, is almost sure to meet with a ready response.

"O yes! to shut the door and hang up my hat;" and away he goes gladly, his manliness helped instead of being trampled upon.

I have seen a mother tease her boy when he had asked for a piece of bread and butter, by offering it to him and, just as he was about to take it, she snatched it away and held it high above her head.

"Now, mamma, give it to me;" scowling and whining.

Then she lowered it near to his hands, that had made themselves into claws, with every finger outspread ready to clutch it. But she wanted a little more fun, and so, just as the claws were about to close upon it, up it went, out of reach again. Then the little fellow threw himself on the floor and began to scream and kick his mother with both feet.

"Oh, shame! to let the lady see you get mad! There! take it and stop your noise."

Then he sat for five minutes, whimpering, as he munched and crumbled his bread. After that, he pounded on the floor with a hammer, and then rode his jack-horse around us, shouting so loud I could hardly hear what his mother said to me. And all her fretful commands to "Shut up!" and "Hush that noise!" were unheeded.

Now, I believe that from the very beginning we ought to use the "golden rule" with our children—treat them as we would like to be treated. Make home pleasant to them, and help them to be generous and loving to each other.

I think I may say all children love to hear mother or father tell stories or read stories, and are delighted when you take a little magazine for them like the *Nursery* or *Our Little Ones*. And if you talk to them about the pictures and make their first short evenings pleasant—when they begin to set up an hour or two after lamps are lit, there is the right beginning.

As they grow older they will not steal off to run the streets with other boys who are bound to have some fun, which is almost sure to grow into something worse than fun. It is our business to know where our children are of evenings, and make pleasant, happy times for them.

I remember going with my boys to spend the evening at a neighbors and after we passed a certain dark corner of the street, they said:

"Mamma, did you see those boys smoking in that corner?"

"No," I said, "I did not notice them."

"Well, there was Myron, and Tom, and Ira," mentioning several boys about 10 or 12 years



old. "They pick up all the stumps of cigars the men throw away, so they can learn to smoke."

I wondered if the mothers never kissed their little boys and so did not know that their breath was no longer sweet and healthy. Not many months later I heard of those same boys having a bottle of liquor. Dear mothers, what will the boys do with their evenings when they are young men, if you do not keep them close to you in loving, happy homes while they are young?

Give them *Wide Awake*, or *Youths' Companion*, or *St. Nicholas*, when they are young and they will work and plan to get *Harper's Monthly*, *Scribners* and the *RURAL PRESS* for themselves when they are older. Be lovingly interested in their games; help about their studies; and talk of what they are reading; even for one-half hour each evening while they are young; and they will love, help, and comfort you when you and they are older. And I do believe the boys will be gentlemen—not fast young men, the girls ladies—not fast young women.

I do not wonder that Myrtle is "heart sick" at the sight of lives thrown away. I am glad she wishes to influence young men to be brave, honorable and temperate. All young ladies should set their standard high for their own conduct and help their companions to do the same. And don't forget the little boys just turning into the wrong way, a few loving words now, may help more than all entreaties and prayers when they have once learned to love drinking, smoking and low company.

Soquel, Cal.

### Chaff.

"Is patriotism dying out?" asks the Chicago *Inter-Ocean*. No, sir; not much it isn't. In places where there are no saloons it is sold at the drugstores.

A WIDOW could not earn \$6 a week at the wash-tub. She became a clairvoyant, and her income increased to \$60. It just shows that a man begrudges a quarter that he pays for washing his shirt, while he will cheerfully give \$1 to stick his nose into the other world before the show begins.

A LITTLE boy of our acquaintance was going past a liquor saloon—the door of which was wide open—with his dog Sport. The dog, not knowing any better, went in; but his little master was soon after him, with the following piece of good advice: "Come out of there, Sport; don't be disgracing the rest of the family."

GIVE THE GIRLS A CHANCE.—Young women have taken a remarkable place in the late examinations of the London University. The class for mathematical honors had but three members, one of them a girl, who took the palm; a girl also came out ahead for English honors, and two of the four for German honors were girls, who again distanced their male rivals; one of the three again, placed at the head for pharmaceutical chemistry, was a girl; and Miss Prideaux was first in the honors list for anatomy, coming from the London School of Medicine for women, and beating both of her rivals from Guy's Hospital.

THE LATE TRANSIT OF MERCURY.—We learn that very successful observations of the late transit of Mercury were taken at Honolulu. C. H. Rockwell, of Tarrytown, N. Y., the astronomer who went to Honolulu to observe the transit of Mercury on the 7th ult., returned to this city by the *Zealandia*, and reports his observations as having been highly successful. The phenomena of the transits of the inferior planets, Venus and Mercury, across the disk of the sun are always looked for with great interest by astronomers as enabling them to test the accuracy of their tables, and to bring their theories face to face with actual facts. The object of these observations is to learn with increased accuracy the relative distances of the planets from each other and from the sun, which is technically known as determining the solar parallax. The distance in latitude between two points from which observations of a transit are made serves as a base line to calculate the difference of position between the parallels on which the planet is seen projected on the disk of the sun. The value of these observations of Mercury is much less than the corresponding observations of Venus, for the reason that the smaller planet is nearer to the sun than to us, and the long leg of the triangle is on our side, whereas with Venus the conditions are reversed, the distance from the sun to the larger planet being about two and a half times as great as our distance from the planet, and the chances of error in observations are diminished in this proportion.

GILDING STEEL.—Polished steel may be beautifully gilded by means of the ethereal solution of gold. Dissolve pure gold in aqua regia, evaporate gently to dryness so as to drive off the superfluous acid, re-dissolve in water, and add three times its bulk of sulphuric ether. Allow to stand for twenty-four hours in a stopped bottle, and the ethereal solution of gold will float at top. Polished steel dipped in this is at once beautifully gilded, and by tracing patterns on the surface of the metal with any kind of varnish, beautiful devices in plain metal and gilt will be produced. For other metals the electric process is best.

THE DIFFERENCE.—The average French family is three, the average English five, and the average Irish seven.

## Young Folks' Column.

### Our Puzzle Box.

#### Cross-Word Enigma.

My first is in bee, but not in fly;  
My second is in your, but not in my;  
My third is in false, but not in true;  
My fourth is not in many, but in few;  
My fifth is in ape, but not in monkey;  
My sixth is in mule, but not in donkey;  
My seventh is in morn, but not in eve;  
My eighth is in morn, but not in grieve;  
My ninth is in brave, but not in bold;  
My tenth is in new, but not in old;  
My eleventh is in you, but not in me;  
My twelfth is in ocean, but not in sea;  
My thirteenth is in red, but not in white;  
My fourteenth is not in top, but in kite;  
My whole—pray give me your attention—  
A city and State do mention;  
The city in the State will be found,  
The State is one where cities abound.

LEX.

#### Hidden Deities.

1. I say, Toni, arsenic is poison, is it not?
2. Parvenu, signifying upstart, is a French substantive.
3. Give me the map, Olio, it is mine.
4. Is Hardi a native of New York, Boston, or Chicago?

MARS.

#### Word Square.

1. A well-known garden fruit.
2. A large northern lake.
3. Affected manners.
4. Repose.

JERRY.

#### Charade.

My first is a well-known animal; my second is a kind of trunk; my third is pleasant food; my whole is a kind of tree.

AUGUSTUS.

#### Reversals.

1. Reverse a number and leave a snare.
2. Reverse a feminine name and leave the same name.
3. Reverse an animal and leave a sticky substance.
4. Reverse a kitchen vessel and leave a brief slumber.
5. Reverse a drinking vessel and leave a vegetable product.

MARS.

#### Answers to Last Puzzles.

- NUMERICAL ENIGMA.—Rhinoceros.  
SYNCOPIATIONS.—1. Pope, Poe. 2. Spear, spar. 3. Beet, bet. 4. Chain, chin. 5. Horse, hoe. 6. Maxim, maim.  
CHARADE.—Deer-field.  
BURIED MOUNTAINS.—1. Rocky. 2. Atlas. 3. Andes.  
4. Alps. 5. Green.  
DECAPITATIONS.—1. Cast, ask. 2. Part, art. 3. Pear, ear. 4. Pin, in. 5. Pore, ore. 6. Learn, earn.

### How Mr. Rooster Lost His Dinner.

"One time, way back yunder," said Uncle Remus, knocking the ashes off his hands and knees, "dye wuz two plantations right 'long-side er wunner n'er, en on bofe er dese plantations wuz a whole passel er fowls. Dey wuz mighty sociable in dem days, en it t'w'n out dat de fowls on one plantation gun a party, w'ich dey sent out der invites to de fowls on de t'er plantation.

"W'en de day come, Mr. Rooster, he blow his hawn, he did, en 'semble um all tergedder, en after dey 'semble dey got in line. Mr. Rooster, he tuck de head, en after 'im come ole lady Hen, en Miss Pullet, en den dar wuz Mr. Peafowl, en Mr. Tukkey Gobbler, en Miss Guinny Hen, en Miss Puddle Duck, en all de balance un um. Dey start off sorter raggedly, but 'twa'n't long 'fo' dey all kotch de step, en den dey march down by de spring, up thoo de hoss-lot en 'cross by de gin-house, en 'twa'n't long 'fo' dey git ter whar de frolic wuz.

"Dey dance, and dey play, en dey sing. 'Mo' 'speshually dey play en sing dat ar song w'ich it run on like dis:

"Come under, come under,  
My honey, my love, my own true love;  
My heart bin a-weepin',  
Way down in Galilee."

"Dey wuz gwine on dis way, havin' der 'musements, w'en, bimeby, ole Mr. Peafowl, he got on de comb er de barn en blow de dinner-hawn. Dey all wash der face en han's in de hack-po'ch, en den dey went in ter dinner. W'en dey git in dar, dey don't see nothin' on de table but a great big pile er co'n-bread. De pones was pile up on pones, en on de top wuz a great big ash-cake. Mr. Rooster, he look at dis en he t'w'n up his nose, en bimeby, after w'ile, out he strut. Ole Miss Guinny Hen, she watchin' Mr. Rooster motions, en w'en she see dis, she take'n squall out, she did:

"Pot-rack! pot-rack! Mr. Rooster gone back! Pot-rack! pot-rack! Mr. Rooster gone back!"

"Wid dat dey all make a great ter-do. Miss Hen en Miss Pullet, dey cackle and squall, Mr. Gobbler, he gobble, en Miss Puddle Duck, she shake er tail en say quickity-quack. But Mr. Rooster, he ruffle up his cape, en march on out.

"Dis sorter put a damper on de yuthers, but 'fo' Mr. Rooster git out sight en year'n dey went ter wuk on de pile w'at wuz 'pariently co'n-bread, en, lo en beholes, un'need dem pone er bread wuz a whole passel er meat and greens, en bake' taters, en bile' turnips. Brer Rooster, he year de ladies makin' great 'miration, en he stop en look thoo de crack, en dar he see all de doin's en fixin's. He feel mighty bad, Mr. Rooster did, when he see all dis, en de yuther fowls dey holler on en axt 'im fer ter come back, en his craw, likewise, it up'n' ax 'im, but he mighty biggity en stuck up, en he strut off, crowin' ez he go; but de 'spounce er dat time done las' him en all er his family down ter dis day. En you neenter take my wud for't, ner, kase of you'll des keep yo' eye open en watch, you'll kitch a glimpse er old Mr. Rooster folks scratchin' whar dey specks

ter fine der rations, en mor'n dat, dey'll scratch wid der rations in plain sight. Sence that time, dey ain't none er der Mr. Roosters bin fool' by dat w'at dey see on top. Dey ain't res' twel dey see w'at und' dar. Dey'll scratch spite er all creation."

## DOMESTIC ECONOMY.

### Canning Meat and Game.

EDITORS PRESS:—Seeing the inquiry of R. Wilkins, of San Buenaventura, and your request that some reader would furnish such experience as they had had, I give mine, in hopes it may be of some benefit, for, if you propose to use meat at all, there is no way of cooking it equal to canning—not only for economy of the meat and labor of preparing, but, if properly done, it is superior to any other method of cooking. Last year, before we entirely discarded meat and the cookstove, I assisted in the experiment of canning both beef and duck, after we had received word from San Francisco that the latter could not be made to keep because of the small bones, but our experiment was more than satisfactory; it was a decided success in every respect, for, though we only put up a few cans, we gave one a decided test by keeping it some three months, part of the time exposed to quite a warm sun on the roof of the house. It was suggested by one of the parties that it was hardly fair to expect it to stand such exposure, but I wanted to make a sure test. So up into the sun it went, and remained for good part of a month, and when it was opened for dinner one day, an expert being present to try it, we all decided it to be superior in rich flavor to anything we had tasted, and though there was no water put in the can, it turned out nearly a teacupful of rich gravy. Asparagus put up the same way spoiled our appetites for every other way of cooking it, and the tomatoes and peaches put up by the same method we are now using, and believe they are unequalled. Well, how is this done?

Have first either two and a half or five lb. cans well made; for if there should be very small leaks, they will give you much trouble. After washing them out clean and cutting your well cleaned duck or beef into suitably sized pieces for table use, pack it down very close into the cans with as much salt, pepper or other spice as you wish; pack very solid and fill quite full, solder on the top, and after you have a sufficient number ready, put four or six cans into a wire crate and lower into nearly boiling water that has been made heavy with salt, so that it will get hotter than ordinary boiling water without boiling. If your work has been well done, and there are no leaks in your cans, you will see no sign except it be a perceptible swelling of the cans, but if there is any leak, a little bubble of air will come up from the spot, and as they get hotter you will soon have a little steam of air bubbles. You must have a scratchawl in hand and mark the leak before all the air is out of the can, and after testing one lot, try another, until you have taken out all the leaky ones or mended them, which you will find it impossible to do until they cool enough to stop the steam from coming out. Now put all your cans into and under the salt water and boil until sufficiently cooked, but if, as is sometimes the case, the meat is so full of moisture, and your cooking heat so strong that there is danger of bursting the cans, take them out and tap each one with a hradawl, being ready with hot coppers and muriate of zinc (soldering fluid) to close up each hole as soon as the steam stops coming out so that no cold air shall get in, after which you can put them in again and boil them more, or until they are cooked to suit you. I forget just how long we cooked the duck. If they swell much the second time you will make the keeping extra sure by tapping again. Now, with this direction and a little experimenting, any careful, persevering person can make a success. Fruits are more difficult to manage because of the juice, which troubled me some, squirting out of the tapped hole, but we succeeded; still, with these main principles, but some difference in the preparation of the fruit, I hope to be able to make less labor and have a more nearly uncooked article next year.

The best tomatoes, though peeled and the cans boiled 20 minutes in unsalted water, do not taste much different from fresh ones.

If all farmers who use beef would cau a part of one ahead, also a supply of sheep and game, it would be much better than depending upon the salt beef barrel or hacon, etc., or buying, at an extravagant price, of the butcher wagon, part-spoiled meat that has been hauled around through the sun. Besides, how much pleasanter and easier for the overworked wife to open a can with a few coals of fire laid on top, and after emptying wash out and put away for next year, than to spend time each day cooking. If the meat is wanted warm, drop the can into hot water a few minutes before opening. These times demand that all that is possible should be done to do away with the household drudgery.

I. B. RUMFORD.

Bakersfield, Cal.

STALE BREAD FRITTERS.—Cut stale bread in thin slices and put it to soak for several hours in cold sweet milk. Then fry in sweet lard, or butter the slices and then fry, and eat with sugar, molasses, or a sweet sauce. To make it more delicate remove the hard crust before using.

## GOOD HEALTH.

### "Cancer Doctors."

Our advice, in the *PRESS* of Nov. 26th, to apply to a well educated physician in all cases of suspected cancers, rather than to any self-advertised "cancer doctor," has called forth the criticism of a certain party, who seems especially hurt at the term "quack." In common with others of a similar class, the communication referred to appeals to the progressive spirit of the age, the persecutions of Harvey, Jenner, and others, old foggyism, etc., *ad nauseum*. We have no disposition to enter into a controversy upon such a subject, but record our conviction that the regularly educated physicians of the present day are as fully abreast of scientific progress as any self-constituted cancer doctor can be. There has been no reasonable proposition for the cure of cancers nor any other disease, that has not been submitted by the faculty to the test of careful experiment, and there exists in London, we are informed, a cancer hospital, with a ward appropriated to the trial of new remedies for the disease. If our critic, or any other person, has a certain cure, there is an ample opportunity for trial, with a certainty of a large fortune, and the honor of the medical profession throughout the world and the gratitude of mankind as a reward. Such being the facilities afforded by the profession, it is folly for aspirants to talk of persecution, or for patients to expect relief at the hands of irregular practitioners. For our own part, we prefer to trust to the evidences of a scientific education in medicine than to the pretension of ignorant self-assertion.

### HOW PRINTING AFFECTS THE HEALTH.—

Years ago there was a notion prevalent among those who were but partially informed upon the question that the printing business was especially detrimental to health. There was a tradition about the absorption of poison from the constituents of which type metal was composed. This was and is true so far as it asserts the poisonous nature of some of the constituent parts of type metal; but that these poisons should necessarily be absorbed into the system of the one who handles type is simply absurd. Printers who have such habits of cleanliness and sobriety as a decent respect for one's self and the opinion of others might be expected to dictate may follow their calling for years without experiencing any further damaging effects upon their health than what will result from close application to any sort of hard work. More "poison" is absorbed by the printer when taking observations of his little finger through the bottom of a glass than in any other way.—*The Chicago Specimen*.

BWARE OF COUGH MEDICINES.—The *Contra Costa Gazette* says that at an inquest in Oakland, to ascertain the cause of death of an infant that had apparently been poisoned, it transpired that the mother had given it two doses of "Pulmonary Cough Medicine," to alleviate the croup. Dr. Back, who made the autopsy, testified that the medicine contained laudanum in the proportion of 360 drops to 3 ozs. of the mixture, and that death of the child was caused by the excessive amount of laudanum in the medicine administered. The jury found accordingly, but cleared the mother of any intentional wrong, she being ignorant of the dangerous character of the mixture. It would appear that the law should provide safeguards that will prevent the misuse of poisonous drugs by those ignorant of their properties and effects.

CASTOR OIL AS AN UNCTION.—The *London Medical Journal* gives reports from various practitioners who have found purgative results to follow the inunction of castor oil. One writer states that he has frequently applied this oil to the abdomen, under spongipoline, or other waterproof material, in cases where the usual way of administering by the mouth seemed undesirable, and with the most satisfactory consequences. In a case of typhoid fever, also, half an ounce of castor oil was applied in this manner, under a hot water fomentation, the effect of this being, as represented, to relieve the constipation and tympanitic distention that had been present, without undue purging or irritation of the bowels.

THE FEET IN MARCHING.—In order to make marching easier for the German soldiers their feet are wrapped in linen soaked with lard. But, on the march, especially where the boots are too big, the sticky mud will pull the boots off. During a parade before the Emperor, not long since, the boots came off by the hundreds, and a large fatigue party had to be sent out to pick up the foot gear.

THE THIRD SET OF TEETH.—Professor Owen, in an article lately published, questions whether man ever receives a third set of teeth. He ascribes alleged cases to the re-appearance of old and worn stumps, in consequence of the shrinkage and absorption of the jaws.

FOR EARACHE.—It is stated that asafoetida dissolved in water is a good palliative for the earache. Warm a few drops and drop in the ear, then apply wool to keep out the cold.





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W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, December 17, 1881

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## The Week.

There has been a succession of average winter days, with occasional rains in the central and northern regions, transient breezes from nearly all quarters; frosts in the morning; floods of sunshine at noon, and night's sable curtain early drawn. In the Great Valley and in the South, the skies have still been clear. There has been much work done by those who are eager for orchard and vineyard planting wherever the ground has been in tillable condition, and the nurserymen are up to their eyes in business, lifting and shipping trees. There promises to be a good stroke of work done before Christmas in many kinds of farming.

Congress has begun work with apparent zeal. The Pacific Coast representatives evidently went East with full portfolios, for there has been already a shower of bills affecting local interests. There are two bills to give effect to the new Chinese treaty, and to restrict the incoming of the celestial. Two bills as shown elsewhere aim to interest the United States in an effort to solve the debris question. A bill to admit grain bags and bagging free of duty, which would help our grain growers and not interfere with our own manufacturing interests, for all this class of material comes from abroad. There promises to be abundant material for discussion this winter, but California will be too busy to talk much, for the outward sings of a most prosperous producing season are on every hand.

EXTENSIVE frauds have been discovered in connection with the building of the Atchison, Topeka & Santa Fe railroad.

## The Road Law.

According to the latest announcement of the Doctors of Law, it appears that California after all its efforts to have a road law, has none after all. This was partly foreseen sometime ago by those who pronounced the new law inadequate to the demand, and it is now farther affirmed by a legal opinion, that the law is in part inoperative and perhaps altogether unconstitutional. It now appears as though there must be another recourse to the legislature before a much needed road enactment can be had.

The San Mateo Board of Supervisors found themselves face to face with difficulties in their road business, and they passed an order employing a lawyer to expound the matter for them. They selected H. P. Irving, of San Francisco, who submitted the following opinion of the present road law of the State, as to its authorizing the location and construction of new roads in the county:

The political Code as amended in 1880, with reference to highways, etc., is the law of the State, since the passage of the Act approved April 16th, 1881.

This law provides for dividing all the counties of the State into two classes, naming the counties in each class. As thus divided, San Mateo county is named as one of the counties of the first class. It also provides, that in all counties of the second class, each township shall constitute one road district; provided, that the Board of Supervisors may, on petition of 50 taxpayers of any township, divide such township into two or more districts, as they may deem necessary for road purposes. And it also provided that there must be elected in all counties of the second class, at the general election in the year 1880, and every two years thereafter, one elector of each and every road district in the county to act as Road Overseers in their respective districts. \* \* \* And all Road Overseers now in office must hold office and exercise the duties thereof until their successors are elected and qualified under the provisions of the Act.

This last provision can only refer and apply to Road Overseers in counties of the second class, as the law provides only for the election and qualification of Road Overseers in counties of the second class.

There is no provision in the road law as amended in 1880, for dividing the first class counties of the State into road districts, or for the election or appointment of Road Overseers therein.

Road Overseers are made essential and indispensable officers in their respective road districts, by the road law now in force. And a failure to provide for the division of the counties of the first class into road districts and for the election of Road Overseers for such road districts, is a fatal defect in the road law, which renders it wholly inoperative as to the first class enumerated in said Act of April 16th, 1880.

As to the constitutionality of this road law, I would state that sections 2645 and 2646 of the Political Code as amended in 1880, and constituting a portion of the road law now in effect, are undoubtedly special and local in their provisions, and therefore in conflict with the seventh subdivision of Section 25, Article 4 of the Constitution of this State, which prohibits the Legislature from enacting special or local laws "authorizing the laying out, opening, altering, maintaining or vacating roads, etc."

All the other sections of this road law except sections 2645 and 2646, are general in their nature and apply to all the counties of the State, and would, I have no doubt, be held to be constitutional, if they can be separated and be operative, without the said two sections.

But it is necessary, in the views I have already taken, in the preceding part of this opinion, to discuss the constitutionality of the road law. Your only safe course, in the premises, will be to apply to the Legislature to amend the present road law.

I am therefore of the opinion that you, the Board of Supervisors of San Mateo county, have no legal authority to lay out, open and construct roads in your county.

Upon the receipt of the above opinion the question arose in the minds of the San Mateo Supervisors as to whether they could not go to work under the old law and they interrogated their attorney to that effect. He replied that he saw no refuge in the direction of the old law and believed that the only thing to be done is to appeal to the next Legislature.

The San Mateo Co. Journal dissents from Mr. Irving's opinion and holds that the old law is in force and that Mr. Irving's reasoning as above, is illogical. We are hardly lawyer enough to attempt the settlement of that matter, but it is clear that the road business of the State will be impeded by the uncertainty which clings to the matter. This is especially unfortunate now because the rural counties are now developing so fast that new roads will be more than ever a necessity. A good road law remains as it has remained for several years one of the greatest needs of the State.

## The "Rural" and the Fruit Growers.

A friend of the RURAL PRESS, who was in attendance upon the meetings of fruit growers at Sacramento last week, writes:

"The greatest praise that could be bestowed on the RURAL PRESS at the late fruit growers' convention, and which shows undoubtedly the well deserved popularity of that paper, is the fact that almost all the members of that convention were subscribers to the PRESS. Receive for that well merited honor and trust my most sincere compliments."

OLD STYLE MARKETING.—The Chico Record tells of a farmer who came down from Goose lake, Lake county, Oregon, with a wagonload of butter, consisting of 1,600 lbs. For this he found a ready market in Chico. He laid in a supply of provisions and clothing and dry goods for the winter, and will return by way of Millville to his home in Oregon. It took him some 12 days to come from Goose lake by the way of Redding, Shasta and Red Bluff to Chico, but he calculates that the increased price realized for his butter, and the low figures paid for supplies, will amply compensate him for the time. Goose lake is on the line between Oregon and California, lying partly in each State.

## Our Subscription Rates.

Hereafter the following will be our subscription rates:

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

## The Rural for 1882.

The RURAL PRESS is outgrowing its clothes; we must have more room. The development of all branches of our agricultural industry is progressing so fast that more space is required for the setting forth of the latest facts and experiences in each branch of husbandry. We are conscious now and then of slighting certain specialties because it has been impossible to find room for the important matter which was in sight. For this reason we now announce that from this onward until the first of July, 1882, at least, the RURAL PRESS by means of extra or double sheet, will average 20 pages or more weekly. Every issue will not depart from the old 16-page limits, but by the issue of double sheets as the space is called for we shall bring the average to 20 pages per week. We shall make special study of each of the several branches of agriculture as practiced on this coast and bring forward the newest data which can be obtained from the most successful and progressive workers. Thus we aim to give all readers the opportunity to keep abreast of the advancement in all lines of work and maintain the good name for value and usefulness which has already been generally accorded to our journal.

To carry out the plans which we have for the enlargement and improvement of the RURAL PRESS we earnestly request the aid and co-operation of all, with their pens and their voices and their purses, in the belief that the work will prove for the benefit of all, and the upbuilding of our leading branch of industry.

## Mining Debris in Congress.

The California Congressmen seem to be alive to the great interests involved in the vexed question of what to do with the debris from the hydraulic mines, and are bringing the matter before Congress in a way that will call the attention of the country to it. Once in Congress, the slickens question becomes a national one, and it is taken out of the influence of local prejudice. While it may not then be argued with the same knowledge of facts which it would be within the boundaries of the State where the civil exists, it will nevertheless be considered more calmly and with greater deliberation.

Mr. Page has already introduced a bill, in the preamble of which he sums up the question briefly, showing what the evils are, and also showing the great importance of the mining industry and the harm being done to the agricultural industry.

The concluding paragraphs of the bill are:

WHEREAS, It is believed that the settlement of the grave issues which have arisen in the State of California, in relation to the physical features of that State and the location of the mines, is peculiarly under the province of the General Government, which has reaped such vast benefits from the mining interests in that State; and to harmonize these interests, which it is confidently stated by our most able scientists and engineers can be done by the construction of proper works, at the expense of the General Government; therefore,

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That the sum of \$500,000 be, and the same be lawfully appropriated out of any money in the Treasury not otherwise appropriated, for the purpose of making such improvements or works, under the direction and supervision of the Secretary of War, as he may see fit, for the improvement of the Sacramento, Yuba, Feather and American rivers, and their tributaries, so as to protect them from overflow from the debris and the filling up of said rivers, and for the removal of deposits of debris that now impede navigation, and also to prevent the destruction of lands and property adjacent to said rivers, and to protect the harbor of San Francisco from further injury from said cause.

Mr. Berry has also introduced a bill, setting forth briefly the facts in the case, concluding as follows:

WHEREAS, Lieutenant Colonel of Engineers G. H. Mendell, U. S. A., after a careful examination, in pursuance of the act of Congress directing such examination, has reported to the War Department recommending immediate action by the General Government in the construction of stone dams in river canyons, which is believed by eminent engineers to be the only feasible remedy to arrest millions of tons of debris now in the upper river channels, and in its way to the levels below; and

WHEREAS, It is the duty of the General Government to protect from injury and to improve the navigable waters of the country in the interest of commerce and the public welfare generally, and it is of vital interest to the commerce of the State of California that remedial measures be quickly taken to prevent these present dangers to her commercial interests, and to redeem an almost desolated portion of her Territory, larger in extent than some of the States of the Union, and that it is highly important to the General Government to lend its aid in compassing the results sought by the State.

Therefore, be it enacted, etc., That a sum of \$500,000 be, and the same be lawfully appropriated out of any money in the Treasury not otherwise appropriated, to be expended under the direction of the War Department in such manner as shall be most efficacious in preventing the navigable waters of the State of California from injury by the deposits of debris from hydraulic mining, and said amount appropriated is hereby made immediately available.

## QUERIES AND REPLIES.

## Artificially Hatched Fowls.

Mr. J. D. Enas, of Napa, calls to assure us that he has hatched fowls with his incubator, and has hatched others with the incubator from eggs laid by the former. In other words, he has several generations of artificially hatched fowls, and finds them as fertile and prolific as those produced in the old-fashioned way. He finds artificially hatched fowls as healthy and satisfactory as he could desire. He is now preparing for a season of hatching.

We have also received from a Petaluma chicken grower the following, in answer to our invitation to bring forward experience on this point.

EDITORS PRESS:—Having noticed your San Mateo correspondent's query together with your reply touching upon the reproductiveness of chickens artificially hatched, and without any axe to grind as regards any particular incubator, I submit the following: It is, as you say, high time the matter was fully set at rest, but notwithstanding all that may be said or written upon the subject, there will still be, as now, a certain class who indulge in the opinion that chickens must not be raised upon any other plan than that of the good old granddame, and should they be raised otherwise, they of necessity amount to nothing. Such people of course belong neither to the reading nor thinking classes, for if the former they would have learned ere this that hatching and raising chickens artificially is not a method confined to modern times and known only to a few, but was in vogue 2,000 years before the birth of Christ, and though at that period was a secret handed down in direct line of descent, guarded closely so that none might reap a benefit, but to those to whom it was transmitted. Fortunately, however, artificial incubation is not at the present time enveloped in a shroud of mystery, and any one who chooses to try it can, at a very small outlay, though all cannot be alike successful. Is it to be presumed that the millions of birds hatched in the Egyptian ovens as well as by the Chinese were without procreative power? We will venture to say that from some of these artificially raised chickens came at least a portion of the immense quantities of eggs needed for incubation, and that they are not of the thinking class is evident, else how can they entertain the thought that chickens artificially hatched should be bereft of procreative power, since the mere process of incubation has nothing at all to do with it, form, color, reproductiveness and all general characteristics having been determined previous to the egg being deposited, and what matters it whether we use a hen as an incubator or a nicely contrived piece of machinery, since all that is required to animate is a due degree and continuation of heat. I will add, in closing, that my experience in artificial incubation and rearing chicks has been of the most encouraging character. Last season I hatched and raised nearly 2,000 chicks, and as touching reproductiveness—one pullet before reaching six months old hatched a brood of chicks from her own eggs, with no other male near but those hatched in the incubator at the same time as herself. I could give a number of instances in connection with my own yards, and with birds raised by me that have passed into other hands.—I. C. BYCE, Petaluma, Cal.

## Ornamental Castor Beans.

EDITORS PRESS:—Will you please give information through the PRESS, whether the seed of the Ornamental Castor Bean is used for the manufacture of oil.—Mrs. L. M. P., Wilmington, Cal.

We are not aware that it is, though it is quite likely it might be. If one had a quantity a sample of the beans could be sent to Kittle & Co., of this city, for estimate of value. But why should we grow the Ornamental as a commercial article?

## Twine Fence.

EDITORS PRESS:—My brother has taken the PACIFIC RURAL PRESS for five years. I have looked over the copies in vain for an advertisement of "twine fence," which I felt very sure I had some time seen in the paper. I may be mistaken about the paper. If you can, will you inform me where it can be obtained, the price, etc.—Mrs. H. L. LEAVITT, Sateio, Ventura Co.

We do not recall anything of the kind. Perhaps some reader has a better memory.

## Pacific Coast Weather for the Week.

The following is a summary of the rainfall for each day of the week ending Wednesday, Dec. 14th, at noon, for the stations named:

[Furnished for publication in the RURAL PRESS by Nelson Gorom, Sergt. Signal Service Corps, U. S. A.]

Date.	Olympia.	Portland.	Roseburg.	Red Bluff.	Sacramento.	San Francisco.	Visalia.	Los Angeles.	San Diego.
Thursday, 8th.	.00	.22	.03	.00	.00	.00	.00	.00	.00
Friday, 9th.	.14	.00	.00	.00	.00	.00	.00	.00	.00
Saturday, 10th.	.00	.71	.68	.01	.00	.00	.00	.00	.00
Sunday, 11th.	.04	.47	.20	.36	.20	.18	.00	.00	.00
Monday, 12th.	.00	.21	.03	.32	.20	.31	.00	.00	.00
Tuesday, 13th.	.45	.02	.00	.00	.00	.00	.00	.00	.00
Wednesday, 14th.	.11	.00	.00	.00	.00	.00	.00	.00	.00
Totals.	.73	1.65	0.94	0.68	0.40	0.49	.00	.00	.00

\* Reports for 24 hours ending from Olympia, and 8 hours from Portland and Roseburg. NELSON GOROM.



## The Elevation of Veterinary Science.

In a remark upon the occurrence of several serious diseases among the live stock of the coast, we hinted at the great value of the movement to elevate veterinary science, which is now becoming quite vigorous at the East. It has already claimed the attention of a number of California physicians and surgeons, and we have no doubt the agitation will commend itself to all who are interested in the well-being of animals either from humane or pecuniary motives, and to those who view the animal economy and health from scientific points of view.

We spoke recently of a veterinary movement in the State of Pennsylvania in connection with some established college of medicine and surgery. New York State has already well entered the list of reformers in the matter of treating the diseases of animals. A department of one of the leading New York colleges of medicine has already a veterinary department in action, and at a recent opening of the course of 1881-82 there was an address delivered which puts the matter in a true and strong light. We shall present a few of the ideas advanced by the speaker:

For the last few years there has been a great interest taken all over our country in veterinary education by physicians, for the sake of the valuable contributions it has made and is making to the study of the nature and treatment of diseases in the human family. It has interested stock-raisers and agriculturists generally, in consequence of its importance to the health and well-being of their flocks and herds. This latter effect is somewhat due to the influence exerted by the agricultural journals which have, by their publications, brought together in word and action the various widely separated districts of our country upon the basis of scientific labor; which have not only made known to one part of the country the products cultivated and the appliances used in another part, but have also spread abroad a knowledge of the prevailing diseases among animals of these various sections, with their symptoms, so that they may be recognized, and to a certain extent their general management and treatment to ward off their destructive tendencies, thereby becoming in some degree the forerunners of the colleges for the higher education and the purer science of veterinary medicine.

Chemistry, geology, botany, entomology, have long since taken rank among the higher sciences, but the study of the diseases of animals has languished; its status in the scientific circle is hardly to be found, unless in the domain of biology or of comparative anatomy and physiology. This has been due somewhat to the kind of patients to be treated, and the difficulty of the applications of remedies. Thus the matter has been left, up to quite recently, to the strong arm of any self-constituted farrier, or to any who had the courage and hardihood to administer a bolus or a draft to our speechless servants, or to apply to them some ointment or wash, without any requisite knowledge of the conditions for which they were to be administered or applied. But we have now every evidence that this period is rapidly passing away, that there is a better future, and that there is a higher plane for this noble profession; and upon the students of to-day, who are now commencing the study of this branch of medicine, and those who have recently graduated, will rest the responsibility of elevating it to that social and scientific plane which it justly claims; to the plane now occupied by the afore-mentioned sciences, and especially to that occupied by human medicine.

The only approach to this enviable position is that which was made at the late medical congress in London, where the scientists in medicine assembled from all parts of the civilized world, listened with deep interest to the story of M. Pasteur, the great French experimenter, in a lecture on the germ theory and virus culture, illustrated by the diseases of domestic animals.

The terrible disaster in Vienna, of the burning of the theater, has drawn public attention and more to such structures in other places. The S. F. Board of Supervisors, in company with an architect, are examining the places of amusement in this city. If proper means of egress are not provided, licenses will be refused.

## The Entrance to Arizona.

Our illustration shows the entrance to Arizona from California—the bridge constructed by the Southern Pacific railway company, and an eastward-bound train just entering the confines of the new country. The traveler to Arizona begins to descend into the sea of sands of the Colorado at a station named Banning. Thence the decline proceeds until, near Dos Palmas, one reaches 263 ft. below the level of the sea. A run of 160 miles over the great transcontinental railroad brings the traveler to Yuma, on the banks of the Colorado. Palm trees of the fan variety are found along the mountain base on the desert. Sand storms sweep the barren waste at times, and billows of sand break on the railroad barriers.

Fort Yuma, on the California side, is situated on the top of a small granite hill, from which point a fine view of the surrounding country is obtained. The river, with its line of willow, cottonwood and mesquite trees, and the distant rugged mountain chains, purple and desolate, make a curious picture. A fine bridge, shown in our engraving, spans the turbid waters, and brings the traveler to Yuma, in Arizona. Most of the buildings of Yuma are adobes, with flat, dirty roofs. The railroad buildings are substantial frame structures. The town is situated near the junction of the Gila, in the plain surrounded by sandhills. The climate in summer is warm, but at present it is all that could be desired. At this season there may be seen fig

## Foothill Fruits.

Williamson & Co. send us by the hand of W. H. Jessup some handsome specimens of oranges and figs from their Orange Hill orchard, at Penryn, Placer county. The sample of Navel orange are clean and bright and good size, being 10½ inches in circumference. The Mediterranean Sweet oranges are also creditable. A new seedling is a large, rather oblong orange with few seeds, much juice, moderate thickness of skin, and good flavor. All these oranges are highly creditable to the growers, and will do well in the market. Oranges from the older trees were shipped to market Nov. 23d and 24th, which is in time to catch the large prices which the first of the new crop commands. The orange growers of Placer county are confident that their fruit grown at an altitude of 600 ft. will prove superior because of its early ripening and sweet flavor and the freedom from smut which they enjoy.

The figs sent us are just as they were gathered from the ground, and have not been treated with any skill at all. They are altogether the best we have seen from such handling. They are of exceedingly rich flavor. The fig was found growing on a fruit farm in Placer county, and nothing is known of its origin. Williamson & Co. call it "Pacific White," and give the following description of it in their catalogue:

Tree a very hardy and strong grower; very prolific; foliage, large, rich, green; wood very solid and firm; bark on

## Insects Everywhere.

EDITORS PRESS:—I was at the horticultural meeting in Sacramento, and was surprised to see so many different kinds of insects. Mr. Cooke asks the question, can the insect pests be annihilated? He answers, yes. I answer, no; not in the foothills. I will give my reasons: First, our packing and tool houses are built with shakes, double, which makes a fine place for the codling moth to hide between the shakes. Second, We have at least 100 oak trees around near our orchards. The bark is shaly, and they are there by the hundreds. We have a good many rods of picket fence, and they are there. The autumn leaves have blown in every direction, and they are there. Now, must I burn up all my packing and tool houses and cut down all my forest trees to get rid of these pests, and then not do it? I answer, no; I shall do no such thing. I intend to do all I can to keep them from my fruit trees, but to exterminate them is out of the question around this section of the country.

I have one thing more which I would be pleased to have you publish. I see that Mr. Cooke and the president, Prof. Dwinelle, and one or two commission merchants were very much in favor of passing a law that we shall have no cases returned. That will work very great loss to those who raise berries. We have to pay about 12½ cents for the baskets for each case, and then to pay 10 cents for the case, making 22½ cents we are out for every case. This

we cannot stand, nor shall not stand.—J. A. ELLIOTT, New Castle, Cal.

All experience in this matter is interesting, and many important points are yet to be brought out, no doubt. It is a good thing to make prominent all of the difficulties in the way, for a danger is half removed when it is foreseen. Our correspondent says he "intends to do all he can to keep the pests from his fruit trees." That is a good enough disposition, and if he should get so tired of killing the insects from his shake incubators, that he should conclude to put up tight-board outbuildings, and if he should rake up and burn the leaves, and endeavor to trap the worms before they crawled to the picket fence or to the oaks, we will promise not to be at all surprised. When a man sets out to do all he can to keep insects from his trees, he will do a heap of things—he will drive ahead in undertakings which he foresees before he gets his blood up in the action. So when our correspondent declares his intention, we know something will have to come,

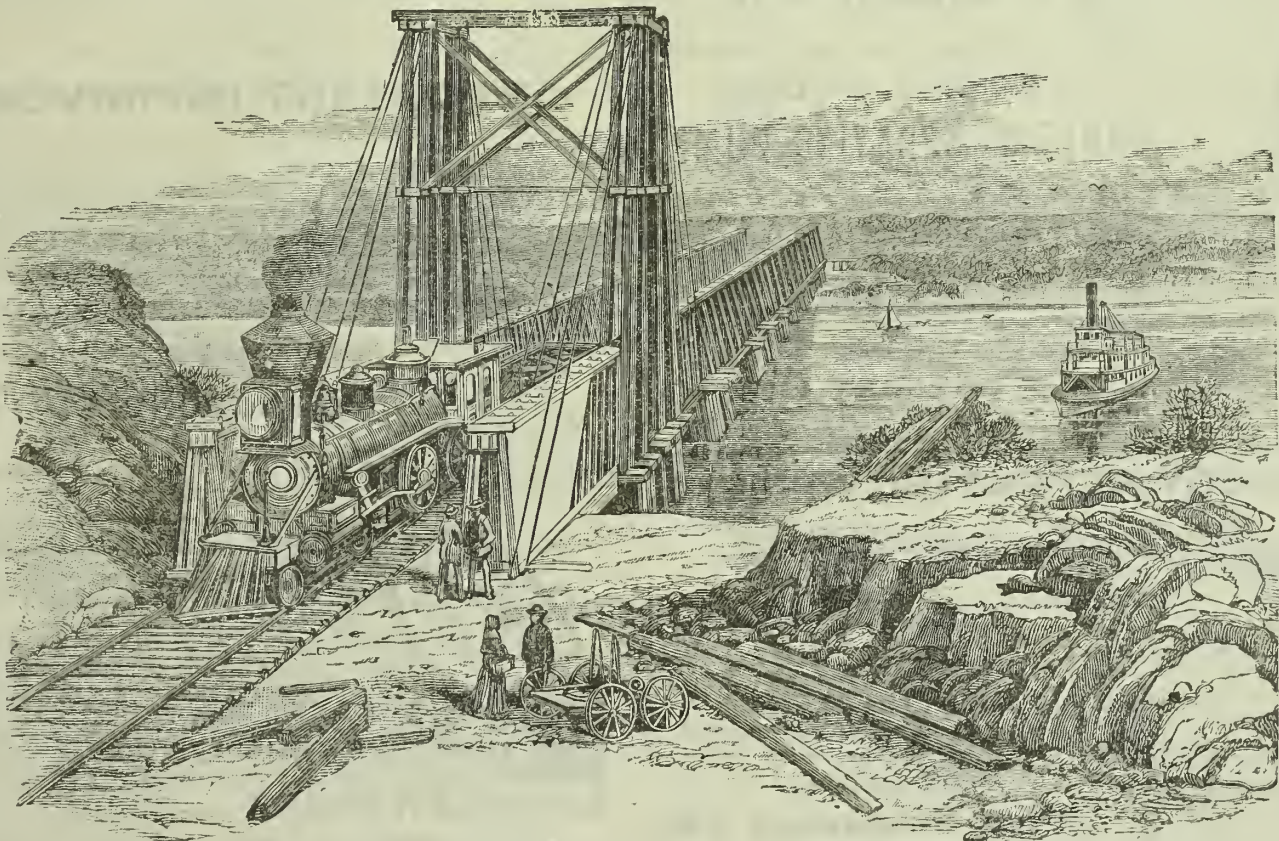
for we know he is a determined man. He may yet be tying burlap pantelettes around the stout ankles of those primeval oaks, or have the Newcastle fire company squirting codling moth wash over his entire premises. One never knows what he can do until he tries, and he never knows what he will do until the occasion and the inspiration come. All that is needed at the start, is the disposition—all possible things will come afterward.

The question of return boxes will be solved in accordance with the dictates of mature judgment on the subject, and there is no reason to anticipate unusual hardship. At present, the tendency is toward disinfection rather than destruction.

THE Supreme Court, in the case of Van Every vs. Ogg, holds that it is the duty of a landlord to repair the leased premises on notice by the tenant, and if he does not perform this duty he can be compelled to pay by deduction from the rent, to the extent of a month's rental, or, at the option of the tenant, the term be concluded without redress to the landlord.

A. R. BRIGGS, Chairman of the Immigration Association, has appointed the following five committees to wait upon the members of the Board of Trade and ask for subscriptions in aid of the society: Jas. Duffy and F. L. Barker, W. N. Hawley and J. V. Webster, Jas. R. Kelly and Wm. Blauding, Wm. Steinhart and A. R. Briggs, W. L. Merry and A. R. Briggs.

THE new Episcopal church at Albuquerque, N. M., is to be built of stone, and the section now building will cost about \$6,000. The plan contemplates extensions as fast as funds accumulate, and the ultimate cost will be \$20,000.



[Published by permission of E. Conklin, author of "Picturesque Arizona," etc.]

SOUTHERN PACIFIC RAILROAD BRIDGE AT YUMA.

trees, loaded with green and ripe figs, and thrifty banana plants. This is an indication of what may done in the future, when the rich bottomlands of the river are brought under cultivation. Half-naked Yuma Indians stroll up and down the streets, or go by loaded with squashes and corn, from their farms across the river. Steamers lie along the stream, and trains pass every few hours. Yuma is the county seat of Yuma county.

The mountain ranges to the north and east are capped with domes and spires of rock, worn into fantastic shapes by the eroding elements. Groves of mesquite, with the long pod and peculiar screw bean, abound along the river bottoms, which are held sacred by the Yumas, who gather the beans for food and cultivate a few fertile acres along the river. Flights of ducks go swiftly by, and myriads of blackbirds sing in the mesquite trees. A blue heron stands on a projecting sand bar, gazing silently into the turbid waters. Yuma is well worth a visit, and as a sanitarium, the mild, dry climate of its winter months makes it a desirable locality.

SENATOR MILLER has introduced a bill to enlarge the Yosemite valley and Big Tree grove grants; the enlargements to be made on the same terms, conditions and stipulations expressed in the act of 1864; the boundaries to be established at the cost of the State by the U. S. Surveyor-General; nothing in the act is to be construed to affect the title to lands to which valid claims have attached prior to the passage of the act.

It is charged that the Northern Pacific railroad is destroying valuable timber in Washington Territory.

new wood dark chestnut color, very peculiar. The fruit is above medium size; will drop from the tree and cure on the ground, and is of a lighter color than the lightest colored imported figs, and is superior in flavor. The only objection to this fig is, the skin may be so softened as not to be objectionable. This thick skin prevents cracking and souring in process of drying, as is the case with most other figs. As a drying fig we have never seen anything to compare with it. We think it is destined to supercede all other figs in our market as a dried fig.

Williamson & Co. commenced their Orange Hill place at Penryn, in Dec., 1878, took the land in the rough and now have about 80 acres cleared and planted into orchard and nursery. They hope to put out 20 to 40 acres more this season, and think of planting 20 acres of that to these new figs.

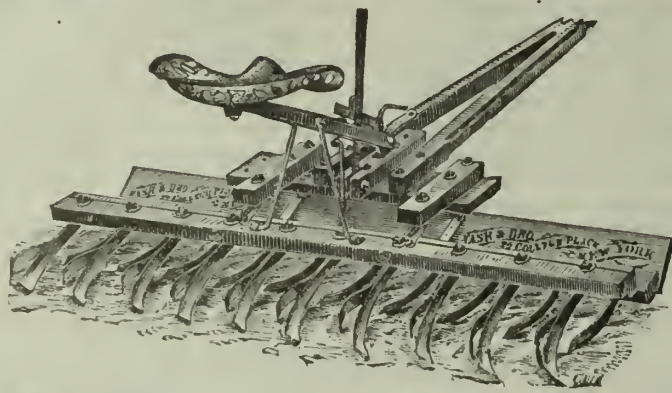
AMERICAN PROGRESS.—A new publication which will be found very useful in the library and on the study table is "The National Handbook of American Progress." It is a reference manual of facts and figures, historical, biographical, documentary, financial, statistical, political, etc., from the discovery of America to the present time. The book was edited by the late Bishop Haven, who, during his residence in this State, showed himself to be a true friend of California, and whose death last summer was deeply regretted. His "National Handbook" is a volume replete with suggestions, directing the curious how to look for what they wish to find in the larger histories. Considering the space to which it was bound to confine itself, it may be set down as one of the fullest books of the kind ever published. It is published in handsome form by E. B. Treat of New York, and will be sent postpaid for \$2 by A. Roman, 120, Sutter St., S. F.



"ACME"

PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

For the Orchard, Vineyard, Nursery and Grain Field.

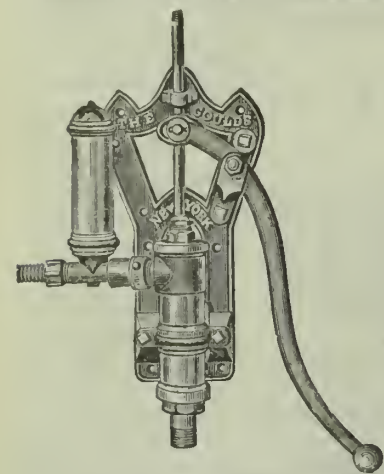


Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers, 22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia.



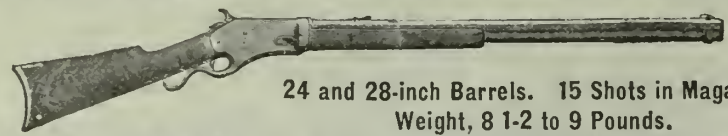
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Sole Agents for the Pacific Coast for  
GOULD'S SPRAYING PUMP.

Used by Orchardists for Spraying Fruit Trees with  
INSECT EXTERMINATING LIQUIDS.

This Pump has been gotten up expressly for the purpose noted. The working parts are constructed entirely of Brass and are not affected by the corrosive solutions used in them. The sale of over 100 of these Pumps last year—principally in the Santa Clara valley is strong testimony as to their merit. Further information can be obtained by addressing the Agents,

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24 and 28-inch Barrels. 15 Shots in Magazine.  
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416 Market St., San Francisco.

Short Horn Bulls For Sale.

The undersigned now have for sale a few choice Thor oughbred and high grade bulls from the best milk strains. Our herd consists of "Young Marys," "Daisies," "Inip. Britannias," etc. Prices Reasonable.

HYDE & MOORE, Visalia, Cal.

Improved Patent Rotary Force Pump for Pumping Water by Horse Power.

This is a Durable and Compact apparatus for pumping, that will force water 100 feet and 2,000 to 4,000 gallons an hour. It can be moved from one well to another for Irrigating. For further particulars, address,

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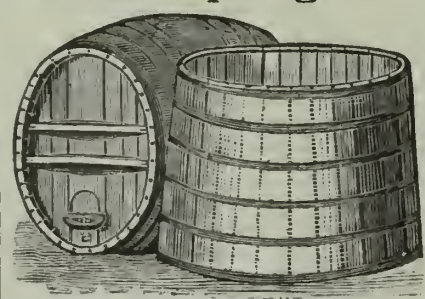
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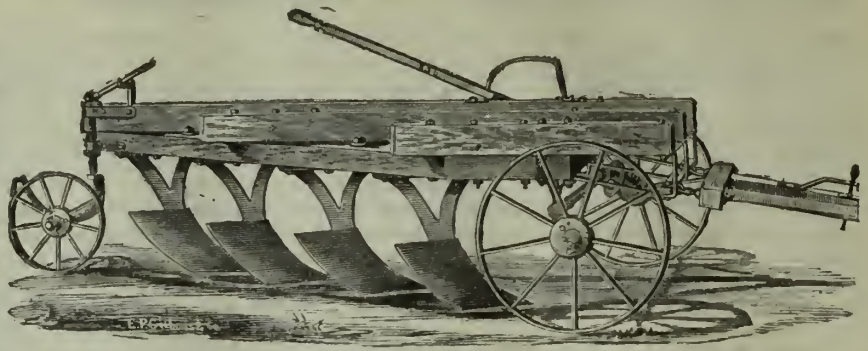
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GANG PLOW,

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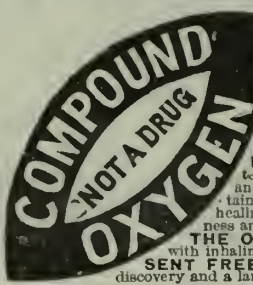
That we have made in the (so-called) Stockton or Reversible Mould Gang, so extensively used in the southern half of our State.

- FIRST—We use wrought iron wheels 30 inches high in the place of the small cast iron ones commonly used.
- SECOND—We use a rear castor wheel running in the furrow instead of one running on the side in front, where it can never act as a castor unless the mate to it slides. All our wheels have separate boxes that can be replaced when worn out. The castor wheel can be made rigid if desired, so that it runs in line with the other wheels.
- THIRD—Our Plow has a crank axle with lifting lever, so that the depth of plowing can be instantly adjusted, or it may be raised entirely out of the ground.
- FOURTH—It has a tongue which may be used if preferred, or it may be laid aside and the Plow used with a chain in the ordinary manner.
- FIFTH—The standards have wrought iron centers cast in them reaching from top to bottom, the upper end of the wrought bar terminating in a nut by which the standard is fastened to the beam. These standards cannot be broken with a sledge hammer.

We make the following sizes: Three, four, five and six-gang, 8-inch, and three, four, five and six-gang, 10-inch.

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A NEW TREATMENT for Consumption, Asthma, Bronchitis, Catarrh, Dyspepsia, Headache, Debility, Neuralgia, Rheumatism, and all Chronic and Nervous Disorders. ACTS DIRECTLY UPON the great nervous and organic centres, and cures by a natural process of revitalization. HAS EFFECTED REMARKABLE CURES, which are attracting wide attention. HAS BEEN USED BY Rt. Rev. John J. Keane, Bishop of Richmond, Va., Hon. Wm. D. Kelley, T. S. Arthur, and others, who have been largely benefited, and to whom we refer by permission. IS STRONGLY ENDORSED: "We have the most unequivocal testimony to its curative power from many persons of high character and intelligence."—Lutheran Observer. "The cures which have been obtained by this new treatment seem more like miracles than cases of natural healing."—Arthur's Home Magazine. "There is no doubt as to the genuineness and positive results of this treatment."—Boston Journal of Commerce. THE OXYGEN HOME TREATMENT contains two months' supply, with inhaling apparatus and full directions for use. SENT FREE: a Treatise on Compound Oxygen, giving the history of this new discovery and a large record of most remarkable cures. Write for it. Address

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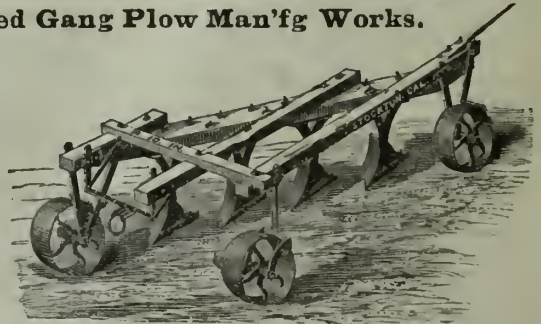
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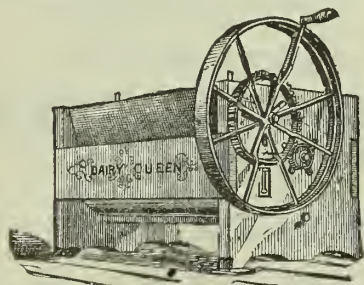
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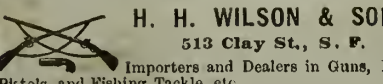
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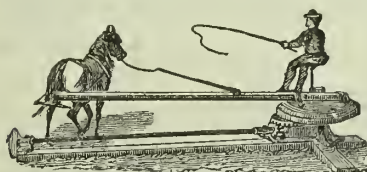
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## PATENTS AND INVENTIONS.

### List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, No. 252 Market St., S. F.

FOR THE WEEK ENDING NOVEMBER 22, 1881.

249,863.—SULKY PLOW—Geo. Appleget, Yoncalla, Ogn.  
249,860.—SULKY PLOW—L. Brown, Waitsburg, W. T.  
249,901.—CHURN—A. H. Conkling, Vallejo, Cal.  
249,921.—FLAT-PULLER—S. W. Gaines, Seio, Ogn.  
249,764.—WINDOW SCREEN ATTACHMENT—B. T. Herold, Stockton, Cal.  
249,973.—DISH-WASHING MACHINE—W. C. Nelson, Santa Rosa, Cal.  
249,791.—AMALGAMATOR AND CONCENTRATOR—C. W. Patten, S. F.  
249,965.—MACHINE FOR CONVEYING AND CRUSHING ORR—J. Richards, S. F.  
249,966.—PNEUMATIC MACHINERY—J. Richards, S. F.  
250,015.—ORE-ROASTING FURNACE—Jas. M. Thompson, San Francisco.  
249,814.—RUNNING GEAR FOR VEHICLES—E. Whitmore, San Francisco.  
250,027.—DRAW BRIDGE—E. A. Wible, Brighton, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific Coast Inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**DIRT PULVERIZER.**—Joseph H. Burd, Crow's Landing, Stanislaus county, Cal. No. 250,199. Dated Nov. 29, 1881. This invention relates to that class of agricultural implements known as "dirt pulverizers," the object of which is to thoroughly break up the soil to render it suitable for planting. The invention consists of a framework on which is supported a secondary frame carrying teeth, said frame having a vertical adjustment by means of a lever. Following these teeth is a roller forming the rear bearing or rolling gear for the device. It has on its surface a number of triangular teeth, which are intended to cut up the earth which the forward teeth have smoothed and scraped. A scraper set over the roller keeps the teeth of said roller clean, and appropriate scrapers keep the teeth in front clean. Minor details of construction complete the invention. The device is intended to follow any kind of a plow, pulverizing the dirt turned up.

**TWO-WHEELED VEHICLES.**—S. W. Metcalf, Santa Rosa. Dated Nov. 29, 1881. No. 250,275. This invention covers improvements in two-wheeled vehicles, and it consists in a novel manner of mounting or attaching the seat to the frame or body, the object of which is to overcome the forward and backward or jerky motion, communicated to the seat by the movement of the horse. It also consists in a removable rack attached to the frame, the design of which is to conveniently carry necessary articles. These improvements will be more particularly applicable to what are known as "break-jumping carts." The inventor has assigned interests to Phoebe Metcalf, Amelia Thompson and Helen Southwick, all of Santa Rosa.

**VEHICLE GEAR.**—Geo. C. Buckland, Tulare, Cal. Dated, Nov. 15, 1881. No. 249,581. Mr. Buckland's invention on vehicle gears has for its object simplicity and economy in construction, together with durability and effectiveness in use. These improvements consist in a peculiar construction of the springs, and on the means of securing them to the axle and head block, the latter, of which, is specially adapted to receive them; also in a cross brace and a novel center spring riveted to said cross brace, and extending forward under the axle and up on front, past both axle and head block, and back upon itself, forming a spring loop through which the king bolt passes.

**HAY PRESS.**—L. B. Lathrop, Hollister, Cal. Dated Nov. 15, 1881. No. 249,640. This is a patent which covers certain details of construction, improving the press patented by Mr. Lathrop on March 9, 1880. The press is a horizontal one, made of iron, and is designed to be permanently placed upon a four-wheeled wagon; and when in use, the wheels are locked, or the wagon is otherwise staked to the ground, so that it is immovable. Mr. Lathrop does good work with this press, and these new improvements make it still better. It would require elaborate engravings to show all the little points devised and carried out by the inventor.

**SAWING MACHINE.**—David Berry, Bolinas. No. 250,191. Dated Nov. 29, 1881. This invention relates to a new and useful device for sawing wood, and it consists of a main frame having a supplementary sliding frame containing a saw, which, by being moved back and forth with rapidity by means of a crank wheel, is caused by its own weight to cut through a piece of wood held suitably under it. There are minor details of construction for the complete operation of the device, but they would hardly be well understood without engravings.

**ADDING MACHINE.**—P. C. Forrester, S. F. Dated, Nov. 15, 1881. No. 249,606. This invention relates to that class of adding machines, the design of which is to record the sums of successive figures, by mechanical appliances without any other mental operation than is necessary to work the machine. The principle of the invention is the operation of needles upon dials by means of a key board through intermediate mechanism, whereby the escapement governing the needles is regulated to respond to the action of individual keys, denoting the nine digits. The mechanism of the device is very simple.

**MACHINE FOR MORTISING DOORS FOR LOCKS.**—T. N. Andrews, S. F., dated Sept. 20, 1881. No. 247,149. This boring machine for mortise locks consists in a mechanism for simultaneously actuating a series of augers or bits to bore the holes in the edge of the door, and a means for firmly securing the machine to the door, whereby a mortise may be fastened on a door already hung. Both hands are left free to operate the machine. Means are also provided for withdrawing the augers by reversing the cranks.

**DRIER FOR PAINTS.**—Alexander H. Everett, S. F. No. 247,031. Dated Sept. 13. This invention relates to an improved drier, to be used for paints and oils. The substance used is claimed to be far superior to other driers heretofore in use.

## THE PACIFIC RURAL PRESS, AN ILLUSTRATED AGRICULTURAL HOME JOURNAL.

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That all the worthy industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.  
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DEWEY & CO., Publishers.  
San Francisco, 1881.

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## The Californian.

### Back Volumes and Single Numbers for Sale.

Copies of the above Magazine can be had in single Nos. or Vols. (bound or unbound) from No. 1, Jan., 1880, to July 1, 1881. Price, 35 cts. for single copies; \$1.50 per volume; bound volumes, \$2.25. "A handsome California gift." Prices reduced to the trade for large orders. Address this office.

### Fruit Trees from Delaware.

W. W. Brier, near Centerville, Alameda county, informs us that he has just received, in good condition, 23,000 year-old peach trees of the best canning varieties, from the celebrated nursery of R. Peters, and a lot of prunes and plums, and expects soon a lot of Bartlett pear trees. All these, with a large number of year-old apricots he now offers for sale on reasonable terms. Mr. Brier will sell his entire nursery of dormant buds also. Address W. W. Brier, Centerville, Alameda county, Cal.

### Annual Meeting.

The regular annual meeting of the stockholders of the Grangers' Bank of California and the election of Directors for the ensuing year will take place at the office of the Bank, in the City of San Francisco, State of California, on Tuesday, the 10th day of January, 1882, at 1 o'clock P.M.  
ALBERT MONTPELLIER,  
December 1, 1881. Cashier and Manager.

### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

**LIVERY STABLE IN OAKLAND.**—We call the attention of farmers visiting Oakland, and others to hire teams or stable teams in Oakland, to the Hay, Sale, Boarding and Livery Stable of T. A. Cunningham, 1363 Broadway, Oakland. Mr. Cunningham (recently from Hayward) where he still owns a ranch) has purchased a homestead in Oakland, and will do his best to give satisfaction to his new customers and old friends who may call.

**IMPORTANT additions** are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

**POSTMASTERS** having their attention directed to this notice by the publishers, are requested to act as agent for this paper (whenever they can do so without interference with our published list of solicitors), and we will allow them a favorable commission on subscriptions, as per terms published elsewhere.

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**AGENTS** can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. O. Riddour & Co., 10 Barclay St., N. Y.

## S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Dec. 14, 1881.

There has been another dull week and considerable reduction in the quotations for wheat. There is, however, almost nothing doing, as buyers are holding off for a time. Enough has been bought to keep ships loading moderately fast, and it is an off time for business. All, however, speak well of the prospects, and do not regard the present downfall as especially significant. The latest from abroad is as follows:

**LIVERPOOL, Dec. 13.**—Wheat: California spot lots, 10s 8d @ 11s 1d. Cargo lots are quiet, at 49s 6d for just shipped, 52s for nearly due and off coast. Receipts of Wheat the past three days, 199,000 cts, including 179,000 American.

### Freights and Charters.

Freights continue firm, the last spot charter reported being at a slight advance over the rates which have ruled for the past two weeks or so. Ships are very slow in coming in, and holders of tonnage are not pressing the market, so that business is very quiet.

### The Foreign Review.

**LONDON, Dec. 13.**—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: This week it has been wet weather, and the snowstorm has made the land very wet and much colder, and consequently the young wheat made very little noticeable progress. The Grain trade was quiet and prices not quotably altered. Old native Oats are inquired for at hardening prices. Foreign Breadstuffs present no fresh features. The values of Wheat in London, ex ship are unchanged, except in very exceptional cases. Trade in Liverpool is quiet and prices are unaltered. There was a more liberal supply of flour in London, but values are unchanged. Corn is held for an advance, but in Liverpool prices declined for new. Foreign Meals in London have partially or wholly recovered from Monday's decline. Barley, Beans and Peas are not quotably altered. In off-coast Wheat the market is well supplied, but shows very little business. Seventeen cargoes have arrived off, of which only three are sold. Red Winter Wheat is quoted at 54s 6d, which represents an advance of 6d. This ad-

vance is due to the preponderance of stocks of White Wheat. Sales of English Wheat during the week were 46,380 quarters at 44s 9d per quarter, against 41,763 quarters at 45s 1d per quarter for the corresponding week of last year.

### Eastern Wool Markets.

**Boston, Dec. 13.**—The Wool demand is steady and prices unchanged. California Fall Wools can only be sold at low prices. Pulled Wools are in steady demand and firm, and choice superiors scarce and wanted.  
**Philadelphia, Dec. 13.**—The Wool market is steady. Oregon fine, 29@32c; medium, 33@34c; coarse, 25@27c. California is not quoted. New Mexico and Colorado, fine, 23@25c; medium, 25@28c; coarse carpet Wool, 17@21c.

### New York Dried Fruit Markets.

**New York, Dec. 13.**—Foreign fruits are quiet. Raisins are selling to a fair extent at former prices. Dates are very strong. Prunes are in fair demand. Currants are weak.

### Eastern Grain and Provision Market.

**New York, Dec. 13.**—The markets are somewhat more active than for several days, with considerable part of the sales for export demand. However, this was, in a great measure, to fill freight room in a fleet of over-sea steamers lately arrived. Prices opened lower and closed higher. Barley was more active. Provisions are more buoyant and steady.

**Chicago, Dec. 13.**—Wheat, firm and higher, at \$1.27 cash, \$1.28 for January. Corn, firmer, at 60¢ cash and January. Pork, firm and higher, at \$16.50 cash, \$16.90 for January. Lard, firmer, at \$10.95 cash, \$11.15 for January. Short Ribs, \$8.55@8.60 cash; short clear, \$9.00@9.05 for January.

**BAGS.**—Bags are quiet and unchanged.

**BARLEY.**—Barley has been neglected and is dull, although prices are not changed and holders are firm.

**BEANS.**—There is no change in Beans this week.

**CORN.**—Corn has also been quiet all the week. There is not much called for now; 60 sbs Small Yellow sold at \$1.46.

**CHEESE.**—Fancy Butter is in rather small supply and brings full prices. There is rather too much of lower grade. Cheese is unchanged.

**EGGS.**—Eggs are easier, the best California selling at 36c. The best Eastern Eggs now bring 32¢.

**FRESH MEAT.**—Beef and Pork are a fraction higher and firm. Other Meats are unchanged.

**FRUIT.**—Apples are doing a little better. The few free from worms sell high. Lemons are higher. Mexican Oranges have declined greatly, but California hold their own. The few Grapes sell high.

**HOPS.**—Hops are a little easier here, the best being quotable at 25c. Emmet Wells has stepped down and out as a publisher. The telegraph brings this note of the New York market:

Hops are quiet. California is quoted at 22@23. Sales of about 75 bales at those figures.

**OATS.**—Oats hold their value well and receipts are small, the demand continuing; 500 sbs Washington Territory sold at \$1.65.

**ONIONS.**—The range is now from 85c to 85c.

**POTATOES.**—The market is steady and prices hold about the same as last week.

**PROVISIONS.**—There is still a fairly active market, and the maintenance of last week's rates.

**POULTRY AND GAME.**—The Turkey market has advanced 1c per lb. Other birds are still on the roost.

**VEGETABLES.**—The market is quiet and unchanged.

**WHEAT.**—Sales are few and far between, and at much lower rates. We quote sales: 1,150 tons and 3,000 sbs No. 1, \$1.02; 500 tons do, \$1.00; 5,000 sbs off grade, \$1.50.

**WOOL.**—There is reported a little more movement in ordinary grades of Southern and San Joaquin Wools, but no change in values has yet occurred.

### Fruits and Vegetables.

WHOLESALE.		WEDNESDAY M., December 14, 1881.	
<b>FRUIT MARKET.</b>		<b>PRODUCE MARKET.</b>	
Apples, bx.....	50 @ 1 40	Pears, sliced.....	9 @ 94
Bananas, buch.....	2 50 @ 4 00	do whole.....	7 @ 8
Cocoanuts, 100.....	6 00 @ 7 00	Pitted.....	5 @ 6
Cranberries, bbl.....	13 00 @ 17 00	Prunes.....	13 @ 14
Figs, bx.....	50 @ 75	Raisins, Cal, bx.....	2 75
Grapes.....	1 25 @ 2 25	do, Halves.....	3 00
Limes, Mex.....	4 00 @ 7 00	do, Quarters.....	3 25
do, Cal, box.....	1 50 @ 2 00	Eighths.....	3 50
Lemons, Cal, bx.....	1 50 @ 3 00	Zante Currants.....	3 @ 10
Sticky, box.....	7 00 @ 8 00	<b>VEGETABLES.</b>	
Australian.....	— @ —	Artichokes, doz.....	50
Oranges, Cal, bx.....	25 @ 3 00	Beets, chl.....	65
do, new crop.....	3 50 @ 4 00	Beans, Lima, lb.....	5
do, Tahiti M.....	— @ —	do, String.....	7 @ 10
do, Mexican.....	15 00 @ 30 00	Cabbage, 100 lbs.....	75 @ 1 00
do, Loreto.....	— @ —	Carrots, sk.....	30 @ 50
Pears, bx.....	50 @ 1 50	Cauliflower, doz.....	85 @ 1 00
Pineapples, doz.....	7 00 @ 8 00	Cucumbers, doz.....	15
Plums, bx.....	50 @ 75	Garlic, lb.....	1 1/2 @ 2
Strawberries, chl.....	— @ 10 00	Green Peas, lb.....	15
<b>DRIED FRUIT.</b>		do Sweet.....	5
Apples, sliced, lb.....	6 @ 6	Gr'n Peas, bx.....	50
do, quartered.....	5 @ 5	do, Chile, bx.....	50 @ 75
Apricots.....	15 @ 17	Lettuce, doz.....	10 @ —
Blackberries.....	14 @ 16	Mushrooms, lb.....	—
Citron.....	23 @ 30	Okra, lb.....	5 @ 8
Dates.....	9 @ 10	Parsnips, lb.....	4
Figs, pressed.....	4 @ 5	Horseradish.....	—
do, loose.....	3 @ 5	Squash, Marrow.....	—
Nectarines.....	14 @ 15	fat, ton.....	10 @ 12 00
Peaches.....	11 @ 11 1/2	Tomatoes.....	— @ —
do pared.....	14 @ 18	Turnips, chl.....	— @ 75

### Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending December 13, 1881.						
HIGHEST AND LOWEST BAROMETER.						
Dec. 7.	Dec. 8.	Dec. 9.	Dec. 10.	Dec. 11.	Dec. 12.	Dec. 13.
30.367	30.296	30.196	30.195	30.193	30.187	30.331
30.238	30.193	30.143	30.065	30.063	29.969	30.187
MAXIMUM AND MINIMUM THERMOMETER.						
56	53	53	56	53	53	54
48	49	48	48	46	47	45
MEAN DAILY HUMIDITY.						
93	86	85.7	91	73.3	84.3	75.3
PREVAILING WIND.						
NW	S	SE	S	W	NE	NE
WIND—MILES TRAVELED.						
75	80	106	170	111	291	129
STATE OF WEATHER.						
Foggy	Cloudy	Foggy.	Foggy	Fair.	Fair.	Clear.
RAINFALL IN TWENTY-FOUR HOURS.						
			.18		.31	
Total rain during the season, from July 1, 1881, 5.18 inches						

### Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, December 14, 3 P. M.  
SILVER



## Domestic Produce.

WHOLESALE.

WEDNESDAY M., December 14, 1881.

BEANS & PEAS.	
Bayo, cti.	1 75 @ 25
Butter.	3 00 @ 25
Castor.	3 50 @ 20
Pea.	3 50 @ 30
Pink.	1 75 @ 15
Large White.	1 75 @ 15
Small White.	3 50 @ 30
Lima.	4 75 @ 05
Field Peas, b'k eye	50 @ 15
do, green.	2 00 @ 25

BROOM CORN.	
Southern.	3 @ 35
Northern.	4 @ 6

CHICORY.	
California.	4 @ 45
German.	6 1/2 @ 7

DAIRY PRODUCE, ETC.	
Butter.	

Cal. Fresh Roll, lb.	32 1/2 @ 35
do Fancy Brands.	34 @ 35
Pickle Roll.	34 @ 35
Firkin, new.	32 1/2 @ 35
Eastern.	20 @ 25
New York.	— @ —

CHEESE.	
Cheese, Cal., lb.	14 @ 16

EGGS.	
Cal. Fresh, doz.	34 @ 36
Ducks.	— @ —
Oregon.	35 @ 38
Eastern, by express.	— @ 32 1/2
Picked here.	— @ —
Utah.	— @ 32 1/2

FEED.	
Brant, ton.	16 00 @ 18 00
Corn Meal.	— @ 32 00
Hay.	9 00 @ 15 50
Middlings.	— @ 24 00
Oil Cake Meal.	— @ 25 00
Straw, bale.	62 1/2 @ 67 1/2

FLOUR.	
Extra, City Mills.	5 25 @ 62 1/2
do, Co. City Mills.	5 25 @ 62 1/2
do, Oregon.	4 75 @ 62 1/2
do, Walla Walla.	4 50 @ 60 00
Superfine.	3 50 @ 64 25

FRESH MEAT.	
Beef, 1st quality, lb.	6 1/2 @ 7 1/2
Second.	4 1/2 @ 5 1/2
Third.	4 @ 5
Mutton.	4 @ 5
Spring Lamb.	6 1/2 @ 7 1/2
Pork, unpressed.	5 1/2 @ 6 1/2
Dressed.	9 @ 9 1/2
Veal.	6 1/2 @ 7 1/2
Milk Calves.	7 1/2 @ 8
do, choice.	8 @ 8 1/2

GRAIN, ETC.	
Barley, feed, cti.	1 45 @ 1 50
do, Brewing.	1 55 @ 1 62 1/2
Chevalier.	1 55 @ 1 57 1/2
do, Coast.	1 42 @ 1 45
Buckwheat.	— @ 62 1/2

CORN.	
Corn, White.	1 42 1/2 @ 1 47 1/2
Yellow.	1 45 @ 1 47 1/2
Small Round.	1 45 @ 1 47 1/2
Oats.	1 57 @ 1 62 1/2
Milling.	1 55 @ 1 62 1/2
Rye.	2 40 @ 2 45
Wheat, No. 1.	1 60 @ 1 62 1/2
do, No. 2.	1 55 @ 1 57 1/2
do, No. 3.	1 45 @ 1 50
Choice Milling.	— @ 65

HIDES.	
Hides, dry.	18 @ 18 1/2
Wet salted.	9 1/2 @ 10 1/2

HONEY, ETC.	
Beeswax, lb.	23 @ 25
Honey in comb.	15 @ 20
Extracted, light.	— @ —
do, dark.	7 1/2 @ 9

HOOPS.	
Oregon.	20 @ 23
California, new.	26 @ 28
Wash. Ter.	23 @ 25
Old Hops.	— @ —

NUTS, Jobbing.	
Walnuts, Cal.	7 1/2 @ 8
do, Chile.	7 1/2 @ 8
Almonds, hd sh lb	8 @ 10
Soft shell.	14 @ 15
Brazil.	10 @ 11
Pecans.	13 @ 15

## General Merchandise.

WHOLESALE.

WEDNESDAY M., December 14, 1881.

CANDLES.	
Crystal Wax.	16 @ 18
Paraffine.	20 @ 20
Patent Sperm.	25 @ 23

CANNED GOODS.	
Assorted Pie Fruits.	
2 1/2 lb cans.	2 25 @ 25
Table do.	3 @ —
Jams and Jellies.	3 75 @ —
Pickles, hf gal.	3 25 @ —
Sardines, q box.	1 87 @ —
Hf Boxes.	2 50 @ 1 90
Merry, Faint & Co's.	
Preserved Beef.	
2 lb, doz.	3 25 @ 3 50
do 4 lb doz.	6 50 @ 6
Preserved Mutton.	
2 lb, doz.	3 25 @ 3 50
Beef Tongue.	5 75 @ 6 00
Preserved Ham.	
2 lb, doz.	5 50 @ 5 60
Deviled Ham, 1 lb.	
do, doz.	3 00 @ 3 50
do Ham 1 lb doz.	2 50 @ —
Boneless Pigs Feet.	
3 lbs.	3 50 @ 3 75
2 lbs.	2 75 @ —
Spiced Fillets 2 lbs	3 50 @ —
Head Cheese 3 lbs.	3 50 @ —

COAL—Jobbing.	
Australian, ton.	— @ 8 50
Coos Bay.	6 50 @ 7 50
Bellingham Bay.	— @ —
Seattle.	7 00 @ —
Cumberland.	— @ 13 00
Mt Diablo.	— @ —
Lehigh.	— @ —
Liverpool.	— @ —
West Hartley.	— @ 9 00
Scotch.	— @ 8 50
Scranton.	— @ —
Vancouver Id.	— @ —
Wellington.	— @ 9 00
Charcoal, sack.	— @ —
Coke, bush.	— @ —

COFFEE.	
Sandwich Id lb.	— @ —
Costa Rica.	12 @ 14
Guatemala.	12 @ 14
Java.	18 @ 20
Manilla.	15 @ —
Ground, in cs.	— @ 22 1/2

FISH.	
Sac to Dry Cod.	— @ —
do in cases.	— @ 5
Eastern Cod.	7 @ 7 1/2
Salmon, bbls.	7 00 @ 7 50
Hf bbls.	3 50 @ 4 00
1 lb cans.	1 12 1/2 @ 1 22 1/2
Pickled Cod, bbls.	— @ —
Hf bbls.	— @ —
Mackerel, No. 1.	
Hf bbls.	9 50 @ 10 00
In Kits.	1 75 @ 1 85
Ex Mess.	3 50 @ 4 00
Pickled Herring.	
box.	3 00 @ 3 50
Boston Smoked.	
Herring.	65 @ 70

LIME, etc.	
Plaster, Golden.	
Gate Mills.	3 00 @ 3 25
Land Plaster.	
ton.	10 00 @ 12 50
Lime, Santa Cruz.	
bbl.	1 25 @ 1 50

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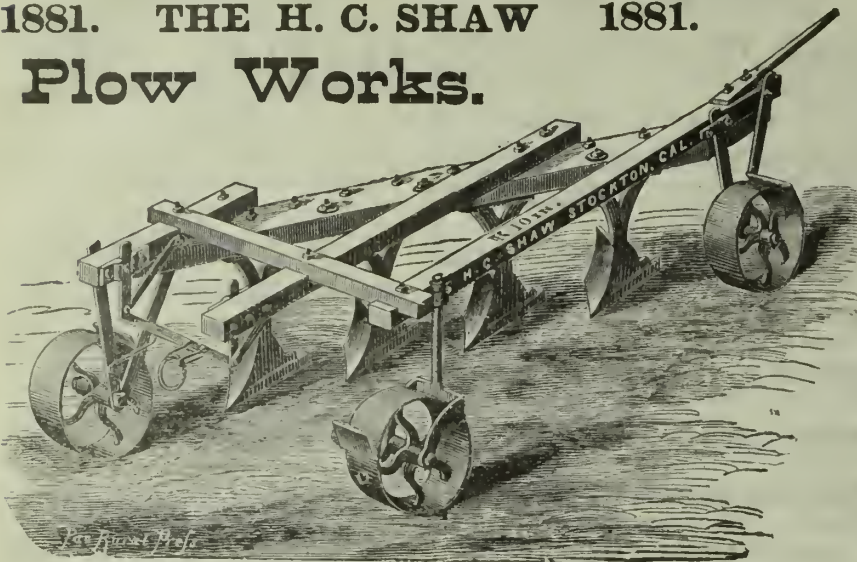
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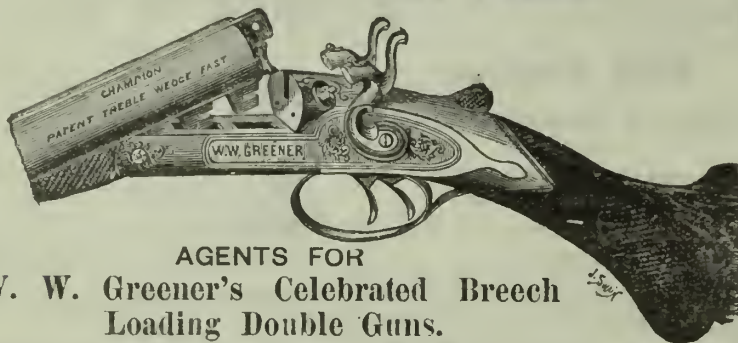
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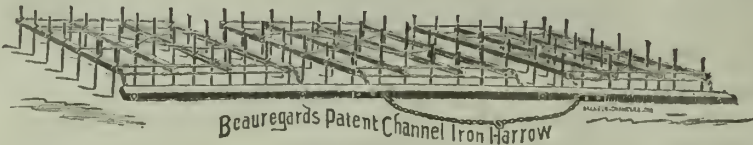
This Harrow is guaranteed to do double the work of any other Harrow and do it better. **GEORGE SEANOR,** Los Gatos, Agent for Santa Clara Co.



# BEAURECARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to  
Break off,  
or Nuts to get Loose.



Is the Boss of the Field.  
It combines Strength,  
Lightness of Draft and  
Durability.

**Light, Strong, Durable, Cheap, and Indestructible. Best Iron Harrow made. Good for a Lifetime.**

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality, combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and like the frame, made light to insure ease of draft. They are driven through this frame and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

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Any stock upon which this assessment shall remain unpaid on the 26th day of December, A. D. 1881, will be delinquent, and advertised for sale at public auction, and unless payment is made before, will be sold on Monday, the 17th day of January, A. D. 1882, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

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Tanks, Troughs, Etc., Etc.,

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**Herd of Percherons**

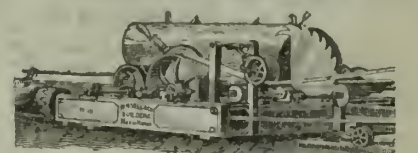
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His Mare "Mignonette" was awarded the 1st Prize \$500—and Grand Gold Medal; and his stallion "Vidocq" was specially recommended to receive the Society's Gold Medal.

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# PACIFIC RURAL PRESS

CHRISTMAS EDITION—24 Pages.

Volume XXII.]

SAN FRANCISCO, SATURDAY, DECEMBER 24, 1881.

Number 26

## Christmas.

The children's holiday is at hand. It is true children have other holidays. They have a share in the Fourth of July, but the enjoyment is always subject to such parental restrictions and limitations that the youthful mind finds itself hampered almost beyond endurance. The patriotic youth asks for a pistol, and he gets a pin-wheel; it is little wonder he is conscious that the day is not all his own when he is bound down to pin-wheel patriotism. What a mockery to attempt to celebrate the Declaration of Independence when the anniversary really brings the boy nought but oppression and the pin-wheel! Again, although the youth contributes much to the commemorative racket, his place is ignominious. While he fires his crackers in the back yard, his father parades the streets and assaults the sky with his oratory and pyrotechnics, and shakes the earth with his cannon. In truth, the child cuts but a small figure in the event of July.

Thanksgiving comes, but the child does not rule the day. Thanksgiving is a revel of the ancients: every thought has a backward turn. The moss is scraped from the main branches of the genealogical tree, and the buds are little thought of. By day the child gnaws the "drumstick," while the ancient gorges himself with rich and savory flesh, and at dark the youth are swept to bed that the hearthstone may be clear for age to rake over the embers of antiquity.

But Christmas rights all of childhood's wrongs. Youth sits at the feast while age girds himself for attendance. From Christmas Eve to Christmas night, the reign of childhood is unbroken. In fact, for days and sometimes for weeks before the day the energies of the household are bent to the service of the little ones. The approach of the event casts the family beneath the yoke, and the fetters of love and devotion, which have been cautiously concealed, are worn in open view. The enthronement of the little ones is complete.

Here comes the Christmas angel

All in a cloud of glory,  
As once upon the plain  
To shepherd boys in Jewry,  
He brings good news again.  
He is the young folks' Christmas;  
He makes their eyes grow bright  
With words of hope and tender thought,



THE CHILD'S CHRISTMAS DREAM.

And visions of delight.  
Hail to the Christmas angel!  
All peace on earth he brings;  
He gathers all the youths and maids  
Beneath his shining wings.

To the little ones Christmas is a pleasure both in anticipation and in realization. Carried far from childhood's thoughts as many of us have been, and bound to harsher thoughts by the burdens of life which come with mature years, we may forget the pictures which fill the mind of the child both in waking and sleeping hours. But they should not be forgotten nor disregarded, when it lies within one's power to treat them more kindly. It is a pleasure and a duty to minister to the happiness of the little hearts entrusted to our care. It is a sin to neglect when joy is so easily given. The toys which seem priceless treasures to the child, are procured by an insignificant outlay or produced by a skillful hand in a few leisure hours. Let them not be denied. The little girl whom the engraving shows dreaming of boundless possessions of little things to gladden her waking hours, should not be permitted to open her eyes on Christmas morning without some verifications of her dream around her.

The picture shows a lovely little girl cosily ensconced in a lovely little bed—a child surrounded by the many appliances of home comfort. There are many even in this happy land of ours who are not thus pleasantly surrounded. Do not let them be forgotten on the birthday of Him who was a friend of the poor, and did so much to alleviate their sufferings. Let it be the pleasant duty of each to spread abroad Christmas cheer. It will reward any effort which the work may cost, to think of the joy which will thus be brought into little hearts where perhaps joy seldom comes. One need not look far to find an opportunity for generous deeds. "The poor ye have always with you," saith the Savior.

Christmas morning is a glad time in homes where love reigns. The hearts of the old are warmed anew by the joys of the little ones, and these joys, in youth who have been trained aright, will awaken a thankful spirit which will manifest itself in signs which make the old home glow with the light of love and affection. Then there will be a merry Christmas indeed: such, we trust, there may be in every home] to which our CHRISTMAS RURAL comes,



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Los Angeles County Notes.

EDITORS PRESS:—Los Angeles county is just now quite anxious to know something as to her future rainfall. Sheep men are most anxious. Our county is very full of sheep, and feed is already becoming scarce, and those possessing sheep feed are advancing prices on the stinted flocks.

Angora goats are becoming below par. One of my neighbors spent many years' time and much money in trying to make the mohair business a success. He too had formerly been successful with sheep, but the tenderness of the high-blood goat was his great drawback. They seemed to need housing after shearing, and finally, becoming discouraged, sent them to Arizona, where they succumbed to the heat and fatigue of the journey. So ended Angories with Mr. Bouchard.

Walnuts are the craze now in Neitos. Grape comes in next, then apricot, and poor orange occupies scarcely a place on the list.

Defiance wheat has given the best satisfaction of the numerous varieties tested in our neighborhood, making a tolerable yield, when other varieties failed, all having the same treatment. Odessa wheat is at home under irrigation. An old Danish sailor told me that he had seen thousands of acres of this wheat in Black sea region, protected by levees, and that the numerous rivers there empty through thousands of canals, which are several feet higher than the grain fields, and that irrigation is held over those lands very complete. At any rate, we find Odessa wheat likes water.

Our corn fields show that they are wearing out, and that a hard strata is forming just below the plow that materially diminishes the yield. When broken, it soon forms again. The fact is, the alluvial soil has been shipped off in corn sacks—"that's what's the matter."

Land sales are frequent, and the beauty of it is, those buying land pretty generally know what they are about. Land that sold for \$40 per acre (mess) in '75, is now selling (to sheep men) for \$7 and \$10; irrigable land at \$60 to \$75. "Without irrigation" does to read about, and, too, is occasionally practicable, but we don't "tie" to it much down here.

The "bony bee" is "a little off" just yet. That pluck and energy that friend Snow advised, in order to win, is not used here much of late, neither by the beekeepers nor the bees themselves. Something wrong, brother Snow. Pluck don't win yet. GEO. KAY MILLER.

Neitos, Dec. 11, 1881.

## HORTICULTURE.

### Our Fruit Interests and the Labor Question.

EDITORS PRESS:—I have concluded to write you, presenting as well as I am able, what I believe to be the views of a very large and intelligent portion of the people of this State on the labor question.

It is objected to the Chinese as laborers among us: First—That their presence excludes white labor. Second—That by underbidding in the labor market they have driven white labor from the field. Third—That the time has arrived when we must exclude them from the country or quit it ourselves, (See General Miller's speech before the Board of Trade in San Francisco). Fourth—That their presence among us promotes immorality and vice.

Now, as to the first objection. Are they not mainly employed in those branches of industry which can only be successfully prosecuted by a constant and certain supply of labor at such remunerative wages as will enable the employer to put the products of his industry on the market successfully in competition with the products of cheap labor in the older centers of labor in the world. So employed, they do not exclude white labor, for you and I both know that the white laborer of this coast never has consented, and does not now propose to consent to labor in competition with the cheaper labor of the Atlantic States or of Europe. In our cities and towns they probably do interfere somewhat with white labor, in the laundry business and as house servants, but why are they preferred? Not because they work cheaper, but because they do their work better and are found more reliable.

But a fourth, and perhaps a third of all the Chinese laborers in California during the summer months find employment in our vineyards and orchards, and without them our fruits could not be gathered. Even the past year it was found difficult to obtain timely force for the proper gathering of the products of our orchards and vineyards, and for the preparing their products for the markets of the world. The fruit canneries of San Francisco, San Jose and Oakland gave employment to all the women, girls and boys that they could obtain,

and then had to supplement such force by employing Chinese to work up the products of our orchards. So that in the absence of Chinese labor to gather the fruits of our orchards and vineyards, we cannot look to the boys of our towns to take their place, for if industrious and careful they will all be wanted at home to help manipulate the fruit, etc., after it arrives at the canneries. Besides if the orchardists could obtain the help of boys, they lack the skill and judgment to select the fruit fit to be picked. We orchardists in this vicinity have repeatedly tried boys to a limited extent, and have found in almost every instance they cannot fill the bill.

In five years from this time the products of our orchards and vineyards will have increased fourfold, and necessarily will require four times the present labor force to handle it. Where is this force to be obtained? It certainly is not here now. The steps now being taken by the S. F. Board of Trade, aided by Stanford, Crocker & Co., even although Congress excludes the further importation of Chinese to induce European immigration, will, I am confident, end in a fizzle. They will probably, by colored representations, spread broadcast through the countries of Europe, turn the tide of immigration in part, this way for perhaps one year. The immigrant, when he arrives here, will find no cheap lands, capable of successful cultivation, open to settlement, awaiting his arrival. He will find no employment among the farmers, for the farmer now does his work by machinery, requiring skilled labor to work it. The orchardist or vine-grower can give him employment only three or four months at most. He has not the means to purchase a home of his own, nor bread for himself and family, if he has one, nothing is left for him to do but to seek a precarious subsistence in the mines, or become a sort of serf to some one of our great land owners. He will feel that his coming to California was a mistake; that the representations which induced him to come were delusions and groundless. He will write to his friends and acquaintances in fatherland of his trials, hardships and disappointment, and advise them to stay away. Thousands of such letters will be sent to Europe, and the tide of emigration this way will be checked. Such, I am confident, will be the end of the effort now being instituted to turn European immigration this way. In the meantime Congress has excluded Chinese immigration. The products of the orchards and vineyards of California have increased fourfold, the harvest has become very great, but the laborers are few. With such an outlook in prospect, is it wise, sound, national policy to exclude Chinese immigration?

But 2d: Their presence here has not so cheapened labor as practically to exclude white labor from the country. The price paid for Chinese labor here is higher than is paid for white labor in the Atlantic States, and from three to four times the price of labor in Europe.

But 3d: General Miller says the time has come when we must decide whether this country shall continue to be the abode of the white man, the country dotted over with beautiful happy homes filled with smiling, lovely youth, or whether we shall surrender this charming paradise to the almond-eyed Mongolian. Now, this is mere declamation on the part of the General, a flight of the imagination, a rhetorical flourish. The Chinese going to drive us out unless we keep them from coming here! What an idea! Why, there are not 40,000 of them in the State, and 150,000 is about the sum total of their immigration during the 30 odd years they have been coming here; while 5,000,000 of Europeans have arrived here in the same time. The Chinese are not so numerous here now as they were 15 years ago. There are now about as many going back to China as come from there; 1,500 returned home on the last two steamers. The Chinese here buy no lands. Few of them have families. None of them expect to remain in the country, and if they die here, even their bones must be returned to China. The country given up to the Mongolian! What an idea! Nobody is aware that the Chinese contemplate an invasion of our country, either by undermining us by mere force of numbers, in the varied pursuits of peaceful life, or driving us out by force of arms. The General surely has a vivid imagination.

But 4th: They promote immorality and vice. How? They are temperate, industrious, peaceable, not given to rows, and as a class honest. If the few women among them are given to lewdness, it is of a retiring character. The charge cannot be sustained, and it is unnecessary to enlarge upon it.

Now, it seems to me, Congress had better "go slow" in this matter in view of the present and growing demand for labor. Labor is the great element of wealth. Without labor the resources of a country cannot be developed, nor its inhabitants advance in intelligence, happiness or wealth; but would remain savages and the country a wilderness. Labor is a commercial commodity and as such its value depends upon supply and demand. The Chinese understand this law of trade, and when the time arrives that their labor will no longer be needed they will seek other fields for employment. But to-day, to develop the immense latent resources of our State, we need all the labor we can obtain from every available source. If the European can be induced to come here in numbers and be content with things as he may find them, so much the better. I hope the efforts of the San Francisco Board of Trade and the railway managers may be successful in that behalf; but until we know it will be successful,

let us not cut off our present supply source of labor. The fruit and wine interest of California is now a great and growing interest. In them are now invested many millions of capital, and if not restricted by unwise legislation, will in the next 20 years become the leading interest of the State. Great as it is, it is yet only in its infancy. It has been brought to its present magnitude and prosperity, mainly by the judicious employment of the Chinese labor element in our midst. With them as laborers in our orchards and vineyards, we can give abundant employment to the women, girls and boys in our towns; to teamsters, tanners, hoxmakers, coopers, lumbermen and to our transportation companies, both by land and water. To exclude Chinese immigration you run the hazard, without knowing to a certainty that the void occasioned by such exclusion can be readily and economically filled, of jeopardizing this great and growing interest. Such exclusion, at this time, or at any time in the near future, I am confident will paralyze the fruit interest of the State for the next 25 years. It will work the ruin of hundreds, nay, thousands, now prosperous in the business.

Restrictive laws are conservative in their character, and when extended to the labor of a country, they cannot be otherwise than pernicious. How can a people expect to be prosperous without a free interchange of labor and the products of labor? Where competition of labor exists, the fittest will survive. Where there is a superabundance of labor now in California, and the Caucasian and Mongolian competing in the same field of labor, the Mongolian would undoubtedly have to give way to the Caucasian; but such is not the case. Such, I undertake to say, in point of fact, never has been the case. The Mongolian, in the field of labor in which he has been employed, has never been in competition with the white labor of this coast, but with the white labor of the Atlantic States and of Europe, in the production of such commodities as cigars, clothing, boots and shoes, some species of woolen and bagging fabrics and the like.

Our orchards and vineyards are the product of Chinese labor. Had not such labor been at command, there would not now be one fruit tree or grapevine in the State where there are now ten. There would have been no fruit or canning factories, nor any immense wineries such as now exist in the State. The thousands of women, boys and girls who now find remunerative employment in our canneries, would continue to remain idle, and the fruit producing powers of our State would be still almost unknown, and not at all appreciated. The Chinese have built our railroads, have leveled our rivers and submerged lands, and have been, in fact, the great force in the hands of enterprising and intelligent men in thus far developing the varied resources of our State. Is it not, in view of all things considered, the dictates of good common sense on the part of Congress to let this labor question alone, in the confident belief that it will work itself out all right?

W. C. BLACKWOOD.

Haywards, Cal.

[We will now drop this subject. Dr. Gally's letter in the RURAL of Dec. 10th, and Judge Blackwood's, as above, present the two sides of this question, each in its most forcible aspect, and that will do for the present.—EDS. PRES.]

### Fruit in San Bernardino Valley.

EDITORS PRESS:—In response to your request for a letter on the subject of experiences in horticulture the past year, or varieties of trees to plant, or future prospects here, etc., I have to say that you would have had an earlier response had not pressure of work prevented, and my time is now so much taken up that I can only write very briefly.

In this San Bernardino valley the progress in horticulture has been very gratifying the past year. Large tracts of land heretofore used only for the raising of grain, or the pasturing of cattle and sheep have been laid out in small farms, and orchards are springing up on every side. Water, the life of the valley, is being husbanded more carefully, and brought on to many acres of what was before practically valueless land. Property has advanced in value from 25% to 100%, and our prospects are better than at any time since the county was settled. Fruit growing will from all present appearances be the leading industry here, as our trees and vines are free from the insect pests and the various diseases which seem to attack them almost everywhere else. The orange and lemon groves show nothing but smooth stems, glossy, bright, clean leaves and golden yellow fruit. No codling moth has attacked the apple orchards, no blight has affected the pear, nor has phyloxera made its appearance, as far as I can learn, in any vineyard in the county.

Strenuous efforts are now being made to keep all orange stock out of the valley, that is anywhere near orchards affected with scale. We earnestly hope their efforts will succeed. No trees ought to be introduced here that are even in the same town where scale is known to exist. No advertisement ought to find place in any paper in this whole county of any trees grown within several miles, at least, of the red scale. We are free from it now. Let us all try and keep so.

One very important lesson has been learned here; namely, the kinds of trees adapted to our different soils and the varieties. Of apricots,

we plant the Royal, Moorpark, and large Early, virtually discarding all others. Of peaches, the Crawford, Foster, Heath and Lemon cling, Smock, Salway, etc., are the choice. Among oranges, the Navel, Mediterranean Sweet and small St. Michael, and the natural seedling take precedence, while the Eureka and Lisbon lead the lemons. We had a brisk demand for a time for the Muscatel grape from the raisin growers, but we have got back again to the white Muscat of Alexandria, and will probably stay by it in the future.

We claim one decided advantage in this valley over any other part of the State, San Diego county alone excepted—i.e., in our ability, to raise the citrus and most of the deciduous fruits in perfection. Apricots, peaches, pears, raisin and wine grapes, oranges, lemons and limes all thrive, are free from injurious insects and diseases, and are of delicious flavor. We wonder of how many places even in southern California can so much be said.

Sau Bernardino, Cal.

## THE APIARY.

### Does it Pay to Keep Bees?

EDITORS PRESS:—After reading Mr. Rumford's article on the lesson of the past season it suggested a few ideas. Does the bee business pay, and if not, why? If you are in a country where there isn't sufficient honey to make it profitable to keep bees, it would be better to set fire to them than keep them to fool away time with. On the other hand if the honey is there in quantity and quality to pay, rest assured there is no outdoor work that will compare with it for profit. Remember that profitable beekeeping is a trade to be learned, where system and order are absolutely necessary or no pay. There is too much skillful competition nowadays to depend on blundering along on your own experience. You must get the best judgment and experience of others by reading and observation. Learn the theory correctly and the practical part will be comparatively easy. By reading you get the knowledge others have spent a lifetime in acquiring. One of my neighbors said to me last season, "La Salle, I'm going into the bee business. We always handled bees and the old man before me, I want to come over and get a few items from you; it don't take much knowledge, I guess, to run a bee ranch." "No, it don't, to run it in the ground," I suggested. "Take Quimby's work on the honey bee. I shall be glad to let you have it; read it pretty thoroughly, come and work with me a few days and you will at least start right," and as he was an industrious man, I felt sure he would succeed. But he didn't think it necessary. He got together 40 or 50 swarms; made his hives after my pattern with ventilators, left the ventilators open all the season, supposing that was what they were for. In October I heard his bees were dying. I hunted him up. The bees had no honey; ventilators still open; hives inside about as cold as they were outside. I let him have honey to feed the balance. From 80 swarms he has lost 40. His bees were so weakened by cold and starvation that it was pretty hard to save them. He will probably get through with 20 swarms. He had taken something over \$100 worth from them, still, there should have been plenty of honey from the late run to have kept them through, with a little knowledge about closing them up to keep the hive warm. The climate here is cool and damp nearly the whole year, no really hot weather, so the ventilators are used more for moving than anything else.

### Different Experience.

The above is a fair description of the average beeman and perhaps I might add the average farmer, but in this line a great improvement is observed in the last few years in diversified crops, mixing in with stock and fruit, and many are beginning to see and feel the necessity of mixing more brains with their work. By taking some good agricultural paper, to exchange their old worn-out ideas for some that are newer and brighter—but I am a little off the subject.

A year ago last season was a pretty fair year for honey, though not an extra one. I extracted from 100 hives 18,000 lbs., or 9 tons of choice white honey, with one man's help; averaged 700 lbs. a day. When I was preparing to transfer in April, a young man came to my place in poor health. He had been keeping books a year or so, and wanted a change to outdoor work. He would like the bee business; had little or no knowledge of the business, except the reading of some work on the apiary. I must say, I had but little faith in his success, for I had seen so many others that seemed every way qualified fail; but I have learned that two things are necessary for success in most any business—pluck and a knowledge of the work. He helped the part of two or three days, learning all he could, of course, by numerous questions and observations. He started with 100 swarms, mostly in old boxes or barrels; a few in frame hives, combs crooked. Although the season was far gone, he transferred the bees, learned the business, and extracted something over four tons of honey. Our bees are about 10 miles apart. We both started this season with a little over 140 swarms. Although the season was a very bad one, he took over



seven tons. I had moved mine a short distance and they were weakened a good deal by returning to the old place. Having my ranch and stock to see to, I did not give them the attention they required at that time. However, I extracted six tons of good honey, averaging 900 lbs. a day, with the help of one man and a good stout boy. I sold a part of it to the honey house at 8½ cts. per pound, and could have sold all at the same price.

I have shown the two characters spoken of, so others might see, to some extent, how and why so many fail with bees. There are some things you must learn and learn well or you had better let the bees alone. There is not a man or woman, girl or boy over 12 years of age, with ordinary sense, but can with a little bee knowledge and a week's practice, an hour or so a day with the frames handle a swarm of bees with much less trouble and not one-half the work it is to raise a brood of 10 chickens. The profit from the chickens, when grown, if sold here would be about \$3; from the bees of an ordinary year the return would be \$20.

#### The Lompoc Region.

I believe there is no country in the world that can surpass Lompoc in the extent and variety of its bee feed; it stretches away for miles north, south and east of the town. Among the numerous plants and shrubs that make honey is sage, manzanita, wild alfalfa, fasselia, barberry, golden rod, figwort or simpson, honey plain willow, mustard—both tame and wild. There are two varieties of sage. There is another good shrub, but not so general, called horehound. Lompoc has also been long noted for its fine grazing. The dry year of 1877, hundreds of head of cattle and horses were summered and wintered here in addition to what were already here. It may be truly said that this is a land flowing with milk and honey. During the run of honey, I take two or three buckets in the morning before breakfast, go to the corral and fill them from as many cows; then when breakfast is over, take two men, go to the apiary and extract from 800 to 1,000 lbs. of nice sage honey. This is no fancy picture, as my neighbors will testify, and it can be done on nearly every man's ranch in Lompoc, where they join the hills or the willows. There could be, and should be, 100 good paying apiaries within 10 miles of Lompoc, producing a yearly income of many thousand dollars. Many appear to think it is some hocus-pocus or slight-of-hand performance to handle bees, when really there is nothing more simple and easy to learn. Only go at it intelligently. A few years ago, I would as soon have thought of attacking a grizzly bear with a shot gun as of hiving a swarm of bees; but when I saw a skillful hand hive, transfer and extract \$40 and \$50 worth of honey a day, why, I thought, there is money in this; and this man don't appear to know a great deal more than I do, and as I am about broken down with hard work, lumbering, mining and farming, and have been going behind steadily since I came to this lower country. Something must be done; I had a family to support. My wife had lost her health, and to recover it I had sent her home to Oregon with my three children. I bought "Quimby" and "Langstroth," and read them thoroughly; got three or four swarms of bees, had a beeman transfer one, watched him closely, and as he was not selfish he taught me more in an hour than I had learned for years. Next day I tried one on my own hook, and succeeded splendidly.

There is money in beekeeping, and more of it in proportion to outlay than any other business in the county, if it can be combined with farming, stock raising, orcharding, etc. Bees at this time were worth from \$3 to \$6 per swarm. I bought a few frame hives and transferred for my neighbors for half the bees, and furnished the hives, till I had 20 swarms of my own. I sold \$100 worth of stock, took 13 swarms of Italian bees at \$80. They were in frame hives, but the combs were crooked, so they had to be overhauled. This was in the fall. I set them in my vineyard. When the season opened, about the 1st of April, I had 33 swarms to start with, and 130 new frame hives. I had let Mr. Archer, one of the first apiarists in the county, set 200 hives of bees within 300 yards of my house. The spring was a wet one, which is most invariably good for honey. I was farming about 70 acres, doing most of the work myself. So I could give but little attention to the bees, except to hive them and put on caps for section honey. I extracted but half a day that season, lost quite a number of swarms by not being on hand to hive them, and sold the last of August honey and bees to the amount of \$800, keeping nine swarms. I intended to move to Lompoc in the spring, which was the reason for selling. The time spent for the season with the bees would not exceed three weeks. I had made a net profit on them of \$600. Any person that will intelligently give one-fourth of the time that he is compelled to give to any other business will be surprised at the profits.

#### Transferring.

Some man writing for the RURAL said it would do to transfer at any time when the bees were carrying in pollen. There is nothing more absurd than such advice to a beginner, for bees carry in pollen before honey comes, and long after it is gone. It is not profitable, nor practicable even, for an expert to transfer unless honey is plenty, so the bees will not rob. A new hand would soon get discouraged and disgusted by having his bees plundered and destroyed.

#### Stings.

Again, one of the most serious troubles in bee

culture with many persons is the stings. Can they be avoided? Yes, entirely yes. During the last six years, I have been stung in the face but once; of course, a good many times on the hands, as I don't use gloves handling them, although I can handle them I believe, better and quicker with gloves and never get stung, even on the hands. Don't hesitate a moment on account of the stings, because you can avoid them. Get a light wool or felt hat and enough strong crape, "bobinet" some call it, make a circular veil. Sew the upper edge to the rim of the hat, run an elastic cord in the lower edge, snap it around the neck, have it long enough to hang loosely. For a lady, to make more sure, tie a light cotton handkerchief around the neck. The face is safe; now for the hands. Get light duck, light buckskin or light rubber gloves; sew on the cuff something that you can run a piece of cord in, snap this on above the wrist hand of the shirt and you are safe. The whole will probably cost \$2 or \$3, and is good for years.

Never open a hive unless the sun is shining, and never without smoke. Be careful about any jars on or about the hive—nothing maddens bees sooner. Use plenty of smoke; don't let the bees get the start of you, for they are then hard to subdue. Always have a cloth on the top of the hive. This keeps the bees from gluing the cover on and the hive warmer.

#### Diversified Farming.

One of the advantages of beekeeping here is to combine it with other industries. There are but few ranches in this section but should have its apiary, from which could be taken from \$100 to \$1,000, and would seem almost like a find when the apiary is once established. It will not be long before lumber will be shipped here by the cargo for hives, and from 1,000 to 3,000 cans of 60 lbs. weight taken daily during the run of honey. Remember there has been no failure of honey here since the dry year of '77. Two years ago last summer, when so many bees died in Ventura, Los Angeles, San Diego and San Bernardino, there was a good run here for 20 days. I was poorly fixed, but took from 40 single hives one ton of honey, and in the fall they were full again.

What a study, too, for a thoughtful mind is the bee. What music to hear them in the spring, with a constant roar, roll along overhead a mile a minute and a million strong, bringing in from \$40 to \$70 per day to the 300 hives. Our colony is prosperous and going ahead finely now; people are paying for their land, feeling happy over their last four years' schooling.

CHAS. LA SALLE.

Lompoc, Cal.

## THE DAIRY.

### Treatment of Diseases of the Udder.

As the calving season is in progress in many California dairy herds some practical suggestions concerning treatment of the udder will be of general interest. In some very good articles written by Henry Stewart for the *Rural New Yorker* we find the following:

An attack of garget requires instant treatment; neglect may cause serious results, while immediate care may soon overcome the trouble. The treatment varies somewhat according to the peculiar character of the attack; and this differs greatly as the causes differ. The causes of garget, in which may be included all the forms of the disease, are constitutional tendency to inflammatory disease; overfeeding with stimulating food, such as cotton-seed meal, which readily provokes it; inflammation resulting from cold, as exposure to cold rains soon after calving, or by lying upon damp, cold ground; excessive muscular strain as by chasing around when the udder is filled; retention of milk either purposely done by the owner, or by a cow withholding the milk; and lastly by a sort of reflex action upon the milk glands produced by a generally diseased condition of the cow which disturbs the circulation and forces it excessively in this direction, or which produces a diseased and irritant condition of the blood.

It is readily seen that each of these conditions may call for a different treatment, and that it would not be difficult for the owner of a cow to do mischief by adopting the advice of a neighbor or friend, who might have at some time, procured relief in a case having an entirely different origin, by the use of some particular treatment or remedial agent. In some cases it is very clear that medicine might be required; such as for instance, when the trouble is caused by some disease of the blood, when this is removed the secondary effects may disappear. In some cases mechanical treatment only may be needed, as when the vessels and ducts have become engorged and the milk has clotted in them, and an alkaline injection would dissolve the solid caseous matter and enable it to be drawn away. In some cases both this treatment and medicine would be needed, as when the blood is in an acid condition during a feverish state of the system and alkaline salts may be given internally and injected into the udder as well.

Sometimes soothing outward applications may be requisite as when muscular strains or accidental blows have caused the trouble; and at other times when suppuration is probable some absorbent agent, such as iodine, may be applied and an antiseptic medicine given internally. In this case warm fomentations would be useful and it may even be advisable to apply hot poultices and to support the udder by a broad

bandage carried under it and over the loins. When it is necessary to draw the milk from a disordered udder, a silver milking tube may be used, which is inserted in the teat and through which the milk flows by its own gravity. This would overcome any obstinate interference by the cow with the flow of milk, and bring it down in spite of her objections. When the milk is tooropy and clotted to be drawn in this way, an injection of one teaspoonful of carbonate of soda (common baking soda) or saleratus dissolved in a pint or half a pint of warm water may be injected into the udder through the teats. This will dissolve the thickened milk and enable it to be drawn either by the milking tube or by the hands or fingers. These methods will be applicable whenever the udder requires to be relieved of its contents, unduly retained from whatever cause.

When the cow is in a fevered condition, or the udder is greatly inflamed, tender and hot, a cooling saline medicine will be useful; this may be a pound of Epsom or Glauber salts, and if the fever is very considerable one ounce of saltpeter may be added. A saline diuretic, such as saltpeter, will always relieve an inflamed udder, as it increases the action of the kidneys and so reduces the activity of the milk-secreting glands.

When the udder is in a suppurative condition and the matter drawn from the teats is mixed with pus, hyposulphite of soda will be beneficial; this is an effective antiseptic and prevents danger from the absorption of pus into the blood. This salt is given in one-ounce doses daily and should be continued until all danger is removed. A mixture of four ounces of glycerine, with one dram of iodide of potassium, dissolved in as little water as is necessary to make the solution, will be useful to disperse a threatened abscess, or to soften the udder when it is very hard from an obstinately congested condition. The iodine is an active absorbent and has been used in such cases with the best effect. When a portion of the udder becomes tumefied, fomentations of hot water, or a hot poultice of linseed meal applied to the part by means of a broad bandage covering the udder and brought up over the back and securely fastened there and behind the buttocks will be advisable. These remedies are only suggested for the use of the owners of such cows as may be affected with garget. It is impossible to mention particularly the right treatment for every special case. Ordinary judgment and reason must be used to meet each particular case when treatment is found necessary.

In general it is easy to avoid the trouble by forethought and preventive precautions. These will do more good than a great quantity of remedies. To watch the cow, to use the best system of management, to be ahead of any difficulty, and should it come to be prompt to treat it, will usually be sufficient to avoid most of the troubles which afflict the careless, thoughtless, reckless and procrastinating dairyman.

## POULTRY YARD.

### Poultry Notes.

We take the following extracts from Wm. Niles' new "Pacific Coast Poultry Book."

#### Range and Shade.

It is indisputable that the more ample the range that fowls are permitted to run about in, at their leisure, the healthier, thriftier and happier they are. A close, pent-up fowl-yard is not the place in which to grow fine birds, as a rule, though very many persons are obliged to keep their choice, small flocks thus stinted as to space; and, with the special care such owners are pleased to give their pets, they do passably well. But to rear chickens on the larger scale, we must afford them room to run and grow in. They should in either case, in hot weather, be provided with plenty of shade, to which they will resort during the heat of the day very eagerly. If there are no trees, shrubs or vines around the place that will afford this shelter from the heat, a rough lean-to or low open shed, boarded tight at the sides facing south and west, will be a good protection from the burning rays of the sun, and prove a grateful spot for them during the "heated term."

#### Soft-shell Eggs.

Occasionally people are troubled with soft-shell eggs, and do not know how to remedy the evil; especially is it to be avoided when the hatching season is at hand, for then it is absolutely necessary to have eggs with their shells of average firmness, and at other times it is desirable to know a remedy, so as to be able to avoid the trouble at all seasons of the year.

Fowls which have free range seldom, if ever, drop soft-shell eggs, while those in confinement are apt to. Over-feeding is the principal cause of this complaint, and the remedy suggests itself to any one at a glance when it arises from this cause. The want of sufficient lime has, of course, much to do with this disorder, for unless the fowls have material wherewith to make the shell, they cannot perfect their work and must lay their eggs in an unfinished condition.

#### Do not Crowd.

The crowding of fowls in a limited space is the rock on which many persons interested in poultry have stranded; not profiting by the advice of those who have tried it, they have become disgusted with the business, which they drop, not to renew.

From 15 to 20 fowls (the former is preferable

in a room or coop, is all that should be attempted, generally. With this number there will be a good supply of eggs, friendliness on the part of the fowls to each other, together with peace and harmony; and it will not only be a satisfaction, but a pleasure to care for them. Increase the number to any extent, and it will often be with more or less disastrous results, such as the breaking of eggs, quarreling and confusion, which will disgust, if not discourage, those who have them in charge. Sometimes, with a good range, and under uncommonly favorable circumstances, 50 fowls may be placed together, but never if they are yarded.

#### Nests for Laying Hens.

Let them be movable, or convenient to clean, near, or on the ground. Quite a favored plan now is to put the nests on the ground and a platform above them, about 18 inches from the ground and roosts about 5 inches above the platform. They can be kept clean very easily. The nests should be taken out frequently, cleansed and whitewashed. Arrange them so that the hen can step in on her eggs and not be obliged to jump down and so incur the risk of breaking the eggs. Some use barrels or half barrels with nests at the bottom and then complain because the hens break so many eggs. Make the nests in a dark part of the house and opening from the light if convenient, as the hen likes seclusion when laying. Nests should be made so roomy as not to damage the hen's feathers and no larger.

#### Nest Eggs.

Nest eggs should be provided for every nest and left there when the daily supply of new-laid ones are gathered. Some persons keep an old spoiled egg for this purpose, but an unaccustomed hand may add that to the market basket. The china or porcelain egg, though costing something to begin with, is handsome, serviceable and easily detected from the true egg by the gatherer, though perfectly satisfactory to the hen.

All kinds of fowls are best conditioned the year through, if they can have a wide range; as this affords them the exercise which is indispensable. If, however, it becomes necessary to keep fowls in yards, they should not be allowed to have food constantly before them, unless much of it is of the dry grains, in variety; which should be so scattered, when fed to them, that they will be obliged to hunt and scratch for it, amongst the strewn leaves, straw, short hay, shavings sawdust, or sand in the pens.

An excellent way and one I practice is to spade up my pens and sow grain. This requires the fowls to work for their living and keeps them active. What they do not find, puts in an appearance as green food.

All fowls depend on motion for thrift, even down to the diminutive Bantams, all need it equally. For if the small breeds are not as much disposed to produce internal fat as their heavier congeners, they are more active and restless by nature, and without exercise they can never do well. Feathered creatures were not made to be kept still.

#### Use Whitewash Liberally.

To the liberal and judicious use of whitewash can be directly attributed the freedom from foul odors and lice, those pests of the poultrymen, so noticeable in many a well ordered chicken house. The money invested in a flock of pure bred fowls usually proves a sufficient incentive, aside from anything else, to insure good sanitary regulations, but there are many others who keep fowls, noticeably, farmers, who pay little if any attention to giving their birds good, wholesome, commodious quarters. This is gross carelessness, and is productive of much loss, both directly and indirectly, for no stock of any kind whatever can be expected to do its best when quartered in filth, and with every inducement for vermin to congregate and multiply. The roosts are never taken down nor disturbed from one year's end to another; a box is tacked up to the side of the house filled with straw, and left untouched and unmolested until about worn out, while the whole house is as innocent of whitewash as can be. Let this thing be remedied, and no better time than now, right away, can be found for it. Clean out the house thoroughly, remove all the boxes and roosts; give it a thorough whitewashing, both inside and out, treat the nest-boxes and roosts in the same way, and the cackling hens will rise with one voice and call you their benefactor.

WHITE LEAD.—Mr. G. J. Lewis, of Philadelphia, proposes to obtain white lead by heating the fumes of lead resulting from smelting processes, and then passing it into a cooling retort. Finely powdered sulphuret of lead (galena) is introduced into a funnel, whence it is forced by a bellows into the retort. This retort is heated to a red heat, which causes the sulphuret of lead to sublime and to deposit itself on the cooler surfaces. The fumes of lead then pass into a cooling chamber, and finally into a reservoir where the product is collected. Another method of obtaining white lead is to introduce sheet lead into a chamber containing jars of acetic acid, the atmosphere being heated by steam to a temperature of from 30° to 50°, besides being strongly impregnated with carbonic acid.

THERE is a rush of Americans to Sonora, Mexico, most of them bent on prospecting for mines or engaging in mining. Sonora seems destined to have a boom, as a large amount of American capital has been invested in mines in that State.



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Meeting of the National Grange.—No. 4.

#### Politics in the Grange.

The following is the report of the committee to whom was referred the subject of politics in the Grange. The report was concurred in:

Worthy Master:—Your committee on "Good of the Order," to whom was referred the resolution of Bro. Vaughn, has carefully considered the same, and asks leave to present the following report.

The resolution reads as follows:

"Resolved, That the National Grange at its present session construe the Declaration of Purposes on the subject of 'Politics in the Grange,' and by a series of resolutions give a clear and unequivocal expression on that subject."

Your committee has carefully considered that section of the Declaration of Purposes, relating to the subject matter of the resolution, and can hardly conceive how a better explanation can be given than appears in the same connection. The founders of our Order and the authors of our "Declaration" evidently supposed that its administrators would be men and women of prudence and discretion. Hence we find upon the subject of politics apparent contradictions, for instance: "We emphatically and sincerely assert the oft-repeated truth, taught in our organic law, that the Grange, National, State, or subordinate, is not a political or party organization." This is plain, clear, unequivocal. This thin-skinned republican, this sensitive democrat, or the co-operative re-adjuster can safely hide behind that, and when the honest, large-hearted, progressive Patron presumes to make this final charge upon, not only legalized monopolies, but upon legalizers of monopolies as well, these careful guardians of the interests of the Order at once throw up their hands in pious horror and cry "politics! politics!!" And why? Because the safety; yea, the very salvation of rings and ring-masters depends upon the fealty of the people to the party of their choice, and a free consideration and discussion of those issues which most vitally concern the people, is always dangerous to the "bosses," who desire nothing so much as to be left alone.

But then there comes along one of our honest old Patrons, whose mind has been expanded and whose manhood has been developed by the influence of our grand principles, and he quotes from the "Declaration" a little farther down the column, and it reads as follows: "It is his duty to do all he can in his party to put down bribery, corruption and trickery; to see that none but honest men, who will unflinchingly stand by our interests, are nominated for all positions of trust." There, Mr. Democrat, Mr. Republican, Mr. Greenbacker, is the rule and the interpretation of the law! We frankly admit that we can make it no plainer. Now, please allow a word as to its application. And here we come to our first proposition, that the law is to be administered with discretion. Some things which are lawful may not be expedient. The law tells us our "duty." Then, do the work. Discharge the duty. Work to put down bribery. Expose and punish corruption. Hold up political tricksters and political trickery to public contempt. Drive the buyers and sellers of the people's rights and the despoilers of the nation's honor from every position of public trust. Do this work by such means as you may think best suited to your hand, or the best calculated to achieve success. The National Grange set the example by its action at the session of 1880. Let the State Granges, the subordinate Granges, and the individual Patron follow the example. To-day no single issue divides the great political parties, says which shall control the patronage of the Government and divide the plunder. And when the one party or the other succeeds, this fight is as bitter and as sharp between its various rings and wings as between the principal antagonists themselves.

Where shall these things end? What shall the end be? Who shall deliver us, if not the farmers? Who shall stand boldly and aggressively out in behalf of the farmers, if not the Patrons of Husbandry? We are to let alone party politics as such, but those great questions of civil service and protection to our industries, those matters of national economy which so intimately concern us as the producers of so large a proportion of the country's wealth, and who bear so great a proportion of the country's burdens, are legitimate topics for discussion by Patrons everywhere.

While it is necessary that we raise our revenue from some source, yet let the producer insist that tariff duties and internal revenue taxes afford the same protection to the producer of the cotton, flax, wool and tobacco, as to the manufacturer after it leaves the producer's hands. Let us insist that what is called "protection to American industry," is not protection to corporate greed and monopoly. These are questions of vital importance, and Patrons are not only allowed, but they are expected to discuss them and to fully understand them, to correct the abuses found connected with them, and to do this work at the caucus, the convention, or the ballot box, as to them may seem best. "Thou shalt not muzzle the mouth of the ox that treadeth out the corn."

Patrons have grown and trodden out the corn

for other people long enough, and now we ask the National Grange to remove the muzzle.

Therefore, your committee, in the spirit of the foregoing paper, and in accordance with the instructions of the Grange, offer the following resolution:

Resolved, That the "Declaration of Purposes," upon these several propositions contained therein, is and should be the rule and guide of our fraternity; and, upon politics, as well as upon all other matters, Patrons are allowed and expected to exemplify its principles, and carry into practical operation its instructions, by such means as to them seem best calculated to advance the interests of the Order.

Per order of Committee on Good of the Order.  
D. H. THING, Chairman.

### Election Day at Alhambra Grange.

EDITORS PRESS:—We, of Alhambra, protest that the Patrons of Husbandry have a day set apart as a legal day for the election of Grange officers, and according to this understanding met Saturday, Dec. 3d, in lieu of the 4th which came on Sunday, to call to the front such brothers and sisters as might be chosen to fill our office chairs for 1882.

Alhambra Grange was organized Sept., 1874, consequently this makes our ninth election, counting two for our initial year, and strangles to say the third, fourth, fifth and even ninth term has been no stumbling block in our constitution, for the ninth roll-call differs but two or three names from the first. Hops no harsh critic will say Alhambra must be short of office material, this we would most emphatically deny. Others there are who would wield official powers with all honor to themselves and to us, but in their bashfulness and humility they hide a power behind that old official corps whom they have so nobly supported in the past as to make it not only easy but a pleasure for them to bear the honors conferred again and again.

Of course, we had the usual harvest feast, with the numberless good things and a rich spreading of that same piquant savor of brotherly love and neighbor sociality that predominates in our Grange households. Brother and sister Whitcomb and brother Loucks, of Walnut Creek Grange, were our only visiting members. The day was beautiful though cold. What would our Eastern brothers and sisters say of our term cold, when our tables and altars were loaded with ivy, smilax, rose-buds and other floral gems, which had been plucked that morning from their parent stems out in the sunshine? Surely our California weather god is capricious, for only 20 miles away Diablo's rocky height is capped with snow, while her low stepping hillsides waft a sweet scented, floral breath spits of the autumnal days that long ago scattered the leafy banners of the forest trees to the four winds.

Upon our hillsides and in our valleys are acres upon acres of newly turned ground, while the song and merry whistles of the plowman is interlaid with the clatter of the shovel and hoe, as the vineyardist and orchardist add to his fruit labors and probable fruit harvest. Who can picture this western shore as she will greet the newcomer, say no farther into the dim future than 1900? We, of the old pioneer regime, have only to take the last 20 years as comparative measures for the next, then add to the old-time newness, rawness and disadvantages, all the centralizing light and sunshine of civilization with the energy, spirit and go-aheadiveness of our favored clime to make the Old World look upon California stories as no fiction or vain dream of an enthused or crazed brain. Then will our Golden Gate not only have opened its treasured vaults that gave the world at large the advancement of years in but a single day, but will also give the golden key to the brightest and richest treasures fruits of Ceres, Pomona and Flora.

Has the husbandman nothing to say in the glad tidings of this upward wave of civilization? We think he has, and every new foot of upturned soil, every added tree, vine and flower but swells his power. By this breach into nature's wilderness, his true friends, the four-footed animals, are turned from their native out-wild to revel in the richer meadows of clover and alfalfa, and mayhap in fields of corn; but is not this an upward step from the pastoral life of the old-time Californian? Then farmers, orchardists, vineyardists, look forward; turn from this big mortgaged ranches, to little well-tilled farms, let them be so small if need be that the debt and interest burden has no room to light, then will Grangerism be rampant and the farmer this independent factor of citizenship he was created to be.

MRS. MARIA B. LANDER.

Martinez, Dec. 10th.

### Elections.

ALHAMBRA GRANGE.—Election Dec. 3: Dr. J. Strentzel, M.; H. Hollinbeck, O.; B. R. Holliday, L.; Jaa. McHarry, Sr., C.; Elan B. Barber, S.; Jaa. Kelly, A. S.; H. Raap, T.; Mrs. M. B. Lander, Sec'y; Geo. Boes, G. K.; Miss Nellie More, Ceres; Marietta Bent, Pomona; Nellie Frazer, Flora; Thos. A. Griffin, Trustee; Miss Sara McHarry, Pianist. Installation, first Saturday in January.

STOCKTON GRANGE.—Election, Dec. 17: Jas. Mareh, M.; Thos. E. Ketchum, O.; Mrs. W. D. Ashley, L.; J. B. Boody, S.; Andrew Wolf, A. S.; Mrs. W. L. Overhiser, C.; Israel Lan-

der, T.; Miss Lou Harelson, Sec'y; Wm. L. Overhiser, G. K.; Mrs. Jas. Marsh, Ceres; Mrs. Wm. Kuhl, Pomona; Miss Martha Harelson, Flora; Mrs. S. P. Sabin, L. A. S.; Trustee, for long term, W. D. Ashley; Mrs. Lacy P. Goff, Organist. Installation, first Saturday in Jan., 1882.

POINT OF TIMBER GRANGE.—Election, Dec. 3d: Geo. Cople, M.; H. C. McCabs, O.; Mrs. S. M. Wills, L.; A. Plumley, S.; Mrs. Geo. Cople, A. S.; Livina Plumley, T.; Mary J. Carter, Sec'y; A. Richardson, G. K.; Mrs. G. W. T. Carter, Ceres; Mrs. T. Jaquillard, Pomona; Ida Plumley, Flora; Mrs. A. Richardson, L. A. S.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

VINE PLANTING IN THE LIVERMORE VALLEY. Livermore Herald: Very few persons except those directly engaged therein have an adequate idea of the magnitude which this grape interest has already assumed in this valley, and of the extent to which capital is to be invested in vine planting here, this present winter. At a moderate estimate there will be planted in this vicinity this present winter, about 1,300 acres of vineyard. The cost of planting, and care for the first year, aside from clearing of timber, and fencing, when this is done, will average about \$25 per acre. Thus, there is to be invested in vine planting, alone, about \$32,500. Take, then, the cost of new buildings erected, fencing, stock, farming implements, clearing the land, etc., and we shall have an investment by our grape men, outside of the first cost of their land, of fully \$50,000. Of this sum fully two-thirds will be paid out right here for labor, giving employment to hundreds of men, and every team which can be secured. There will be work for every laboring man among us, at good wages, and hundreds from abroad. Our population will be increased, money made even more plentiful, and the pulse of trade quickened into new life.

THE ANTI INSECT BOARD.—Alameda County Reporter: The County Board of Horticultural Commissioners held a meeting Monday, at Oakland, in the Courthouse. The Board desired to warn persons haying trees to be careful that they do not accept scale insects and other bugs "thrown in." Young trees received from San Jose this fall had been examined by the Board and found infested with enough *Aspidiotus perniciosus* to destroy an orchard in three years. Matthew Cooke's "Treatise on Insects" infecting fruit trees, noticed in this Reporter some time since, will be furnished free to any person asking for it. The county was divided into three districts, and one commissioner assigned to each. A. D. Pryall will look out for Oakland and Brooklyn townships, A. P. Crane for Eden township, and Martin Mendenhall for Washington and Murray townships. They will classify and keep a record of the insects found in each orchard which they visit.

#### FRESNO.

FRESNO ORANGES.—Republican: Just as we were ready for press last week, Jo. Burns, of King's river, made glad our hearts by covering our desk with oranges, fresh from his orchard, near Centerville. This lot formed a sight that would delight the eye of a horticultural expert, and presented an unassailable proof that oranges can be successfully grown in Fresno county. We do not mean that they can be grown in all parts of the county, no more than any other product, but in many places they can be grown, and that profitably. Mr. Burns has about 100 trees that are now coming in; bearing and will soon be a source of no small profit. One of the oranges before us measured 11½ inches in circumference and weighs nearly 12 oz., and these figures will apply to most of the lot.

#### LOS ANGELES.

JAPAN PERSIMMON.—EDITOR EXPRESS: I herewith present you a sample of Japanese persimmon with which I have been experimenting. I learned from a Chinaman, who has had much experience in fruit growing, that the best method of treating the persimmon is to take it from the tree when fully matured and put it away in some place (a box or otherwise) where it will be excluded from the air and light until it has become perfectly soft and pulpy, and then steep it for a few hours in clear water. I leave you to judge from the sample whether it is not a fine palatable fruit and well worth the care and cultivation of our orchardists.—J. C. NEVIN.

FEEDING BEES.—The inquiry is often made, "Will it pay to feed bees?" I answer no; not long in this country, where bees fly out every day. There is perhaps no insect more neat and cleanly in its home and habits than the bee. It never evacuates in the hive unless diseased so that it cannot get out. When filled with honey it remains so for many days when confined to its domicile by cold or inclement weather—evacuation only taking place when it flies out. On its return it again gorges or fills its stomach with honey, when it is not employed in gathering. Consequently, in this climate, where bees fly out almost every day during the interval of working seasons, it does not pay to feed only a brief period prior to the early bloom, as a colony would soon consume more honey than their value. When feeding is once commenced it must be kept up until the commencement of the

honey season, as it has a tendency to make bees lazy and dependent upon the feed. In cold climates, where bees are confined to their homes, feeding will pay, as they do not consume near the quantity of food. I speak from personal observation, and would not advise feeding only as before stated. As the bees die or leave their hives examine their combs, and if there be any moth in them, remove them and fumigate the combs with kerosene. Return them to the hive and close it so that mice, ants and millers cannot enter. Where no signs of moth are discernible, close the hives as just stated. Comb should be preserved, as it is an important requisite to the early formation of new and strong colonies, and the collection of honey—so much so that the expression, "empty comb is worth its weight in gold to the beekeeper," has passed into a proverb among apiarists. It is estimated that the building of one pound of comb is equivalent to the gathering of 20 to 25 lbs. of honey—hence the great value attached to comb. Those who do not often examine their bees will be astonished to find so many colonies that have succumbed to the pinching hand of poverty, while the most trying time is yet to come—just at the beginning of the working season. It is then that feeding pays in this climate—it stimulates breeding and insures early swarms. I have heretofore stated that the mortality among bees, from the close of the working season in 1881 to the beginning of the same in 1882, will be from one-half to three-fourths. I still maintain it.—N. LEVERING, Los Angeles

#### SAN BERNARDINO.

ORANGE SALE.—Press: Messrs. Cover & McCoy have sold their Riverside or Washington Navel oranges, the entire crop, to Mr. H. B. Everest, for the sum of \$40 per 1,000 on the tree. Mr. Everest will ship his oranges to the principal cities of the East and place them on the market to see how they will sell. He expects soon to plant a large orange orchard, and if his returns from this venture are satisfactory, he will plant his entire orchard to this variety of orange. This fruit will be wrapped with printed tissue wrappers before being shipped East, and will be a fine advertisement for our citrus fruits.

FAIR ASSOCIATION.—Steps are being taken for the incorporation of the Riverside Citrus Fair Association for the purpose of building a pavilion and holding annual citrus fairs. The plans of the pavilion are already prepared and appointed by the building committee. It will be 56 by 120 ft. in size, and will cost something less than \$5,000. Mr. Evans proposes to donate a good-sized lot on the northeast corner of the public square to the association as a building site. The association will have a capital stock probably of \$5,000, divided into shares of \$25 each. This matter must be pushed and the pavilion completed in time for the next citrus fair.

THE NAVEL ORANGE.—It is said that some object to the navel oranges because of the un-pleasant protuberances from the blossom end of the fruit. Those well posted know that there is no unsightly mark on the navel orange as a rule when it is grown on orange stock. The China lemon and lime stock gives a large size, thick skin, and frequently a navel development that is unsightly. The coarse stocks produce a coarse fruit, but the orange stock produces a fine textured fruit that as a rule barely shows the mark that gives the fruit its name.

#### SANTA CLARA.

FURLONG'S BLOOD CATTLE.—Gilroy Advocate: The stock world is improving. Every year evidences of progress in producing cattle of a higher grade than the native breed are brought before us by some of our wise farmers. Foremost among those who see profit in the best blooded cattle, is Mr. Wm. N. Furlong, ex-Supervisor of this district. Last year it will be remembered he bought a prize Durham bull and two cows from Mr. Quinn, of San Jose. The bull, which he has named the "Duke of San Ysidro," was calved Dec. 26, 1879. He is a son of the "Duke of San Jose" and "Lady Emmett," by "Emmett III," of an illustrious ancestral line. The cow "Maid of Erin" was calved April 15, 1880, and "Winifred" Nov. 12, 1879. Their pedigree are traced through the same sire and through many dams of fame. At the late agricultural fair, Mr. Furlong made other purchases. Among them was his favorite bull, "Gwynne Prince," calved March 26, 1878. The sire and dam of this handsome fellow were selected in England, and imported into California, in 1875, by Robert Ashburner. They are both direct descendants of Mr. Robert Colling's celebrated cow "Princess," by "Favorite"—a family of Short Horns looked upon with much favor, and selling for high prices at the present day. At Mr. Brogden's sale, in September, 1878, a sister to "Gwynne Prince," of Lightburne III, was sold for 780 guineas, equal to \$4,000; and in September, 1879, six Gwynne cows and heifers sold for an average of \$626 at Lord Skelmerdale's sale. Mr. Furlong bought two other bulls, viz: "Mollie Prince," calved May 5, 1880, by "Gwynne Prince" and "Mollie." This dam's pedigree is traced through "Senator," "Daniel Boone," "Albert" and "Lincoln" to "Mollie II," of Oct. 4, 1873 "Kirklevington Prince" is another fine beast, which was calved April 27, 1881. He is a son of "Gwynne Prince" and the "Duchess of York," and has a right royal pedigree. A number of heifers, well made up, whose purity of descent is unquestionable, are also to be seen grazing on Furlong's farm—fair young



beauties, perfect pictures, which win one's admiration at sight.  
SAN JOAQUIN.

**FRENCH CAMP FARMING.**—Stockton *Independent*: Dec. 18: Several farmers from the vicinity of French camp were in town Saturday, and report the work of plowing and seeding as rapidly progressing. A. Meyers, a well-known farmer on the sand plains, reports his land in fine condition with the "foul stuff," as the weeds are commonly designated, just high enough to turn under. He will plow and sow 200 acres this winter, and pasture part of his ranch. His neighbors are all pushing their work rapidly, and will have in a large acreage in a short time.

**FROM THE WEST SIDE.**—Yesterday J. Hawser was in town from the West Side. He reports everything in the farming line as very promising. He will put in 640 acres, all dry and winter plowed, and will have finished his work in six days more if the weather holds favorable. C. Blanchard is interested in the venture with Mr. H., as he was in the last harvest on the same section. Mr. H. reports many of his neighbors along with their work, and others as just beginning, the latter having waited for the weeds to obtain a good start before plowing them under. There will be but little land fallowed in that section if the weather holds good. Rain is needed now on the growing grain, but a few days more of dry weather will work no serious injury.

**FARMING NOTES.**—C. C. Long, of Waterloo, was in town yesterday. He reports the farming work around Waterloo as progressing very lively. He thinks the work further advanced than he remembers to have seen it for several seasons past, at a corresponding period of the year. He thinks a much larger area will be seeded this season than was put in last winter. The ground is hardly wet enough for this soil—a sedimentary loam—but still everyone is plowing and seeding. The land of this character being too rich for fallowing, is mostly plowed and seeded during the winter. Mr. Long has 200 acres for grain at the home ranch, and 650 acres on Roberts' island, about half of which has been planted, and the remainder will soon be in a like situation.

#### STANISLAUS.

**APRICOTS AND PEARS.**—*Herald*, Dec. 15: Stephen Rogers gave us a sound lecture, the other day, for having stated in our last that apricots were not one of the kinds of fruit suited to this part of the valley. He says that they are; and that the finest flavored and largest apricots he ever saw have been produced on Dry creek, near Modesto. To make his faith in the production of this species of fruit good, he has planted 2,500 trees on his ranch on the river, and expects to realize largely from it before many years. We are glad to be able to make the correction on the testimony of one who has exhibited so much enterprise in introducing other interests than the everlasting wheat-production which gobbles up so much land, peculiarly valuable.

**STANISLAUS FOR FARMING.**—The more we see of Stanislaus county, the better we are impressed with its importance as a farming section. The rich lands lying along the Stanislaus river are very valuable; but what is best of all, there is a bench of land lying near the river that ought to be used exclusively for raising fruit. These flats are protected from the wind and are sufficiently moist at all times for constant cultivation. These flats are, or have been, covered with timber, and this timber being removed, and the land cultivated, it will produce more abundantly than the plains. The character of the soil is a sandy loam, and portions of it are subject to winter overflow in seasons when there is much snow on the mountains.

#### SUTTER.

**FARMING PROSPECTS.**—*Farmer*, Dec. 17: From all parts of this county the reports are very encouraging. The late rains have caused the grain sown on summer-fallowed land to sprout, and it is looking very well. The acreage of summer-fallow sown is considerably in excess of last year. Winter plowing is being pushed with great vigor, and almost every available acre will be seeded. We are reliably informed that five acres of wheat will be sown to one of other grains. The number of acres of barley sown will be greatly in excess of last year, but the probable amount cannot now be estimated, as but little comparatively has now been sown. The rainfall has been amply sufficient for the present, and our agriculturists desire a couple of weeks more of fine weather. If we escape being flooded this year, our farmers will be blessed with abundant harvests. Considerable land will be set out in orchards this winter. Of the varieties of fruit trees that will be planted, we are as yet uninformed. A large proportion will be apricots. When the slickens question is once settled, Sutter county will take her place in the front rank among the cereal and fruit producing counties of the State. For her area there is not a better amount of good land anywhere.

#### TEHAMA.

**RASPBERRIES IN MID-WINTER.**—*People's Cause*, Dec. 17: Mrs. M. B. Force, residing in Red Bluff, sent a bunch of ripe raspberries to the *Cause* office this morning. They were plucked from a vine in her yard and when we saw them had frost on them. Just think of it! Ripe raspberries in Red Bluff on the 14th of December, with the temperature down almost to the freezing point! This little fact speaks volumes in favor of the soil and climate of this

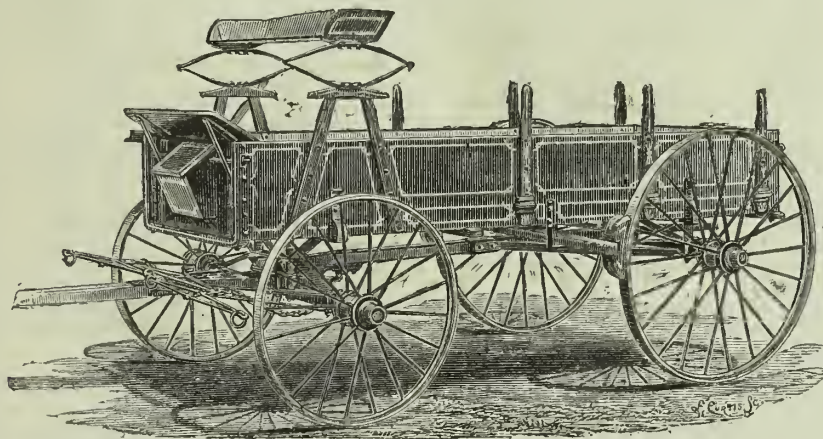
county for the production of small fruits. We have often called attention to the fact that all kinds of fruits, even those properly called tropical, could be raised in this county in great abundance if the people would only plant and cultivate them properly. There is no good reason why Tehama county may not supply her home market with the finest of fruits and export a large quantity to San Francisco and Eastern markets.

#### NEVADA.

**THE LUMBER FAMINE.**—*Reno Gazette*: Old dealers say they have never seen dry lumber so scarce on the Truckee river as at present. Eight mills have been run this year and must have cut probably considerable over 40,000,000 ft. Nearly all of this has been shipped as fast as sawed, and transient customers are crying in vain for lumber. There are orders now in for several hundred carloads of lumber, and there will be plenty more before spring.

#### The Sweepstake Iron Wagon.

Readers cannot well overlook the handsome advertisement which the Benicia Agricultural Works make on another page this week of their Sweepstake iron wagon. The advertisement is so explicit and satisfactory in its statement of details of construction, materials, etc., that it leaves but little to be said in a descriptive allusion to the vehicle. The engraving on this page, however, supplements the advertisement by giving a view of the wagon in complete form as it may be seen in use in many parts of the Pacific coast. The experience of many which has been reported to us bears out the claims of the manufacturers and approves the employment of a practically indestructible material in the manufacture of a piece of farm machinery which is subject to such unceasing strain and exposure as is the farm and freight wagon. The manufacturers issue a special catalogue devoted to their iron wagon, from which can be



SWEEPSTAKE IRON WAGON WITH RACK BED.

gained a full account of its design, manufacture, prices and the experience of those who have used it. It can be had by addressing Benicia Agricultural Works, Benicia, Cal., or Baker & Hamilton, S. F.

#### Prang's Christmas Cards.

These beautiful holiday art treasures may be seen at all the leading art, book and stationery stores. No one should overlook them. They are passing beautiful in themselves, and beautiful in the thoughts they embody. They have done a great public good, in the popularization of the art ideal, for they are within the reach of those of moderate means, and yet fit to gratify the most cultured taste. Prang's Christmas cards have become an American institution, recognized and appreciated wherever Christmas is observed. Do not forget to look for them.

F. R. GIRARD, 332 Sutter St., S. F. The largest stock of Pianos and Organs in the city. Large new 8 stop Organ for \$95 cash. New Upright Pianos, Hartman & Co., for \$275. The celebrated Wheelock Piano. No agents employed. No commission paid. All pianos sold at factory prices, and sent on test trial in the country; if not satisfactory, to be returned at his cost. Write to Mr. F. R. Girard, 332 Sutter St. for catalogue. Pianos sold on installments to good parties.

We call the attention of our readers to an interesting article (in this number of the *RURAL PRESS*), with accompanying cuts of the Studebaker Manuf'g Car, Carriage and Wagon Works, at South Bend, Ind. It will be perused with pleasure and profit, as these gigantic enterprises are the outgrowth of the progress of this age—a part of our history and the pride of the American people.

**RIPIARIA CUTTINGS.**—Those desiring riparia grape cuttings are referred to the advertisement of the Furnas fruit farm of Brownville, Nebraska. The owner of this farm is ex-Gov. R. W. Furnas, who lately visited this coast, and who is known everywhere as one of the foremost horticulturists of his State.

#### The Value of the Rural.

As the New Year is at hand, we suggest to all that it is a fitting time to renew their subscriptions to the *RURAL PRESS*, and send in names as new subscribers. The enlargement of the paper to which we are committed will occasion increased outlay for labor and materials, and the publishers will be gratified to receive assurance that readers value the change by sending in the money which may be due and securing the reduced rate for payments in advance.

We respectfully ask all who approve of our work to aid us in extending the circulation of the *PRESS*. Each friend can recommend the paper to some one in his or her neighborhood who does not now receive it and the result will be an increased patronage which will enable us to go forward with many improvements which we hope to adopt, and which we are sure will make the *RURAL PRESS* more and more valuable to its readers. There is a prospect of a most prosperous year, and we wish for our journal a share in the general advancement and development.

We have so many words of praise from our readers that it is altogether unnecessary for us to praise our own work, and we are glad that it is so. We prefer to let the work stand for itself and let others praise it if its merits call for praise. Just as we write, the following comes to hand from one of our readers, which presents the claims of our journal more forcibly than our modesty would allow us to urge them:

**EDITORS *PRESS*:**—In the columns of your splendid paper I find invaluable hints on various matters of which naturally a new-comer would be woefully ignorant. Allow me to say that the *PACIFIC RURAL PRESS* compares favorably with the best agricultural papers of the United States, being decidedly superior in its general make up to many papers numbering scores of years in their existence. I was cogitating what Eastern agricultural I should take next year, when I discovered that the *PACIFIC RURAL* was taken on our ranch, and all my queries in regard to various farming matters, to say nothing of the poultry-

#### News in Brief.

JOHN P. JONES has been chosen a Director of the United Globe Electric Light Co., New York.

THE Marquis of Lorne has decided to remain in Canada another three years as Governor-General.

DR. ISAAC I. HAYES, well known in connection with Arctic exploration, died Saturday in New York.

THE surveyors of the Carson and Colorado railroad have completed their final lines into Candelaria.

A TERRIBLE typhoon is reported from China, one town being entirely destroyed and 3,000 inhabitants killed.

ADMIRAL BIRD, the commander of the *Investigator*, in Sir John Ross' expedition in search of Franklin, is dead.

THE international railroad has been completed to Laredo, Texas, and the Rio Grande will soon be bridged.

DURING the week ending Dec. 17th, standard silver dollars to the number of 448,495 were coined at the United States mints.

THE English Ambassador at Constantinople refuses to allow the Turkish authorities to search a British ship for explosives.

THE precautions against fire ordered by the Paris authorities in the Theater Francaise will involve the closing of that theater for a month.

DURING the five months ending November 30th there arrived in this country 291,318 immigrants, against 254,262 for the same period in 1880.

IT is said Germany does not intend to await the return of Von Schlezzer to Rome, but proposes to intrust negotiations at the Vatican to another diplomat.

THE town council of New Tacoma, W. T., has levied a tax of one cent on the dollar on all property within the corporation, to pay the indebtedness incurred by the visitation of the smallpox.

THERE were two important incidents last week connected with Ireland: The suppression of the Land Leaguer Egan, which English opinion approves, and the formation of the Lord Mayor's Committee.

THE Corralitos Water Co., which supplies Watsonville with water, threatens to reduce the pressure in the town mains unless the town will pay them \$150 per month—a sum which the citizens consider exorbitant.

ENGLISH papers announce the birth of a son on the 17th ult. to Lady Hesketh, at Rufford Hall, Lancashire, an heir to the baronetcy. San Francisco readers will recognize in Lady Hesketh the daughter of ex-Senator Sharon.

THE English Government has opened negotiations at Washington and with some continental Powers with a view to establish International Courts for dealing with the Pacific Islands outrages. It is intended that the Court shall sit in Sydney.

SHASTA RIVER is said to abound with a greater supply than heretofore of fur animals, such as the beaver, otter and mink, and at the old Meyer ranch there is a beaver dam, 10 ft. high and a quarter of a mile wide, where the beavers are numerous.

A MAN just back from Wood River, I. T., says that country is a paradise for bald-headed men. Owing to some peculiarity in the climate or the water, men who went there last spring with heads bald as billiard balls, now have fine growths of hair started.

THE latest reports from Lima represent that the whole of the interior of the country as broken up into local factions or political parties. Montro has not reached Lima. In Cajamarca in the south, various encounters have taken place between the political factions in which the Pierolists were generally vanquished.

THE bill introduced by Representative Pettibone, relative to the retirement of army officers, provides that all general officers and officers of the different staff corps shall be retired from active service when they have served 45 years in the army, and all officers of the line shall be retired when they have reached the age of 60.

IN THE Superior Court at Sonora, William Minor, the stage robber, expecting a life sentence, made a lengthy speech to the Judge, criticizing what he stigmatized as the Judge's inconsistency in sentencing one of his companions to 25 and the other for 12 years. At the conclusion of his remarks, the Judge gave him 25 years.

**SLIP IN BELTS.**—From experiments made it has been ascertained that about two revolutions per hundred are lost in the transmission of motion by a belt. In ordinary practice this would be a slight loss, and would in no wise interfere with the usual manufacturing processes; but, where there is a long train of gear repeated from shaft to shaft by belts, the loss becomes serious. It is clear that if the coefficient of loss by slippage be .98 for a single pair, which has been verified with great certainty by varying the tensions of the same belt, it will become equal to the successive powers: .98, .96, .94, .92, .90, and so on; so that after a succession of five speeds, the loss amounts to one-tenth of the calculated speed, and at the end of 34 speeds the velocity will be reduced to half. From these considerations it appears that where it is required to transmit speeds as near determinate as may be, by means of bands and pulleys, it is necessary to increase the diameter of the driving pulley by its fiftieth part, or diminish the driving pulley in the same ratio.

#### Pacific Coast Weather for the Week.

The following is a summary of the rainfall for each day of the week ending Wednesday, Dec. 21st, at noon, for the stations named:

(Furnished for publication in the *RURAL PRESS* by Nelson Gorom, Sergt. Signal Service Corps, U. S. A.)

Date.	Olympia.	Portland.	Roseburg.	Red Bluff.	Sacramento.	San Francisco.	Visalia.	Los Angeles.	San Diego.
Thursday, 15th.	.25	.40	.16	.01	.10	.40	.00	.00	.00
Friday, 16th.	.33	.00	.02	.00	.00	.12	.00	.34	.19
Saturday, 17th.	.52	—	.00	.00	.00	.00	.00	.00	.00
Sunday, 18th.	.56	.37	.00	.00	.00	.00	.00	.00	.00
Monday, 19th.	.00	.02	.00	.00	.00	.00	.00	.00	.00
Tuesday, 20th.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Wednesday, 21st.	.05	.04	.00	.00	.00	.00	.00	.00	.00
Totals.	1.76	.83	.18	.01	.10	.52	.00	.34	.19

\* Reports for 8 hours missing from Olympia.

NELSON GOROM.

**RECLAMATION, LEVEEING AND DEBRIS.**—We have received from the author, L. F. Moulton, of Colusa, a neatly printed pamphlet entitled "Random shots at a great problem: being a collection of articles, written at different times on reclamation and leveeing, which includes some discussions of the great problem debris." Mr. Moulton is well-known to our readers as a vigorous writer, and he speaks from a great fund of experience and observation upon the subjects he takes up. He writes and publishes for the good he may do, and will no doubt favor our readers who may address him for copies of his pamphlet. Part of the "random shots" were fired some time ago; the last is a sharp review of the report of the S. F. Citizens Debris Committee, and will hold a prominent place in the literature of the debris question.

**FRUIT TREES FOR SALE.**—We call attention to the advertisement of Milton Thomas. He has 15,000 Bartlett pear and apricot trees, besides apple, peach, plum, etc. His address is Bellevue nursery, Los Angeles, Cal.





### His Birthday.

It is His birthday—His the Holy Child!  
And innocent childhood blossoms now anew,  
Under the drooping of celestial dew  
In o its heart, out of this heavenly Flower,  
That penetrates the lowliest roof-tree bower  
With fragrance of an Eden undecayed;  
O, happy children, praise Him in your mirth—  
The Son of God born with you on the earth!

It is His birthday—His, in whom our youth  
Becomes immortal. Nothing good, or sweet,  
Or beautiful, or needful to complete  
The being that he shares, shall suffer blight;  
All that in us His Father can delight  
He saves, He makes eternal as His truth.  
Praises Him for one another, loyal friends!  
The friendship he awakens, never ends.

It is His birthday—and this world of ours  
Is a new earth, since He hath dwelt therein;  
Is even as heaven, since One Life without sin  
Made it a home: His voice is in the air.  
His face looks forth from beauty everywhere;  
His breath is sweetness at the roots of flowers;  
And in him—joy beyond all joy of these—  
Man wakes to glorious possibilities!

It is His birthday—and our birthday too!  
Humanity was one long dream of him,  
Until he came; with fitful glow, and dim,  
The lights heavenward smoked from vague desire,  
Despair half stifling aspiration's fire.  
He is man's lost ideal, shining through  
This life of ours, whereunto floweth His—  
God, interblent with human destinies.

It is His birthday—His the only One  
Who ever made life's meaning wholly plain;  
Dawn is life to our night! no longer vain  
And purposeless our onward struggling years;  
The hope he bringeth over-floods our fears—  
Now do we know the Father, through the Son!  
O earth, O heart, be glad on this glad morn!  
God is with man! Life to us is born!

—Lucy Larcom.

### Hungry on Christmas Day.

A TRUE STORY.

On the afternoon of Dec. 24, 187, though the light was fast falling, a weary little lady sat close at her window, painting rapidly yet carefully as she finished a delicate miniature portrait on porcelain, for she was employed by one of our largest photographic galleries, at that time just in the beginning of its existence.

Two children played lovingly and merrily at a table near, her room was unusually pleasant and comfortable looking, her own dress and the children's good and suitable—there seemed no cause for the look of sad and weary care upon her face—but this dear little woman was one who loved her neighbor and conscientiously lived for others, and these were her thoughts:

"I have not seen my young neighbors for nearly a week until to-day, and then the husband looked so pale and thin! I fear they are in trouble, and yet I hardly dare venture in. Oh, this life in large cities is cruel! Where they pack us, so utter strangers, in separate rooms adjoining, and we know nothing of each other! Our neighbors on the other side of the partition may be dying of grief, or loneliness, or want, while we are careless and gay, until some morning the janitor comes in with a scared face that the man in the next room is dead—died in the night alone—his body lies there on the other side of the wall! Oh, it is too horrible! Such a thing happened in this house before I came to it. It must not happen again! I will get paid to-day for this picture, and when the children are asleep I will run round to the market and buy a turkey, with all the accompaniments, and then I will invite Mr. and Mrs. Wilson to eat with us to-morrow, and I will learn if they are in trouble."

Inspired by kindly thoughts, she worked faster than ever; and soon the last touch was gently placed, the miniature rigidly scrutinized, and with a satisfied smile wrapped up. Then telling the children to get their coats and hats, they all three hastened away to the photograph gallery. Only one young clerk was there, having been left in charge while the others left home earlier than usual.

"Mr. Poser expected you," said he, "and told me when you brought his wife's picture to shut up the place and bring it to his house. He said he knew you wouldn't disappoint him—you never do."

"Where is the house, Johnny? I might take it myself (and get paid)," she added mentally. "Up in Fortieth street; but you hadn't better take it, Mrs. Lenox, for he has a party to-night, and I live near there."

"Very well, Johnny; don't undo the package; if you take it from the box it might get broken."

"Oh, I'll look out. Merry Christmas, Mrs. Lenox; I won't see you to-morrow."

She turned sadly away and went sadly home with the children, trying to share their enjoyment of the brilliantly beautiful show window where so many things were displayed that she would like to own. But she scarcely thought of that; her own disappointment in not getting the expected \$10 that evening had quite de-

range her plans, for now no turkey could be bought.

"Laugh, mamma, laugh; don't be so still," cried out little Bertie, as he glanced up at her sad face. The mother smiled to please him—a tender, loving smile, such as an angel's face might wear, and both the children laughed outright.

"Dear innocents! they know nothing of life's trials and disappointments. Neither shall they know; I have always made them happy, and will still do so, whether we have a Christmas dinner or not."

New energy animated her; she joined with her darlings in admiring beautiful and wonderful toys, books and all the various holiday gifts so temptingly displayed, and only took them home when they were ready. As she helped little Bertie up the long, tedious flights of stairs that led to their two rooms, while Madge tripped lightly on ahead, she met Mrs. Wilson, her neighbor, coming down and, exchanging a pleasant greeting, saw that the young wife's eyelashes were wet with tears, while her voice sounded unnaturally cheerful:

So, the artist, who had been a young wife herself once and was now a patient, quiet little widow, fell a-planning again as soon as she had given the children their supper, and, after a merry game of romps, put them to bed.

"Only one dollar besides the money for rent," she sighed, "and four meals to provide before I can see Mr. Poser. Well, I have some stores in the pantry; I will see what there is, and then go to market. I must manage to share my dinner with my poor neighbors—at least to invite them—or I shall be troubled all day. How glad I am that I bought gifts for the children three weeks since, when they were cheaper and I had the money; now they at least will not be defrauded of their expected enjoyment on Christmas day."

Among other lessons which the vicissitudes of life had taught this brave little woman was that of the true art of cookery—how to provide a delicious meal from cheap and simple materials; so, when she had looked through her pantry she skipped off to market with a self-satisfied and happy smile, as if she had been going to buy the largest turkey and the best bunch of celery to be found there, though her basket was small and her purse held only one dollar.

The Wilsons, her neighbors occupied but one room, which was warmed by fire in a large open grate, and Mrs. Lenox knew that the young wife was accustomed to cook a simple breakfast by this fire, every morning. But for two mornings past there had been no fragrance of beefsteak and coffee, or any other good thing, coming through the cracks of the nailed-up door that led from her pantry into their room, and could not help fearing they were living very frugally.

So, on Christmas morning, Mrs. Lenox went with her children to bid the neighbors "Merry Christmas," and when the Wilsons' door was opened one quick glance showed her that no cooking had been done that day, nor was likely to be. The husband sat by the window looking out, while she was sewing near a very small carefully-built fire.

Both responded politely to her greeting, but they looked pale and sad.

The artist hurried back to her room and wrote a friendly little note inviting them to share her Christmas dinner, because her "other friends" were not coming, and she did not like to dine alone. But they returned a delicately-worded, friendly refusal, on the ground of their preferring to spend their holidays with each other only.

The kind little woman sighed, but went on with her preparations for dinner, while her children enjoyed the pretty gifts that had made them happy since morning. By and by she wrote another note, which read:

"Don't be annoyed, dear Mrs. Wilson, if I beg you to accept one little dish from my table, since you prefer to remain at home, because I am dreadfully superstitious, and I believe in the old Saxon proverb: 'The family whose Christmas dinner is unshared will be unlucky all the year.' So please do taste a morsel, just to save me from misfortune. Yours, truly,  
KATE LENOX."

Then on a china platter she arranged a most appetizing little *filet*, tender and brown and juicy, flanked by aliced potatoes browned in gravy, amber-like bits of carrot, tender as jelly, sippets of toast, and over the whole a gravy that would have compelled the praise of a Frenchman. All around these she placed tender heart leaves of lettuce, and put the dish on a pretty tea tray, with a saucer of cranberry jelly beside it, and her little note edgewise between them, and gently opening the door looked out.

No one was in the hall, so Mrs. Lenox noiselessly put the tray close to her neighbor's door, rapped loudly, and instantly dating swiftly back to her own room, softly shutting herself in. Then, with her children, enjoyed such a dinner as she had given her neighbor. There came no sound from the adjoining room, for the walls were thick enough to muffle ordinary noises, and Mrs. Lenox did not know if the Wilsons were pleased or not, but soled herself with the saying that "no news is good news," and took her children out for a walk.

That evening, when the little ones were asleep, and the artist in her pretty studio reclining on the sofa enjoying a book, she heard a timid rap, and Mrs. Wilson came quietly in. She tried to speak, but could not; her cheeks grew crimson, and her earnest eyes sparkled with moisture. Then as Kate Lenox rose to re-

ceive her neighbor with a pleasant smile of welcome, the young wife fell into her arms sobbing.

"Oh, you angel! God bless you!"

The artist felt her own eyes grow dim, but endeavored to speak lightly as she drew her guest to sit by her on the sofa, saying:

"You are very good not to be vexed at me for wanting you to taste my *filet*. Do you know I rather pride myself on my cooking?"

"Ah, God bless you! You saved us! We were hungry!"

"Hungry!" cried Kate Lenox, horrified. "Hungry on Christmas day!"

Mrs. Wilson could only nod reply, for her sobs came faster. The two ladies sat clasping each other, and Kate Lenox kissed her neighbor and comforted her by repeating holy words of promise, while her own tears fell fast and her heart stopped beating for a moment at the "What if my darling should ever be hungry?"

Mrs. Wilson was not a weak young woman, only unnerved by excitement; she composed herself soon and explained:

"Yes," she said, in low, thrilling tones; we had only a loaf of bread and a bit of cheese all yesterday, and to-day only a few biscuits, until you placed that delicious dinner at our door. Oh! it was like the heavenly manna. When I was eating I thought I was no longer in this world."

"I am glad that you were not angry with me."

"Harry was angry at first. He wished me to carry it back at first, and when I implored him just to taste a little, he said we were not beggars, and ordered me to return it! I think he was really out of his mind, he went on so dreadfully, and reminded me of my promise to die with him to-night."

"Oh!"

"Ah, yes; don't condemn us too severely. He has been sick and out of work; we have been poor a long while. All our clothes are wearing out—you know that is hard on a lady and gentleman. We have been used to living well. Now people owe Harry who don't pay, and at last his courage and money went together. But you saved us. Poor Harry! he had lost his faith in God, and I, too, have been sorely tried; but I kept telling him that we should not be allowed to perish so miserably; that a ministering angel would by sent, and you came—God's angel—I love you."

She could say no more for awhile, but Kate Lenox presently replied: "And now you must really let me be your friend. I have plenty in the house for breakfast; that is if you like French pancakes and coffee."

"Ah, you have given us all we need. I coaxed and pleaded with Harry till he ate with me, and presently he rose up and said he felt like a man again, and went out to one debtor, whom he got \$50 from, and this gave him new life; so that he went to a gentleman we know and got an engagement of work to begin with the new year."

"Oh, I am glad!"

The faces of both women shone with a radiant happiness, when the young wife asked:

"May I look at your sleeping children?"

They went in the inner room, where she bent above each little bed a moment in prayer, and softly murmured aloud: "May they know happiness as intense as I have known misery!"

At the door of the studio, kissing Kate Lenox with a tender and reverent grace, she said: "You could do only one little deed of mercy to us, which will last us all our lives. You must minister to others now—God's angel!"

### Uncle Sam's Business.

EDITORS PRESS:—No better subject for holiday rejoicings can be found than our national prosperity, as shown by the following quotations from the President's message:

The report of the Secretary of the Treasury shows that the total ordinary receipts from all sources for the fiscal year ending June 30, 1881, were \$300,782,297, and the total ordinary expenditures were \$260,712,857.59, leaving a surplus of revenue of \$100,069,409.41.

The increase of the revenues for 1881 over those of the previous year, was \$29,352,901.10. It is estimated that the receipts during the present fiscal year will reach \$400,000,000, and the expenditures \$270,000,000, leaving a surplus of 130,000,000 to be applied to the sinking fund and the redemption of the public debt.

The increase of the revenue from customs for 1881 over that of last year, is shown to be \$11,037,611.42. Notwithstanding the increase in revenue from customs, the gross value of the imports, including free goods, decreased over \$25,000,000.

The annual average of the increase of imports of merchandise over exports thereof for ten years previous to June 30, 1873, was \$104,806,922. But for the last six years there has been an excess of exports over imports amounting to \$1,150,668,103, an annual average of \$196,778,017. It is a matter of congratulation that the business of the country has been so prosperous during the past year as to yield by taxation a large surplus of income to the government. If the revenue laws remain unchanged this surplus must year by year increase on account of the reduction of the public debt, and its burden of interest, and because of the great increase of population.

In 1860, just prior to the institution of our internal revenue system, our population but slightly exceeded 30,000,000; by the census of 1880 it is found to exceed 50,000,000, an annual increase of about 1,000,000 people. It is estimated that even if the annual receipts and expenditures should continue as at present the entire debt would be paid in ten years.

This is encouraging not only for the people of the United States, but also for those who may be anticipating immigration. Wide-awake people don't like to invest in property that is mortgaged for all it is worth. And it would be the same thing if the public debt of a country was more than the country would sell for. But the above statistics show the United States to be on good footing. Consequently, we may expect in the near future a large increase in

population. It is not the drones who emigrate, but generally the reading class, who, after being fully convinced by statistics and other substantial information, that there are better places than where they now live, are not long in getting there. Let us send the news abroad, and at the same time extend a hearty welcome to those who may have cast their lot amongst us. Uncle Sam is truly a great benefactor.

Olimpo, Colusa Co.

L. D. J.

### Christmas Chimes.

Hail, blessed day! Hail, Christlike morn!  
So fill'd with joy, so bright with love!  
Thou bringest tidings which were borne,  
By angel's voice, from heaven above  
To earth beneath, to men below,  
In years gone by—the long ago.

We hail thee now, with hearts that thrill,  
And softly list to tidings sweet.  
Ring, Christmas bells, a merry trill—  
Come angel-voices, kind friends to greet.  
Soft Christmas chimes, a Christlike deed,  
Are tidings sweet—a Christmas need.

SWIFT in the footsteps of the beautiful feet of morning, and sometimes "preventing the dawn," will go the tripping troops of merry wishes around the world in this glad Christmas time. How came the earth to be belted with this beautiful custom? Who gave to universal childhood this happy holiday? Our Christmas carols tell us: "Unto us a child is born." And "the government shall be upon His shoulder." And His name shall be "the Mighty God." Give Him larger welcome and more room, O people! Homes are happier, hearts are cheerier, lives are cleaner, business is harvestier, nations are peacefuller, woman is holier, and childhood is heavenlier where He is. May all the air be thick with melodious song. Room for the gift of God.

CHRISTMAS! the birthday of the whole world's Savior! I love to think of it for what it is—the one glad supreme holiday of the human race. Let there be laughter now, and joyous chimes, and games, love-tokens, and the greetings of dear hearts. Who would not take, once in the year, a perfect reprieve from the aches of life, the sadness of a disenchanted heart, the fret and the turmoil of ambition and zeal and doubt and wrath! This day means the real presence of the Divine among us, a new moral force born for a race whose moral force was almost gone, a new departure for mankind, and quite properly and logically the beginning of a new mode of counting the world's years. Oh! if we could all fully know just why this is so happy a day as our happy customs try to make it, there would be no more sorrow possible here forever.

WHATEVER tends to make home worthy of the heart's deepest regard, helps to compose the best shape of human welfare. The homes of the peasantry of France have again and again come between that nation and ruin. Out of those cottages have come, in hours of need, men, money, and morals. Christmas is an annual exaltation of the fireside. It is not for man as a statesman, nor as a scholar or soldier, but for man as a being who sits by a fireside, and eats at a table along with loved ones. Each Christmas should make the crusty old bachelors, and those who imitate riches by boarding in palace hotels, bluish with repentance, and abandon their narrow shape of existence. It is to be hoped that all the papers and speakers and all the fathers and mother, will so enlarge and glorify this December feast that at last it will become the chief end of man to be the owner or the occupant of a home.

EXCESS is so natural to man that a "merry Christmas" may easily mean indulgence that overtop the symmetry of strength, and to come toppling down on themselves like too ambitious architecture. None the less, it may be well to hold to the greeting, "A Merry Christmas," for the Christ-like spirit is one which reaches the bounds of pleasure without ever passing them—is the grape full of juice, yet that does not burst the skin, and so sour in fermentation.

WHAT seems to be the greatest need of our times is not so much an increase of wealth in our country, for the people generally have plenty, but rather do we need some way of enjoying more what we already have. We need not enlargement of our dominions, but consolidation and unity among our many-tongued and widely different population. Among the many possible agencies in bringing about these results, we should not overlook the observance of our great national and religious holidays. In these we forget our lines of parties and sects, and come more fully into the life of Americans and of our common Christianity—into the broader love of man as man. In these public rejoicings we forget, for the time at least, our cares and our daily toil. The interchanges of friendships and gifts make us richer in feeling at least, if not in fact; and, after all, it is the good feeling and good will that give to life its real wealth and its sweetest charms. We need as a people more holidays, more days of rest and rejoicing; less of striving and worrying to acquire, and more ability to enjoy what we have. All hail, then, to Christmas day, with its merry greetings, its joy in the home, its gifts to the young and the old, its love, its hope.

THE children's day, the parents' day, the home day, whose nameless power makes truce with toil, conquers and brings back the busiest and most distant ones to the hand-clapping and song-singing and story-telling around the old fireside, as in the days of yore. Day, as well, it is which opens hearts and hands, promotes the humanities, and makes somewhat real the sentiment of a common brotherhood.



## Chaff.

WAS Noah's voyage an Arctic expedition? How does father time travel? Bicycles, of course.

FOUR hundred people are employed in the Philadelphia mint, and all are making money.

Who says it is unhealthy to sleep in feathers? Look at the spring chicken and see how tough he is.

"WHY men drink is what staggers us," says a woman's journal. What men drink is what staggers them.

THE charity committee did not mean exactly what they said when they announced: "The smallest contributions will be most gratefully received."

THERE are some experiences in life which makes us feel like the boy who, when he stubbed his toe against a sharp stone, said he was too big to cry and too badly hurt to laugh.

THE Chinese government is going to build some railroads, and soon will be in the land the voice of the Celestial brakeman, "Hoop-pee! Yang-tze-kian junction! Tailnee stoppee ten minutes eattee and dlinkee!"

A CONNECTICUT pastor declined an addition of \$100 to his salary, for the reason, among others, that the hardest part of his labors heretofore has been the collection of his salary, and it would kill him to try to collect \$100 more.

PHILOSOPHY and fact: Professor Harris, a Boston scientific sharp, says: "There is a coming of the macrocosm into the microcosm." Well, what of it? If the microcosm is larger than the macrocosm, and the macrocosm wants to go in and has got a ticket, we don't see what is to prevent it. Give us something new.

## Suggestions for Old Santa Claus.

[Written for the RURAL PRESS by JULIA M. GOODLETT.]

Christmas is almost here, and old Santa Claus has been stirring around for some time, trying to find something for the multitude of little folks, who are so anxiously awaiting his coming; and varied are the dilemmas in which he frequently finds himself. Sometimes he finds that there is a big bank book behind the chimney, and that there will be only one or two small stockings to fill. In such a case he needs no advice, for then the big wax dolls, jewelry and rocking horses seem to come of their own accord. But he is wonderfully quick about finding out all about the children he must visit, and sometimes finds there is no bank account at all; yet six or eight little eager, gaping stockings are sure to meet his view on that eventful eve; besides all this, he finds that he has some good fruit land which he would like to put in orchard, but is unable to purchase trees and vines and make the little stockings as heavy as the children expect them to be, and in his kind old heart he can't bear to disappoint them. Now, here is a dilemma which will make even his jolly face look grave.

Right here I cannot refrain from trying to help him (and I hope the venerable gentleman will not be offended by my seeming impertinence), by suggesting that he take old mother Santa into his confidence and procure some neatly made rag dolls, have them well dressed in bright colors (be sure to use a small round stick for a spinal column or they will soon become entirely too polite), a few ingeniously constructed canton flannel elephants (made of grey flannel, fleecy side in), lambs, ducks and rabbits (both white and grey, fleecy out), and other things which will readily suggest themselves to the kind old lady, when once she begins and becomes interested. These will please the little girls, and a doll neatly dressed in a black suit of men's clothes, shoes and hat, will not be amiss for Teddy; in fact, we knew one which was played with and enjoyed for more than two years, and the owner (now a young man), recalls no happier Christmas than the one when Old Santa brought him his beloved Billy Jones and the stout little wheelbarrow, on which the kind old man had fully tested his mechanical ingenuity, and which made it so easy for the sturdy little fellow to keep mother's chip-box always filled. It lasted a long time, and cost little more than a few pleasant evening's work with saw and plane. These, with a nice red apple, big orange, some nuts and good candy, not too much, and last, but by no means least, a little note making each one a present of fifty choice trees (which can be bought with the money usually expended for nick-nacks and rich food) will make a very respectable stocking and bring bright smiles to the faces of all children who have not been pampered until they have no conception of the value of economy or of the rights of others. And there will not only be bright eyes this Christmas but for many a Christmas after, for the trees, (well cared for by kind old Santa Claus until the little tots are able to do it themselves, and the proceeds judiciously expended) will be apt to bring a bank book as a Christmas present to that house in a few years, and the little ones will have cause to remember this Christmas when they have need of the many advantages which independence alone brings, and when the costly dolls, rocking horses, jewels, and thousands of other extravagant toys, too often purchased by the sacrifice of better things, have been forgotten as well as numbered with the things that were.

San Bernardino, Cal.

## Young Folks' Column.

## A Visit to Santa Claus' Shop.

A CHRISTMAS STORY.

It was nearly 9 o'clock when Tommy and Rosy went to bed on Christmas eve. Their stockings had been hung up, and they wished very much for the next morning to come. Sallie Ann was Rosy's dolly, and she wore stockings. One of them had to be hung up with the others.

In 10 minutes Tommy and Rosy and the dolly were all fast asleep. In the middle of the night Tommy woke and found Rosy sitting up in bed. She was looking at something. Tommy wanted to know what it was. He turned over, and what should he see but Santa Claus himself!

The dear old man was buttoned up to his chin in a coat of white fur. He was busy filling the stockings.

"There!" said Santa Claus, "I've forgotten Rosy's doll, and I shall have to go all the way back and get something for it."

"I wish you'd take me with you," said

Tommy and Rosy still in his pockets. Sure enough, there stood Santa Claus's house, all made of white, yellow, and red rock candy, and lighted up from top to bottom with Christmas tapers.

"I'll take you right into my workshop," said Santa Claus, bouncing into a big room where hundreds of little men were at work. They were tying up toys, books and candies into thousands of parcels. These were to go at 12 o'clock by Santa Claus' express to all parts of the world.

At the sight of so many lovely things, Tommy and Rosy both jumped out of Santa Claus' pockets.

"Oh!" screamed the workers, "where did the earth-children come from?"

"I brought them in my pockets," said Santa Claus. "I forgot this little girl's doll. Hurry and find a gift for it, my men, for I must away again."

The tallest of the little men went to find the gift. Others gathered about Rosy, who was too frightened to speak.

"Isn't she lovely?" said one, touching her long curls.

"Yes, indeed," added another; "she is prettier than the prettiest wax doll we ever made."



THE BIRDS' CHRISTMAS TREE.

It is an Eastern scene. The children have fed the snow birds day after day, until they learned to fly to the pretty little window shelf regularly, and became quite tame. The little girl and her smaller brother made a Christmas tree for their little pets, and on Christmas morning they found the birds helping themselves to the presents with great glee. Was it not a pretty idea to surprise the birdies in this way?

Tommy, boldly.

"An' me too, if you please, Mr. Santa Claus," added Rosy.

"Hallo!" shouted Santa Claus, "you awake, youngsters?"

"Yes, sir," answered Tommy, "and we want you to take us to ride in your sleigh."

"Well, well, well!" laughed the old man, "Santa Claus can't refuse the children anything; make haste, I've no time to lose."

Out of bed jumped the two children. "Don't wait to dress," said Santa Claus. "I'll put one of you into each of my big pockets, and you'll be warm enough. Come on!"

Out on the roof they went. There stood the sleigh, drawn by eight tiny reindeer. Santa Claus got into the sleigh, and drew the fur robes over him. Tommy and Rosy, peeping out of his pockets, felt very nice and warm.

"Come, Dasher! on, Dasher! hie, Comet!" said Santa Claus to his team. "Away we go!"

And away they did go, right in the air and through the falling snow-flakes. Over the tops of houses and trees, over the towns and cities, faster, and faster, faster they went, till they came to Santa Claus's country.

Here everything was of snow—trees, streets, houses, all made of snow. It was as light as day, for high in the pink sky hung a great bright silver moon.

"Is that your house, Mr. Santa Claus?" asked little Rosy, as they passed a beautiful castle all built of ice.

"O, no, my dear!" said Santa Claus. "My house is made every bit of rock candy. Here we are now. Hie, Prancer and Cupid! stand still!"

Santa Claus jumped out of the sleigh with

"She must be cold; let's give her one of our little seal-skin coats," said a third, helping Rosy into a warm fur coat.

"Let's put candy in the pockets," said a fourth, stuffing the pockets with sugar plums.

"Let's give her a cap to match the coat," said a fifth, putting a cunning cap over her yellow curls.

"Let's all kiss her," said a sixth.

But at this Santa Claus popped Rosy back into his pocket. "No, no," said he, "you might change her into an elf like yourselves."

Tommy, who was never frightened at anything, had mounted a bicycle, and was flying up and down the hall. The little men, forgetting their work, ran up and down after him, playing on trumpets, horns, fifes and drums.

"Bless my heart!" cried Santa Claus, "I never heard such a din in my life. Come, you youngsters, the doll's gift is found, and I'm going to take you right back to bed."

"No, you don't," shouted Tommy, "not unless you let me ride this bicycle."

"You can't," said Rosy. "I can," added Tommy, "I know I can!"

"I'll go with you," said one of the little men; "I can ride in the air like Santa Claus."

The little man got on Tommy's back, and away they went! Rosy and Santa Claus were in the sleigh, Tommy and the little man on the bicycle. On, on, on! faster, faster, faster! Tommy shouted in glee. Suddenly the wicked little man bit Tommy's ear. He screamed, and knocked the elf off his back. The little man jumped on one of the reindeer.

Tommy was no longer able to ride on the snowflakes, and began to fall—down, down, down! O, how frightened he was! Down,

down, down! The bicycle turned over two or three times, and down he went, head first, into—bed.

Yes, when Tommy opened his eyes he found himself in bed.

He only dreamed this story. Rosy was asleep beside him. The stockings were twice as big as when hung up. Right in the middle of the room stood a splendid bicycle.

The early sunshine was coming through the nursery window. It was Christmas morning.

## Christmas Time.

The joyful time is coming,  
Santa Claus is dressing,  
And little hearts are waiting  
For their Christmas blessing.  
Let cheer adorn their faces,  
Your hearts with kindness glow  
Wish all a happy Christmas,  
But—help to make it so.

Scant use to shout Hosanna  
In the ears of sorrow,  
When from your rich abundance  
Needy hearts should borrow.  
Did some poor wail be happy,  
By storm tossed to and fro,  
But seal thy words by giving,  
And help to make it so.

When Christmas joys all sparkling  
Round your bright hearth hover,  
Think of poor, and thinking,  
Let some cheer run over.  
God's gift to man remember,  
Long centuries ago,  
Good will to men is wanted,  
Then help to make it so.

He has given thee plenty,  
Making life so pleasant,  
And has made thy brother  
E'en the meanest peasant.  
Then let thy heart be warmer  
Than winter's cheer! 'ss snow,  
With all a happy Christmas,  
And help to make it so.

Not for fame's proud worshippers,  
Lords or rich men only  
Comes holly garnished Christmas,  
But the poor and lonely,  
The castaway and weary,  
Should feel its ruddy glow;  
Its gladness is for mankind,  
Then help to make it so.

## DOMESTIC ECONOMY.

INODOROUS PAINT.—This paint is mixed without any turpentine, the evaporation of which in ordinary paints causes a strong, unpleasant smell. In this paint the ordinary white lead, or zinc white ground in oil, instead of being thinned with oil and turpentine, is mixed with methylated spirit in which shellac has been dissolved, together with a small quantity of linseed and castor oil. The methylated spirit evaporates very rapidly, leaving behind the shellac which acts the part of the film of varnish left by the oil and turpentine in the ordinary method of painting. This paint dries very rapidly. The second coat can be applied an hour after the first, and three-coat work can be finished in one day. For interior work in occupied buildings this paint has very great advantages; also where rapidity of execution is required.

VELVET PUDDING.—Take five eggs and beat them separately, then add one cup of sugar to the yolks. Take four tablespoonfuls of corn starch dissolved in a little cold milk, and add this to the yolks and sugar; boil three pints of milk and add the other ingredients while boiling; remove from the fire when it becomes quite thick; flavor with vanilla, and pour into a baking dish; beat the whites of the eggs to a stiff froth, add half a cup of fine white sugar, turn this over the pudding and place in the oven and let brown slightly. To be eaten with sauce made of the yolks of two eggs, one cup of sugar, tablespoonful of butter; beat well, add one cup of boiling milk, set on the stove till it comes to a boiling heat; flavor with vanilla.

SWEET POTATO PUDDING.—One pound of sweet potato, boiled in a little water; when done take them out, peel them, and mash very smooth; beat eight eggs very light, add to them half a pound of butter (creamed), half a pound of sugar (granulated), half a teaspoonful of powdered cinnamon, a very little nutmeg, one wine glass of rose water, one gill of sweet cream; stir all well, then add the sweet potato, a little at a time; mix altogether, stirring very hard; then butter a deep dish, put in the pudding, and bake three-quarters of an hour; or line pie plates with puff paste, put in the pudding, and bake 20 minutes.

STRONG CEMENT FOR CROCKERY.—One of the strongest cements, and very readily made, is obtained when equal quantities of gutta-percha and shellac are melted together and well stirred. This is best done in an iron capsule placed on a sand bath, and heated either over a gas furnace or on the top of a stove. It is a combination possessing both hardness and toughness, qualities that make it particularly desirable in mending crockery. When this cement is used the articles to be mended should be warmed to about the melting point mixture, and then retained in proper position until they are ready for use.

AROMATIC VINEGAR.—Put into a stone jar one handful each of dried sage, mint, lavender, rosemary, wormwood, rue, and a large tablespoonful of whole cloves; pour over these ingredients a gallon of scalding hot vinegar; cover the jar tightly, and keep it covered for a week where its contents will just keep lukewarm; then strain it, dissolve it in an ounce of powdered camphor, and put it into glass-stoppered bottles.





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SAN FRANCISCO:

Saturday, December 24, 1881

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## The Week.

We offer our readers a little something extra this week in observation of the Christmas time, and we trust it will please and entertain both old and young, and add, perhaps, a little to the joys of the day in the homes far away from the holiday observances which delight the townspeople during the Christmas season.

We also begin on our extra pages this week a full and detailed report of the proceedings of fruit growers, recently held in Sacramento, and which was the most notable convocation of those engaged in the fruit interest ever held in this State. The fruit interest is now awake to the danger which impends, and there is a most hopeful unanimity of desire and effort to overcome the evil. We propose that the RURAL PRESS shall stand head and shoulders above all other journals in the dissemination of information pertaining to the magnificent horticultural interest of California. We shall probably give our readers another 24-page edition next week, which will complete 27 issues for the present half year, and make a volume far superior to any we have ever issued before. If our readers like it let them say so. A word from those who know the RURAL to the multitude who are now thinking of investment in orchard or vineyard planting will be a word in season for the interest of all.

The hum of Christmas preparations ceases for a moment to give sound to the announcement of the safety of those who went out from San

Francisco in July, 1879, to guide the "Jeanette" toward the pole. Reports up to this writing are conflicting, but it seems probable that whether the little ship was lost or not, the greater part of the brave explorers are safe on the northern shores of Siberia.

## Christmas in California.

The approach of the holidays could not be attended with more auspicious circumstances and conditions than are found this year in California. The rains have won the greater part of the State to growth and beauty again, and the characteristic vernal features of a California winter are all around us. The young grain and grass are fast covering the sear expanses left by summer's drouth and heat, and soon acres upon acres of bloom will adorn the landscape. The storms seem for the time being to have ceased, the air is balmy and transparent, the roads are drying to the hardness and smoothness of floors—everything external bids to buoyancy of spirits and to the social joys of the holiday season. The country homes will resound with rejoicings and the highways will be thronged with those going hither and thither to holiday visits and reunions. It will be a memorable holiday season—one fit to close the good year 1881 and to welcome the good year 1882; for good it surely seems destined to be.

The outward marks of this year's holidays are but the reflection of the joys within the hearts of our people. As a rule, the people of California were never so generally prosperous as at present. There have been times of more showy prosperity and more lavish expenditure, but never a bounty so well distributed and well cared for as that of 1881. The list of land owners who have this year lifted mortgages would of itself prove this claim, if we could but cite the names. The improvement the country through, the new houses, barns and outbuildings which appear on every hand, the depleted stocks of the tree growers, the orders already filed for cuttings at the vineyards, the continued and extended trade of the implement manufacturers and dealers, the advance in lumber values, the general interior trade in all supplies and merchandise—all these show the prosperity of the people and the progress which is being made in the improvement of homes, the upbuilding of new ones, and the development of our resources generally. We have made frequent reference to these things as they have revealed themselves during the year, but it is proper now to recount them as themes for general rejoicing during the holiday season, and as warrants of activity and prosperity in the immediate future.

But Christmas is not especially the occasion of rejoicing over material prosperity, although it is a poor holiday when the means for procuring cheer are low. Rather is Christmas the day for the turning of the thoughts toward the higher life here and the higher life beyond. Therefore let the rejoicing be that the close of the period of depression has banished from sight and hearing the multitude of fallacies which restless and idle men were crying aloud not long ago. The idea that the idle should divide the cherished savings of the industrious and the provident, and the multitude of ways and forms in which this central thought propagated itself, have all passed away and none is now so poor as to do them reverence. There seems to be a healthier tone pervading the community; the fears of the timorous are banished, the purses of the generous are unloosed; enterprises for the advancement of public intelligence and the promotion of philanthropy are going forward. The clouds of distrust and suspicion seem to be melting away before the sunshine of prosperity.

But Christmas is pre-eminently an occasion for individual devotion and for commemoration of the advent of Him from whose life and teachings our civilization has arisen, and whose precepts point the way to the Higher Life. Let not the day's rejoicings and merry makings obscure this leading significance of the day. Let the truth be proclaimed in public and impressed in private converse. Tell the children whence comes the institution and its name. Thus may the day be a pleasure and a lasting profit.

To all our readers we extend the sincerest well-wishing and the hope that to all in their hearts and in their homes there may be A MERRY CHRISTMAS.

THERE is an artesian well in the Bay of San Francisco. It is about two miles from the Alameda shore, opposite Newark, at a house on the oyster beds of Doane & Co. This house is on a platform set upon piles. The well is 212 ft. deep, with an outside pipe of eight inches and one of six inches on the inside. A filling of cement prevents leaking and saves the inner pipe from salt water. The water is good. These oyster beds cover a large area, are located in Alameda, Santa Clara and San Mateo counties, and are planted with Eastern oysters.

RAMIE, NOT JUTE.—We have forgotten to mention sooner that the communication in our issue of Dec. 3d, concerning the growth of jute on Paige & Morton's ranch in Tulare county, was in error, because the plant there grown was ramie, not jute. The remarks about the unsatisfactory growth of the textile were, however, correct.

## QUERIES AND REPLIES.

## Persons Who Have Eaten Carp.

EDITORS PRESS:—In your paper of Dec. 3d, you invite "statements of readers on carp as food." First, let me say I never sold a carp, have none for sale, but have three ponds stocked with carp; the largest covers a little over an acre. I received my first stock from San Francisco, the second lot from Mr. Hebborn, of Natividad, Monterey Co. This gentleman has a pond of about four acres, stocked about five years since and now contains thousands of fish. Mr. J. N. Besse, Cashier of the bank of Watsonville, and myself, made a delicious breakfast on carp at Mr. Hebborn's, cooked by his daughter, (I think an expert). We eat them in our family, and one and all pronounce the carp, if properly cooked, a fine fish. It does not take "one dollar's" worth of condiments to make a two-bit carp palatable. A Stockton paper to the contrary notwithstanding. But people having carp must not let them mix with gold fish or Chinese carp; this makes soft meat. I have taken a lump of solid fat out of one of these hybrids larger than my fist. I think the trouble with the carp is in the frying pan.—W. E. KING, Watsonville, Cal.

Evidence is accumulating in favor of carp as a table material which will be important to the many who are now arranging ponds, etc. A practical test was made in San Jose last week. B. F. Rankin had two of his yearling carp, weighing a pound and a half each, prepared at the Lamolle House, in the highest style of the culinary art, and invited a few friends with cultivated appetites, to be present and sit in judgment on the merits of the fish. Judge Belden, Hon. C. T. Ryland, and Messrs. Howell and W. B. Rankin were present. One of the fish was boiled plain, and served with appropriate sauce, and the other was roasted, with bits of lemon dressing. The *Mercury* says: Judge Belden was somewhat prejudiced against the fish, but his mind was open to conviction. In the outcome he admitted that he was agreeably disappointed. Mr. Ryland thought the fish superb, resembling, in his judgment, the Mississippi catfish. And the general verdict was that it was a success. The fish, as Mr. Redding states, has no marked or distinctive flavor. Its excellence was no doubt due to the capital manner in which it had been cooked. In fact, bad cooking would spoil the best of fish.

Another case of gastronomic experience is recorded by the *Visalia Delta*, the fish being taken from Mr. Osborn's pond on the Tule river. The flavor of these fish, as is attested by the *Delta* reporter, is delicious, and unequalled by any native fish in California waters. The absence of bone renders them a delightful repast, and to this must be added the fact that the flesh is firm, juicy and nutritious, the flavor somewhat resembling that of mountain trout.

The editor of the *Martinez Gazette* has also eaten carp, for he says that Mr. Dickinson of Concord, some months since when he called at his place, took three fish weighing about half a pound each, from a tank fed directly by his artesian well and asked the editor to taste their eating qualities. He did so, and found them quite equal in flavor and firm texture of flesh, to any fish he had ever eaten.

## Pleasant Valley Oranges.

EDITORS PRESS:—As your valuable paper is mostly made up from agricultural notes, I thought it might not be out of place for me to give you a few notes on my experience with orange trees in this valley. Twelve years ago next spring I planted one hundred one year old seedling orange trees. I planted them on bench-land about 75 ft. above the average level of this valley. The land is sandy and rich. I have never watered them, nor do I think they need it now. They now have on the third crop of fruit, some of the trees having on as high as 300 oranges at present. The largest of my trees are 12 to 16 ft. high, with stems 6 inches in diameter. They have never been affected with any disease except a slight touch of red scale which does not now seem to increase. The coldest weather we have does not affect them only by turning some of the youngest growth a little yellow. The mercury gets to 25° above zero every winter and sometimes as low as 20° and still they stand it and do well. The fruit begins to ripen here about the middle of November. As yet I have never pruned them only to keep the trees in shape. I expect to see the day when orange orchards in this vicinity will be quite extensively grown on account of them ripening their fruit from two to four weeks earlier here than Los Angeles or most other places in this State.—W. J. PLEASANT, Pleasant Valley, Dec. 14, 1881.

This record of experience is valuable and interesting. The fruit sent by Mr. Pleasant is good-sized, bright and clean, well ripened and of delicious flavor. There is every reason to believe that this little grove will prove a very profitable investment.

## Twine Fence or Netting.

EDITORS PRESS:—If you will look in *Queries and Replies* column in your issue of Dec. 11, 1880, I think you will find what Mrs. Leavett, of Saticoy was inquiring for in your issue of last week.—S. N. WICKOFF, Salinas.

Yes; and we print the above just to show how mole-eyed and stupid one can be—even if we have to illustrate by ourselves. Not only did we treat of twine last December, but we have had it around our chicken yard all summer. The fact is we had called the stuff "netting" and when the term "twine fence" came up we did not recognize it. The material is known as "lawn tennis netting." It is sold by the pound and when we bought cost 65c @ lb. A pound contains about 20 square yards of the net. It is sold by Armes & Dallam, 228 Front street, S. F.

## The Loquat.

EDITORS PRESS:—A correspondent of yours makes inquiry with regard to the loquat. I have a tree that has borne fruit for three years. It ripens during the month of Febru-

ary. The tree is now heavily laden with fruit in all stages—nearly grown and down to the blossoms. So J. R. M.'s is probably blossoming in season. The fruit is very delicate in flavor, and ripening, as it does, at a season when fresh fruits are not in order, I wonder that it is not more generally cultivated.—K., National City, San Diego county, Dec. 12th.

## Floral Farming.

EDITORS PRESS:—Will you be kind enough to give me the names and address of any parties within your knowledge who may be engaged in "flower farming," for the purpose of using flowers to extract their essential oils. A new corner in your lovely land, just beginning ranch life, I am desirous of introducing some new features and relieve the prosaic realities connected with stock and grain raising. The ethetic craze takes possession of the sterner sex sometimes, as well as the gentler portion of humanity.—B., Gabilan, Cal.

There has been something done in a preliminary way looking toward perfume farming in Santa Barbara county and perhaps elsewhere. We have heard nothing of last summer's progress and experiences. Will readers give us such information?

## Christmas and Christmas Observances.

We find the following interesting statements concerning Christmas in the latest edition of "Chamber's Encyclopedia:" Christmas, the day on which the nativity of the Savior is observed. The institution of this festival is attributed by the spurious Decretals to Telesphorus, who flourished in the reign of Antoninus Pius (138-61, A. D.), but the first certain traces of it are found about the time of the Emperor Commodus (180-192, A. D.). In the reign of Diocletian (284-305, A. D.), while that ruler was keeping court at Nicomedia, he learned that a multitude of Christians were assembled in the city to celebrate the birthday of Jesus, and having ordered the church doors to be closed, he set fire to the building, and all the worshipers perished in the flames. It does not appear, however, that there was any uniformity in the period of observing the nativity among the early churches, some held the festival in the month of May or April, others in January. It is, nevertheless, almost certain that the 25th of Dec., cannot be the nativity of the Savior, for it is then the height of the rainy season in Judea, and shepherds could hardly be watching their flocks by night in the plains.

Christmas not only became the parent of many later festivals, such as those of the Virgin, but especially from the 5th to the 8th century, gathered round it, as it were, several other festivals, partly old and partly new, so that what may be termed a *Christmas cycle* sprang up, which surpassed all other groups of Christian holidays in the manifold richness of its festal usages, and furthered, more than any other, the completion of the orderly and systematic distribution of church festivals over the whole year.

Not casually or arbitrarily was the festival of the Nativity celebrated on the 25th of Dec. Among the causes that co-operated in fixing this period as the proper one, perhaps the most powerful was, that almost all the heathen nations regarded the winter solstice as a most important point of the year, as the beginning of the renewed life and activity of the powers of nature, and of the gods, who were originally merely the symbolical personifications of these. In more northerly countries, this fact must have made itself peculiarly palpable; hence the Celts and Germans, from the oldest times, celebrated the season with the greatest festivities. At the winter solstice, the Germans held their great Yule feast, in commemoration of the return of the fiery sun-wheel; and believed that during the 12 nights reaching from the 25th of Dec. to the 6th of Jan., they could trace the personal movements and interferences on earth of their great deities, Oden, Berchta, etc. Many of the beliefs and usages of the old Germans, and also of the Romans, relating to this matter, passed over from heathenism to Christianity and have partly survived to the present day. But the church also sought to combat and banish—and it was to a large extent successful—the deep-rooted heathen feeling, by adding—for the purification of the heathen customs and feasts which it retained—its grandly devised liturgy, besides dramatic representations of the birth of Christ and the first events of his life. Hence sprang the so called "manger songs," and a multitude of Christmas carols, as well as Christmas dramas, which at certain times and places, degenerated into farces or fools' feasts. Hence also originated, at a later period, the Christ-trees, or Christmas-meats and dishes, such as Christmas rolls, cakes, currant-loaves, dumplings, etc. Thus Christmas became a universal social festival for young and old, high and low, as no other Christian festival could have become.

THERE is intense excitement in Europe regarding the activity manifested by France in increasing its armament. France has just ordered 900 new cannons of Hotchkiss, the American armorer, for the French navy and other purposes. The French Government has requested Hotchkiss to double the capacity of his works at St. Denis.

SETTLERS are coming in numerous along the line of the California Southern railroad, in San Diego county, and are taking up every available piece of land that can be obtained.



Of Christmas.

Whether, in their frequent dealing with the theme, literature and art have always quite done justice to the "Sweet Feast of Christmas," is, to our thought, somewhat questionable. In so far as both have impersonated it, the festival has come to us as the twin brother of the tottering old Year. Sometimes, indeed, with red holly berries about his brow; sometimes with a cornucopia of hounties, which leads us to wonder, and especially in the estimate of the

"Chimnie's sinuous and smutty track," how the gray-headed could venture upon the distribution. He laughs indeed; as a quaint poet has it—

"His very foot has music in't  
As he comes up the stair;"

and yet the rosy cheek and beaming smile remind us of Thomson's description of Chaucer:

"The laughing, venerable sage,"

rather than of the glad and gladdening youth. For we think the latter the true representative of Christmas. True, his life is that of almost two decades of centuries. For the sake of generations to come, however, we are happy in the conceit that he is yet in his minority. If, in the procession of the seasons, he must ever accompany that grave personage who, in the semblance of the year, with scythe and hour-glass in hand, has so often and solemnly taught us of our frail estate, we greatly prefer that it should be as the acolyte of his benediction than as the partner in his infirmities. The fragrant incense of Nativity may well float about the white vestments and trembling steps of a hoary age, and art do something more for us than it has yet done, in picturing the gentle and sweet ministry of the "Virgin's Wondrous Child," in the solemn recession of the year.

We confess, however, that while we write we are not a little self-reproached. The traditional Christmas has afforded us many a delight; and, when we reflect, we a little fear that our ideal will, after all, do more justice than ourselves to the Christmas of the poets and the painters. The rubicund visage which comes up to us in the memory of days passed away; the laughing eye and the merry greeting of the white head of the annual; all the embellishments with which trueful song and cultured art have sought to grace the wint'ry advent of the festival—we are grateful, thrice grateful, as we think of them. Nor are we without reproach. The centuries merry-maker himself seems to frown at us while we write. We, perhaps, intimate that these "toilers of the pen and pencil" have disguised him; that, like the son of Jesse, he is really "a youth, and of a ruddy countenance," but with hoary mask and antique vestments. "By no means," he answers—his years are his pride—

"The year and I are hale old men;"

if we are not both Cheeryhles, I, at least, do not carry a wallet. That wild blade, Will Shakespeare, who so long ago roistered well at my revels, and then moralized, has told you who it is that wears it, and what he puts into it. I carry no pack. Trouble and I sometimes meet, indeed, and I lighten his burden. I smile alike in cot and hall, alas! how often only to see the tear glisten, and unwittingly to renew the pang; but then, in the long run, I have found that even Sorrow cannot get along without me. Am not I Sir Evergreen? Learn what you will from this solemn fellow-traveler of mine; call him what you will; perhaps he may deserve it:

"Fierce spirit of the glass and scythe!"

let him prate of woes; let him close up his husiness; mine is perennial."

And then this Christmas of tradition talks more of himself: "Why," he adds, "I am obliged to help out this very Year, as I have done for many brothers of his before him. How would the old fellow go into retirement if I did not cheer him? He has some work yet to do: his harvests are not quite gathered; but I do what he cannot do alone. I bring 'the fir, the pine and the hox together,' and wreath the wintergreen about his sheaves. That queer chronometer of his, I put the holly about it, and rubicate his scythe with something better than he sometimes chooses to put upon its blade. He was brought up to better work than he has always done; but where he has planted thorns and sown decay, I scatter fragrant things of life

and beauty. I cannot help my gray locks, but I can help his looks. See if I do not 'keep up.' Why, there he goes stumbling amid the snow drifts, freezing and complaining, while, wherever I may be, after they have covered him—although I shall stay about until Twelfth Night—you shall hear something good of me all along until I return. I was born, indeed, in poverty; a good many years of my childhood were those of hardship; but then I always found some kind friends. As my means increased, I have sought to balance the account by making myself and others merry. I am an old fellow, but a true. Don't be sad on my account. If there are some faded flowers in your Christmas wreath, and some have fallen out, bring the rest, and let me crave a welcome—*semper viresco*."

We are not a little in sympathy with this still half-grave, half-gay discourse of the traditional Christmas. If the time were ours, we should count it not the least among our recreations to sit long with him in our rural home, as Emerson says:

"Around the radiant fireplace enclosed,  
In the tumultuous privacy of storms."

We are quite sure, however, that he would insist that he is old. "Why, so old," he would say, "that a rhymester of one of the centuries that I knew long ago, wrote of me as the venerable dead! And this, too, when he knew what my good friend Irving has noted, that the brand remaining from the Yule-log is carefully put away to light the next year's Christmas fire. Ah," he says, "there is Herrick, he remembers it:

you can be, as you ought to be, an ever-young Christmas. In all right church precedents your visit is to be prolonged, so that you can take the new year by the hand. You can hold it longer if you will. Your better mission is something higher than that of a holiday. In a few days, Christmas, the Church will put on her garments of praise to welcome you; the palace and the cottage will light up with the festive fires. In that old raiment of yours, and yet smiling, we already see you among the hooks and the gifts in the windows. The carol, the chant, and the hymn, are even now upon the lips of children, and the chimes of Advent foretelling your coming. Much will he said about you, under lowly, humble parish roofs and groined cathedral arches. Here, as we sit together and love you, alike in our memories and our anticipations, take a word of counsel. We must preach when you come. We are already gathering green omphlets from among the snows, to make the place of the sanctuary of the Christ-Child glorious. You must help us, when we perform the priest's office. Tell the children that Christ was the Christ of children; that "He appeared among men as a child upon His mother's bosom, that He might teach men to feel for Him and with Him, and to be sure that He felt for them, and with them; that He took the form of a little child to draw out all their love, all their tenderness, and all their pity." Come among men with lessons of manly strength in the love of truth and goodness. Come to age, and, with the ever-fresh tidings

share in kitchen composition. When the dinner comes upon the table the children will surely claim their share of honor for its excellence.

Many of our young friends will see themselves portrayed in the engraving which we present. May they enjoy the day from dawn to eve.

Christmas There and Here.

No mode of keeping Christmas has ever been so celebrated in song or legend as that of England, in the olden time, and certainly no other has ever been so picturesque or festively joyous. The merry season ran from Halloween to Candlemas, thus covering the whole winter. Frolic reigned supreme, under the Abbot of Ureasion and the Lord of Misrule, enthroned in grotesque majesty. The blazing yule-log flung its light on the sports, in which all ranks mingled, and cast into light and shade the walls wreathed with ivy, holly and the charmed mistletoe. The hoar's head and wassail howl have their place in the picture handed down to us; we hear the music of the minstrels; we hear and see the gibes and antics of the jesters and mummers; and at midnight the carol of the waits rises clear through the frosty air without. But we must not forget how powerfully contrast contributed to enhance and protract all that merriment. It was, for the humble, the one bright spot in the whole year where man was stern, and when nature at that season

was stern also. Grim feudalism unbent from its severity at the call of the sacred season, and lord and serf mingled to exercise for a while their gentler faculties, and did so with more zest because of the novelty. Then the harsh winter of rain and snow and floods suspended all the labors of the field, and life within doors would have been intolerable if passed in gloom instead of brightness, and in silence instead of mirth.

Let nobody depreciate this sunnright Christmas of ours. Do not undervalue the advantages of our present country and climate and social circumstances for Christmas-keeping as for other things. Cast back a pleasant, but not a regretful eye to the Christmas of the old land, at the root of whose picturesque-ness lay the contrast between the snow without and the blazing hearth within. Ours need not be less merrily celebrated because we do not need the yule log to scare away the fiends of frost and fog and rain. How many are there in the old land who now more taste the bitterness of the season without the cheer of the festival? How many who have

the snows, but not the Christmas fire—who hear the bells, but whose thoughts beat weary chime to their gladdening music? Alas for poor old Europe! With all her proud and picturesque memories, her homes of plenty and pleasure to-night will be only scattered stars on a broad map of sorrow.

Neither let us forget that nature gives to our Christmas an infinitely closer resemblance to the ancient and original one. The shepherds watching in the fields of Bethlehem were scourged by no snowflakes—no winter blasts like those of Northern Europe. Even in winter the Syrian airs are genial, except on lofty Lebanon.

"The palm tree waves by Parphar,  
Under Hermon's gladsome hill;  
In Judah's elmo,  
This holy time,  
The flowers are fragrant still.

Damascus hath rainbow gardens,  
That are blooming like the rose,  
And thro this hour,  
The sacred bower  
Is built of living boughs."

A DUBLIN despatch says the organization against the payment of rents is becoming still more formidable. It is regarded as much of a crime to go into the Land Court as to pay rent. A list of persons who have been served with notices and those suspected of paying rents are posted at the chapel and other places where they can be seen, and although the police tear them down, they are soon posted again.

A LONDON despatch says the Countess of Crawford and Balcaires has announced that she is determined not to offer a reward for the restoration of the body of her husband, the Earl, in order not to create a precedent and encourage the repetition of such outrages. She has requested her son to do the same.



THE KITCHEN ON CHRISTMAS MORNING.

"Come, bring with a noise,  
My merrie, merrie boys,  
The Christmas brand to the firing;  
While my good dame, she,  
Bids ye all free,  
And drink to your heart's desiring."

We think, Old Christmas, as you fain would call yourself, that you may do much, if you will, to render yourself useful in even a better way than you tell us of. Whatever that and you may be, you are what you are, simply because, nearly 19 centuries ago, a lowly, yet Divine Child came into this else sad world. You may tell us of what in the olden time—

"A man might then behold  
At Christmas in each hall,  
When your old cap was new;"

you may give us the details which some of those ancient chroniclers of your past days have given us, "of the quaint humors, the burlesque pageants, the complete abandonment to mirth and good-fellowship." They were times, indeed, full of spirit and lustihood, as that dear friend of yours and ours, now at rest, where he loved to dwell, has told us: "Men then enjoyed life heartily and vigorously; times wild and picturesque, which have furnished poetry with its richest materials, and the drama with its most attractive variety of characters and manners." We know, too, that but for you, with that disguise of yours, that charming and rollicking Herrick, who once rejoiced in your footsteps, never could have woven so sweet a garland as that which, fadeless, you still carry about with you:

"Why does the chilling winter's morn,  
Smile like a field beset with corn?  
Or smell like to a mead new-shorn,  
Thus on a sudden?—Come and see  
The cause why things thus fragrant be."

But we want a young man's work of you. We want you to see how, if you persist in being old—and we will be sure not to forget you as such—

of a life ever new in the exercise of a Christian trust, teach it that its waning years but precede the dawning of another and longer day. Come to sorrow, and minister better things to it than lessons of endurance. Come to the mart, and teach it honesty; come to the State, and teach it righteousness; come to the pulpit, and hid it tell not alone what faith is, but also how faith works; come to the nations, and teach them peace; come to the world, and help to make it more and more a dwelling-place for "the King in His beauty."

"Bide the waits sing,  
Bide the chimes ring."

"Ring in the valiant man and free,  
The larger heart, the kindlier hand;  
Ring out the darkness of the land,  
Ring in the Christ that is to be."

Preparing the Christmas Dinner.

Christmas begins very early with the children. The tardy December sun is often too slow a torch bearer and the unaccustomed gleam from many windows on a Christmas morning is a token that the little ones are awake and searching for the footprints of Santa Claus around the hearthstone. Beginning thus early with their gifts the fleeting interest of childhood seeks new fields before the morning is half spent and the kitchen is resonant with little voices laden with countless queries concerning the coming Christmas dinner.

Our artist has seized a view of a home where this flight to the kitchen has just occurred, and all, even to the baby, are clamorous to have some share in the preparations for the feast. The request is cheerfully granted and little two-years' old is now enjoying her



## The Convention of Fruit Growers, Fruit Dealers and Nurserymen.

### Official Report of Proceedings and Transactions.

#### PREFACE.

By order of the Board of State Horticultural Commissioners, a convention of the fruit growers, shippers, packers, nurserymen and others interested in horticulture in California was called by Matthew Cooke, Chief Executive Horticultural Officer, to meet at Sacramento, on the 6th and 7th of Dec., 1881, for the purpose of consultation and discussion on the most practical means of exterminating the insect pests now infesting the orchards and gardens of the State; and such other subjects as might be introduced for the improvement of the fruit growing interests of California. The following is the journal and complete record of the proceedings had at said meeting as furnished by the secretaries:

The horticultural convention began its session in the Assembly Chamber, Sacramento, Cal., Dec. 6, 1881. The meeting was called to order at 10 o'clock A. M. by Matthew Cooke, Chief Health Officer. Upon motion of Dr. Chapin, Prof. C. H. Dwinelle was named as temporary Chairman, and William Johnston as Vice-Chairman. J. H. Wheeler and Edwin F. Smith were named as temporary Secretaries.

Mr. Johnston moved that a committee of five upon organization be named by the Chair. So ordered. Whereupon the Chair named, as such committee, A. S. White, of Riverside; R. B. Blowers, of Yolo; M. T. Brewer, of Sacramento; N. R. Peck, of Placer, and John McMullen, of Solano.

Matthew Cooke was, upon motion, added to the committee.

Upon motion of Mr. Johnston, the convention took a recess until 11 o'clock.

The convention re-assembled at the appointed hour.

The committee upon organization submitted the following report:

#### Officers.

Prof. C. H. Dwinelle, President; Hon. Wm. Johnston, President pro tem; J. H. Wheeler and Edwin F. Smith, Secretaries.

#### Order of Business.

1. Address by the President; 2. Report of Chief Health Officer; 3. Appointment of committees on ways and means, fruit growers, fruit shippers to Eastern cities, fruit shippers west of Omaha, fruit packers, commission merchants, nurserymen; 4. Address of welcome by Mayor J. Q. Brown; 5. Essay on insect pests by Dr. Chapin; 6. General discussion.

Mr. J. H. Carroll moved the adoption of this report. So ordered.

Mr. Johnston moved to limit speeches, other than essays and set speeches, to five minutes' time. So ordered.

Upon motion, the first order of business was passed until after the noon recess.

Matthew Cooke, Chief Horticultural Officer, submitted his report.

#### Matthew Cooke's Address.

Mr. President:—I suggested to the State Board of Horticulture the propriety of calling a convention of fruit growers and representatives of the various industries associated with horticulture, so that it would be fully understood by all concerned, what would be expected or required of the respective interests toward the enforcement of the laws for the protection of horticulture.

The interest manifested by the large attendance present, from all sections of the State, representing the various industries and branches of business connected with fruit growing, cannot fail to produce beneficial results.

The President, Prof. Dwinelle, will state to you the present situation of the fruit growing industry and what may be expected from further neglect; his statements I endorse in every particular.

#### Invasion of Insect Pests.

From the time that Smith, Hollister and others planted the fruit orchards on the banks of the American river, until 1875, fruit growers seemingly entertained the opinion that their industry in this State was absolutely safe from the invasion of insect pests, such as were known in orchards in States east of the Rocky mountains. Alas! they were mistaken. In the summer of 1875 the codlin moth, *Carpocapsa pomonella* made its appearance in the vicinity of Sacramento and in the same careless manner in which it was introduced, it was allowed to spread. No precaution of any kind was taken to destroy the pest; but as it was every facility offered for its spread throughout the fruit growing districts—especially by the introduction of the package known as the return box. The adoption of this package was a serious mistake, so far as the spreading of this pest was concerned. This I say without fear of contradiction. The codlin moth was introduced into this State in less than five barrels of apples in the fall of 1873, and was noticeable in orchards in the vicinity of Sacramento in 1875, and can be found in orchards in the following named counties at the present time: Butte, Sutter, Yuba, Colusa, Nevada, Placer, El Dorado, Amador, Sacramento, Yolo, Solano, Napa, Sonoma, Lake, Mendocino, Marin, Contra Costa, Alameda, San Joaquin, Santa Clara, San Mateo, Tuolumne, Calaveras, Tulare, Kern, Los Angeles and in some other counties. Of the 26 counties named, County Boards of Horticultural Commissioners have been appointed in 11 of them. It is unnecessary for me to speak of the amount of damage done to the fruit crop, especially apple and pear, by this pest. Unfortunately it is too well known by all parties interested in fruit growing, and the various branches of business connected with that industry. And in order to impress upon your minds the necessity of an immediate warfare for the extermination of this pest, I will refer to reports received from some members of County Boards of Horticultural Commissioners. One of the commissioners states in his report:

"I have visited all the orchards in my district. Three-fourths of the entire crop of this season has been destroyed by codlin moths. But I can say, to enforce this law, it would take an army of officers. The fruit grower may be induced to put on the bonds, but to get them examined as required by the rules, would be an impossibility." This may be taken as a purport of the report from two counties.

Since the appearance of the codlin moth in 1875, orchards in several sections of the State have been infested by various species of scale insects. In the citrus groves of Los Angeles we find the so-called red scale, *Aspidiotus aurantii*. It was thought until this season, that the pest was confined to Los Angeles county, but at present it can be found as far north as Marysville.

The black scale, *Lecanium oleæ*, is to be found on nearly every variety of citrus and deciduous fruit tree in the southern counties and in central California.

The soft orange scale—*Lecanium hesperidum*—is found on citrus trees throughout the State.

The common apple scale—*Aspidiotus conchiformis*—is found in central California, especially in the bay counties and Santa Cruz.

The scale—*Aspidiotus rapax*—is found in some of the bay counties, Santa Cruz, and some of the southern counties, especially Los Angeles.

The so-called San Jose scale—*Aspidiotus perniciosus*—has infested nearly every variety of deciduous fruit tree in Santa Clara county, and can be found in some orchards in San Joaquin, Yolo and Solano counties.

The cottony cushion scale—*Icerya purchasi*—is found in Santa Barbara county in several orchards, and is also reported from Los Angeles and Santa Clara counties.

The white scale—*Draspis roseæ*—is found on the blackberry and raspberry vines.

The San Jose scale, black scale, and the *Icerya purchasi* are found on various varieties of ornamental trees, and in some cases, on vegetables.

There are several species of scale insects on ornamental trees and shrubs in gardens and other places throughout the State, that are certainly dangerous to the fruit interests.

Red Spider.—The orchards and gardens throughout the State have a liberal supply of this pest, *Tetranychus telarius*.

Caterpillars: In Marin county a species of tent caterpillar, *Clisiocampa constricta*, has done some damage.

In Santa Cruz the tent caterpillar, *Clisiocampa Americana*, and the caterpillar of the Tussock moth, *Orgyia leucostigma*, have done some damage, also in some localities in adjoining counties.

Woolly aphid: A serious amount of damage has been done to the apple trees throughout the fruit counties by this pest, *Myzoxyla mali*.

Borers: The loss of trees in the orchards and gardens of this State from the different species of borers is very great.

Saw-flies: The damage done to foliage of pear trees by the larvæ of *Nematus similis* and *Selandria cerasi* (pear slug) in 1881 was double that of any previous year.

Add to the above the fungi, *Fumago salicina*, found on fruit trees infested by black scale and the mildew, and it will be readily seen why a united warfare on insect pests, etc., should be organized. The question is often asked, how and when these insect pests came to the orchards of this State. It is not my intention to discuss the question at present, as I consider it of secondary importance. It is an undisputed fact that they are here, and the prominent inquiry should be, How can they be exterminated?

#### Damage to Orchard Property.

In the absence of statistical information, I have made diligent inquiry, as to the damage done to orchard property in this State, and from such information as I received from reliable sources. The actual depreciation in value is not less than \$2,000,000.

#### Damage to Fruit Crop of 1881.

The orchard crop of 1881 produced less than 35% of choice marketable fruits; or, in other words, less than 35% of the entire crop produced in 1881, could be classed as choice marketable fruit.

From this statement, and I assure you it is not exaggerated, the prospects of the fruit-growing industry are not encouraging. However, the results are such as would be reached in any other industry conducted in the same manner. The system of fruit-growing as practiced in the past by a large number of orchardists may be termed the "go as you please," and has produced a chaos from which order could only be restored by the aid of legislation. Such legislation has been obtained, and the object of this convention is to construct a solid foundation upon which can be organized a united warfare for the extermination of those evils, which through negligence have been allowed to spread throughout the orchards of what may be termed the fruit-growing counties of this State.

#### Legislation.

In relation to the legislation obtained, allow me to say the fruit growers of California are under obligations to Senator Baker, of Santa Clara, Assemblyman Young, of Sacramento, Reynolds and — of Santa Clara, and Crank, of Los Angeles, for their efforts in procuring legislation, and especially to Senator William Johnson, of Sacramento county, Vice-President of the Senate, who led, as it were, the forlorn hope of the horticulturists. After the first bills introduced were defeated, I will remember his telling his colleagues that he stood on the floor of the Senate a representative horticulturist, and that before the adjournment of

the Senate the wishes of the horticulturists would be respected. How well he kept his word the sequel proves.

What has been done by authority of the laws? By provision of section 8 of viticultural bill the Board of State Viticultural Commissioners are empowered to appoint a Chief Executive Horticultural Officer, and to issue quarantine rules and regulations for the protection of fruit and fruit trees. On the 12th day of March last, at a meeting of the Viticultural Commission Mr. Geo. West, Commissioner for the San Joaquin district, offered a resolution which was unanimously adopted by the Board, providing for the appointment of an advisory Board of Horticultural Commissioners, to consist of 11 members, and their duties specified. Said Advisory Board shall co-operate with the Viticultural Board, and make such recommendations concerning the horticultural interests and the appointment of horticultural officers as they may think proper. This liberal action of the Board of State Viticultural Commissioners was heartily accepted by the horticulturists, and the following Board was appointed: W. W. Smith, Vacaville, Napa district; M. T. Brewer, Sacramento, Sacramento district; W. B. West, Stockton, San Joaquin district; Felix Giller, Nevada City, El Dorado district; A. S. White, Riverside, Los Angeles district; Dr. S. F. Chapin, San Jose, San Francisco district; A. Cadwell, Petaluma, Sonoma district; C. H. Dwinelle, Berkley, Elwood Cooper, Santa Barbara, Charles H. Shinn, San Francisco, Matthew Cooke, Sacramento, for the State at large.

The Advisory Board met on the 5th of April at San Francisco, and organized by electing Prof. C. H. Dwinelle President, and Mr. John H. Wheeler, Sec'y.

The Board of Horticulture meets on the Thursday preceding the last Friday in March, June, September and December.

By authority of the horticultural law, approved March 14, 1881, County Boards of Horticultural Commissioners have been appointed in 15 counties, by the Boards of Supervisors of the respective counties as follows: Sacramento, Yolo, Solano, Santa Barbara, El Dorado, San Bernardino, Santa Clara, Santa Cruz, San Joaquin, Amador, Contra Costa, Nevada, Placer, San Diego and Alameda. Petitions have been presented according to law, and appointments refused in Los Angeles and Sonoma counties. In the other fruit growing counties, from apathy of the fruit growers, no action has been taken to present petitions. This opposition to appointments of county Boards by the Supervisors in some counties can only be attributed to their ignorance of the necessity of such boards, or to their endeavors to favor the opinions of individuals rather than the opinions of the masses of fruit growers, for many of the orchards or orange groves of Los Angeles county are seriously infested by scale insects. The citrus trees and fruit from that county are transported to all sections of this State, and liable to spread contagion, yet a majority of the Board of Supervisors have refused to appoint a county Board which was petitioned for according to law.

In my opinion this is a serious mistake in not assisting to foster the fruit growing industries of the county, and hope that this error will be rectified at the earliest opportunity. Not only should a Board be appointed in Los Angeles, but all other fruit growing counties.

By authority of the Viticultural Law (approved March 4, 1881), and approved by the Board of State Viticultural Commissioners, I issued Quarantine Rules and Regulations on the 12th of November, which will be advertised according to law, and appointment made of local resident inspectors. I hope that the subject in regard to this enforcement will be brought before this convention and discussed.

By the direction of the Board of State Horticultural Commissioners I prepared a treatise on insects injurious to fruit and fruit trees and recommendation of remedies for their extermination, which was issued from the State printing office. The first edition of 7,800 are distributed; the second edition of 2,200 are issued and partly distributed.

I have given you a brief report of the action taken under the laws to the present time, and respectfully ask this convention to take such action as will provide for a strict enforcement of said laws in the future.

Fruit growers, I believe I can say to you in the greatest sincerity that the prospects for an immediate extermination of the insects injurious to fruit and fruit trees are greatly improved from what they were one year ago. Legislation has been obtained. A consolidation of interests have been consummated, as witnessed by the various branches of business represented here, connected with your industry, namely: ship pers, merchants, packers, commission merchants and nurserymen.

I am confident that any plan agreed upon by the combined interests represented here for the improvement in quality of orchard produce cannot fail to be successful.

You should report to this Convention through a committee of your members a series of resolutions.

1. Let it be distinctly understood that no longer will orchard property be allowed to be kept as it were for the express purpose of propagating insect pests, and to spread contagion in the neighborhood where such property is located, such places being declared by law a public nuisance.

2. That the shipment of fruits or other transportable material infested by insect pests will no longer be allowed without incurring the penalties of the law.

3. That fruit-growers residing in counties where county Boards of Horticultural Commissioners have not yet been appointed, present petitions to the Board of Supervisors in their respective counties, and insist upon such appointments, as the law authorizing such appointments is mandatory.

4. That the practice of selling the crops, of orchards infested by any insects injurious to fruit and fruit trees, to irresponsible and disinterested persons, is against the interests and improvement of the fruit-growing industry.

5. That the introduction of this study of insects injurious to fruit and fruit trees into the public schools be encouraged. And also the formation of youth's associations in every fruit-growing district of the State for entomological studies.

6. Demanding a strict compliance with the laws for the protection of horticulture.

The fruit shippers are represented here. I recommended them to report to the convention through committees of their number, one representing those who ship to the Eastern markets, and another representing those who ship to points west of Omaha, what varieties of fruit are best adapted for their respective trades, the required quality of such fruits, and such other information as they may deem proper.

Fruit packers, with you will rest a great responsibility in this work of enforcing the laws for the extermination of insect pests. Your business is such that it is difficult to convince irresponsible and unintelligent parties who have fruit for sale that they cannot sell everything they ship or bring to the cannery at a price. I consider this a great injustice to the capital invested. And such opinions should not be allowed to remain uncontradicted. You should report to this convention through a committee of your number what varieties of fruit your trade requires and proportions of varieties, and such agreements as you will require of those selling or shipping fruit to your respective establishments, to protect you in case of their non-compliance with the quarantine rules and regulations, and such information as you may deem proper.

Commission merchants: You are liable to have more trouble than any other branch of business connected with fruit growing, by the enforcement of the quarantine rules and regulations. Unlike the Eastern and other shippers and dealers, who know, or at least think they know, what they are buying, the products of orchards are sent to you to sell, and it cannot be expected that you are aware of the quality of fruit in each package. The fruit has to be exposed for sale, and the local inspector will be likely to find it, if infested by insect pests. You should report to this convention, through a committee of your members, such advice to fruit growers as you may think proper. Also such agreements as you will require from fruit growers as will protect you in case of their non-compliance with the quarantine rules and regulations.

Nurserymen: You will be required to assist in this great work. You are interested to a great extent in the success of fruit culture, and a faithful compliance with the quarantine rules and regulations, before shipping nursery stock, will be of great assistance in preventing the spread of insect pests. You should report to this convention, through a committee of your members, such information concerning the branch of industry in which you are engaged, as you may think proper.

I respectfully suggest to the members of this convention that they shall introduce such subjects for discussion, as will tend to improve the fruit growing industry.

An exhibit of insect pests will be made at the store of M. T. Brewer & Co., Second street, between J and K, this evening at seven o'clock; also of such apparatus as have been found to be most convenient for the applying of liquid solutions on trees, etc.

Mr. President and members of this convention I am confident if a united warfare is made upon the insect pests by all owners of fruit and fruit trees, that within two years from this time, the horticulturists of California will not only claim that they produce the finest fruit in these United States, which is mutually conceded at the present time; but they can produce a larger quantity of choice marketable fruit from a given area than can be produced in any other State, Territory, or country under the canopy of Heaven.

Mr. Johnston moved that a committee of five be named by the Chair to report on the address, after the noon recess. Carried, and the Chair named as such committee M. T. Brewer, F. Gillett, J. H. Corroll, Chas. Gammon and Mr. Thurber. Mr. Brewer declining, Mr. Johnston was named instead.

A recess was taken until 1 o'clock P. M.

Upon re-convening the following report was made upon Mr. Cook's address:

Report of Committee on Address of Matthew Cooke.

The Committee, to whom was referred the report of the Chief Horticultural Officer of the State, Matthew Cooke, Esq., beg leave to report as follows:

The convention has doubtless listened with great pleasure and still greater instruction to the many valuable and useful suggestions therein contained, not alone to the producers of the fruits on this coast; but likewise to all shippers, consumers and all others having in hand the well-being of that inestimable source of our coast's wealth at heart. The Committee trust that the report may be so placed before the public of the State that it may not fall as a dead letter but that its full merit and usefulness may be perpetuated by becoming a text to be studied and learned in the interest of the great good that has called us together. Your Committee further recommend that the report be published as soon as practicable for general circulation, and, in conclusion, beg to offer the following:

(CONTINUED ON PAGE 429.)



# HUNTINGTON, HOPKINS & CO.,

SAN FRANCISCO and SACRAMENTO,

SOLE AGENTS FOR THE PACIFIC COAST.

## THE BRINKERHOFF PATENT Metallic Fencing.

(WITH AND WITHOUT BARBS.)

This is by far the most COMPLETE, PERFECT and VALUABLE Barb Fencing ever put upon the market.

It has not only all the merits and advantages of the best Barb Wire, but has many valuable features that Barb Wire does not possess, viz:

1. It is made of COLD ROLLED TEMPERED STEEL.
2. It is nearly TWICE AS STRONG as double Barb Wire.
3. It can be READILY AND PLAINLY SEEN.
4. It is FAR LESS DANGEROUS than Barb Wire, for it has no hooked or angling Barbs.
5. It will not stretch or sag.
6. It is galvanized AFTER the Barbs are cut and put on.
7. It is entirely rust-proof.
8. It is much easier to handle and put up than Barb Wire.
9. It can be READILY and QUICKLY tightened, without pulling out the staples.

Finally—A summary of the whole matter is contained in a simple, undeniable proposition, viz:

The purchaser of this fencing gets in it, not only ALL of value, that he could in buying Barb Wire, but a GOOD DEAL MORE.

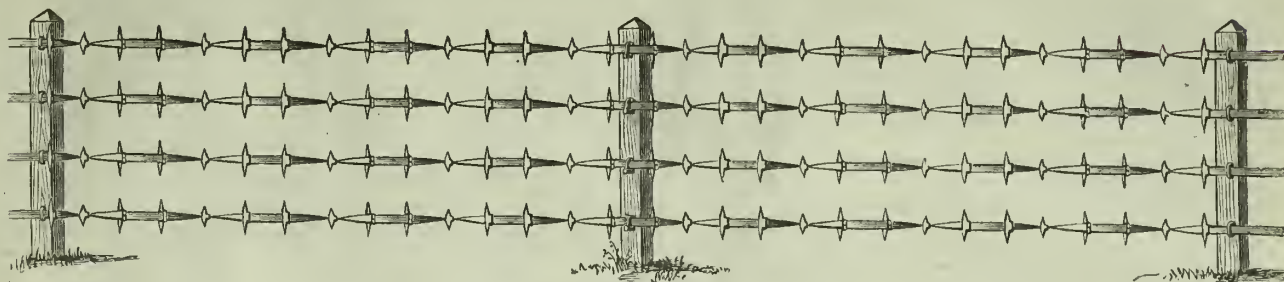
Call and examine this UNRIVALED FENCING.

It is warranted as represented, in every respect.

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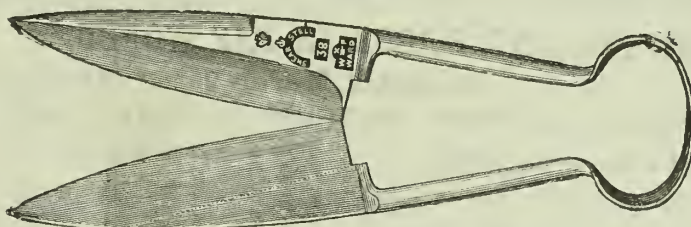


BRINKERHOFF'S METALLIC FENCE, WITH BARBS.

The average TESTED strength of this Fencing is TWO THOUSAND AND TWO HUNDRED POUNDS, or nearly TWICE AS GREAT as that of double barbed wire, although it is NO HEAVIER per rod. THIS GREAT STRENGTH is due to the Fencing being made of A FINE QUALITY OF HIGHLY CARBONIZED STEEL, COLD ROLLED, AND TEMPERED IN LEAD.

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## WARD & PAYNE CELEBRATED SHEEP SHEARS.



A FULL ASSORTMENT ALWAYS ON HAND.

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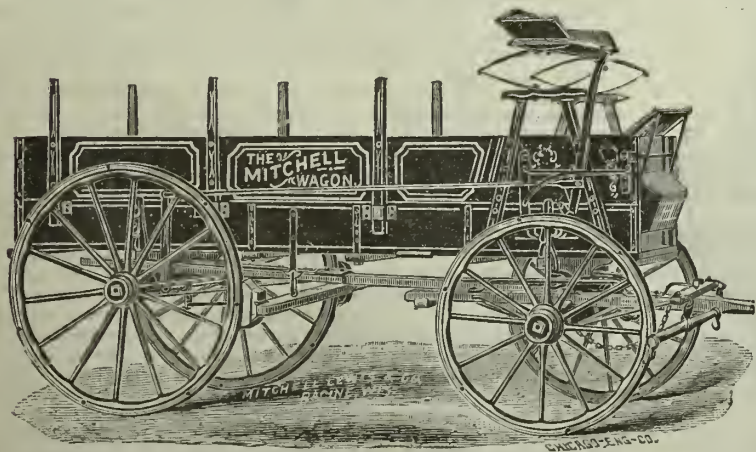
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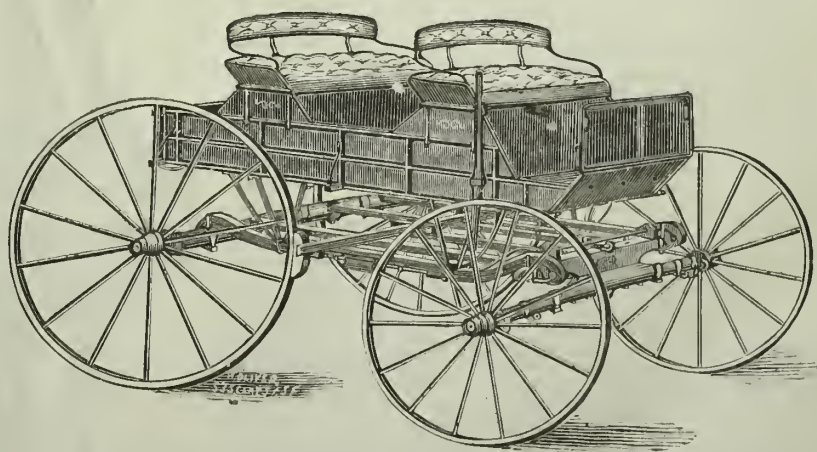
From their own Manufactory in Manchester N H. Also Agents for the

MITCHELL FARM AND SPRING WAGONS.

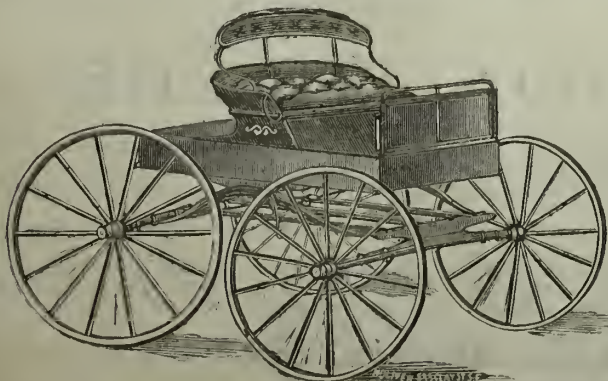
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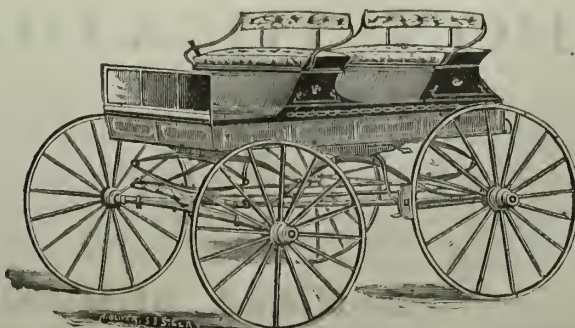
MITCHELL FARM WAGON WITH CALIFORNIA STAKE RACK BED.



THOROBRADE WAGON—TWO OR THREE SEATS—THREE SIZES



SIDE SPRING BUSINESS WAGON—THREE SIZES



FOUR SPRING WAGON FOR RANCH AND FAMILY USE—THREE SIZES.



# THE SWEEPSTAKE IRON WAGON.

## Important Advantages Over Wooden Wagons

Which we think we can justly claim for it:

1st. The material of which it is made is equally unaffected by the hot, dry climate of our interior valleys, or the cool, wet weather of the coast.

Experience has shown that it is almost impossible to make wooden wagons stand in valleys like the San Joaquin, the heat of the sun and the drying winds seeming to destroy the life of the timber, causing them to fall to pieces.

In this respect we feel confident that this wagon is just what has been long needed.

2d. The tires will never require setting, but will simply have to be renewed when worn out, as the wheel can never become "shakky," nor can the spokes get loose in the hub. This alone to many men would make the wagon of twice the value of a wooden one.

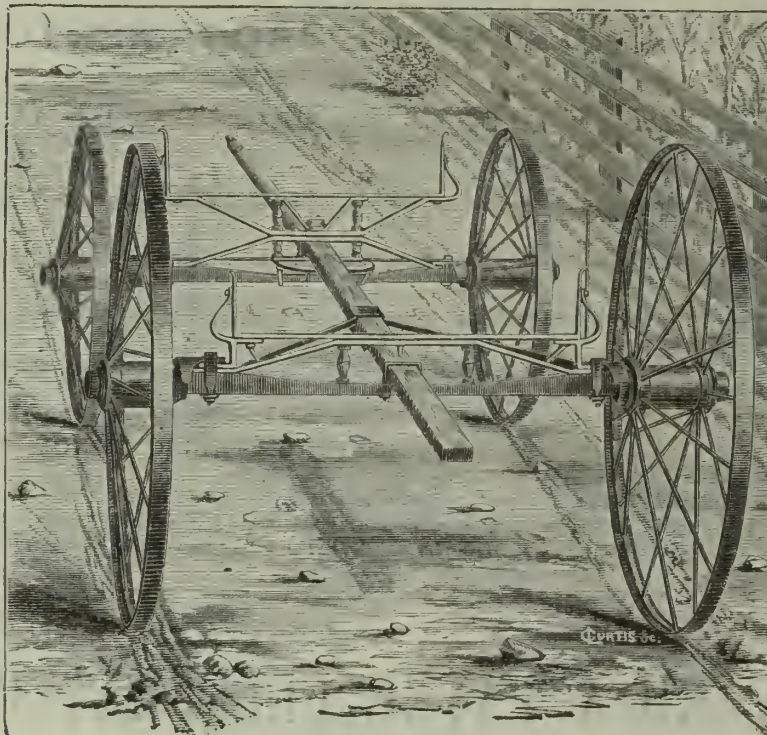
3d. The entire Wagon will last (if the tires are renewed) till the spindles are worn out, and the repairs on it will be next to nothing.

For the above reasons we claim that we are offering to the public the best farm or freight wagon yet made.

They have been severely tested in every possible way, and the result has fully justified all we have ever claimed for them as to

**STRENGTH, DURABILITY,**

**Lightness and Ease of Draft.**



They have been used steadily in hot, dry climates for months, and in sections where it rained almost constantly, and in both cases remained in perfect order.

A good many of our wagons were sold last year with the understanding that the purchasers were to test them severely, and they did so, with one unvarying result—proving in each case that they would carry a heavier load and pull lighter than a wooden wagon of the same weight. We are now making these wagons in quantities and have had rolls made at the rolling mills specially for us to make the forms of iron that we require to best secure lightness and strength. For this reason **OUR WAGONS FOR THE PRESENT SEASON** will be superior to any heretofore made.

We wish to reiterate what we have said before about these wagons being constructed on an entirely new principle as applied to wagons, for it is the chief reason for their success.

Iron wagons have been attempted before and have not been successful, but the difference between those made heretofore and ours is as great as the difference between iron and wooden wagons. All iron wagons made hitherto have had a clumsy and heavy appearance, due to the fact that the makers thereof attempted to use the iron just as wood is used—that is, instead of employing the truss principle they attempted to get strength by using large heavy pieces that are subjected to a breaking strain precisely as in a wooden wagon. It is needless to say that the plan resulted in a failure from the fact that when iron of sufficient size was used to obtain the required strength, the wagon became much heavier than a wooden wagon, rendering it useless.

**THE BEST FARM AND FREIGHT WAGON IN THE WORLD.**

**LIGHT, STRONG, HANDSOME AND DURABLE.**

(Patented March 25th, 1879, and July 1st, 1879.)

**THIS WAGON IS CONSTRUCTED ON THE TRUSS PRINCIPLE THROUGHOUT, WHEELS, AXLES, BOLSTERS, AND ALL.**

**The Cut Shows the Construction of the Wheel,**

And special attention is called thereto, as the wheel is the weak point in all other wagons.

A moment's consideration will show that neither a side strain nor a heavy load can affect it unless some of the spokes shall stretch or pull apart, a result that cannot occur with any load that the spindles will sustain.

It will be seen that the load on the axles is carried by the upper spokes of the wheel—in other words, it hangs on them, and were all the spokes in the lower part of the wheel removed, the load would still be sustained.

The bracing position in which the spokes stand—being six inches apart at the base—effectually prevents a side strain affecting it; such a thing as "dishing" being simply impossible.

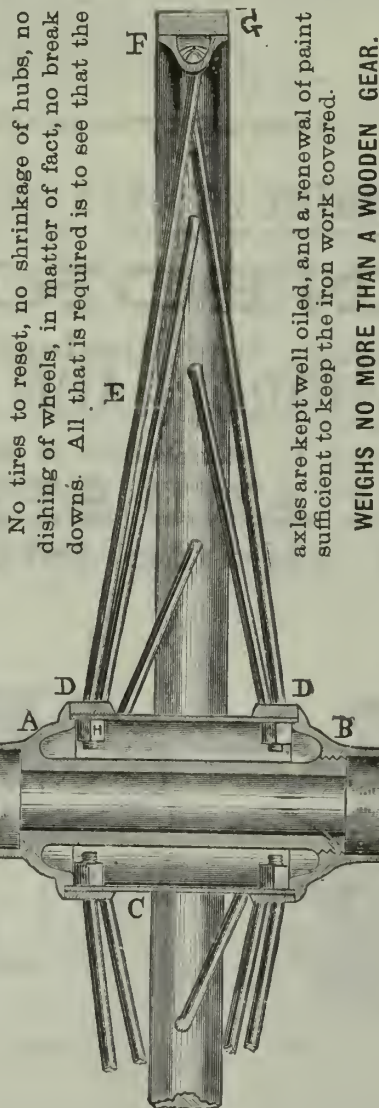
The cut shows the hub of a wheel split open lengthwise through the middle. It is one-sixth the full size of a hub for a two-inch axle. At F and G, the felloe and tire are shown as they would look if cut in two. G is the tire and F the felloe. The shape of the felloe and the way the head of the spoke rests into it, can be clearly seen. E is one of the spokes. For this size of wheel we use half inch round Norway iron, with the lower end (where the thread is) upset so that it is as strong there as anywhere else. We use close fitting, hot pressed nuts, nearly seven-eighths of an inch thick for a half inch spoke.

A represents the box of the hub, and also forms one end of it. B is a cap or flange that screws on the outer end of the box and forms the other end of the hub.

It will be seen that the two flanges, A and B, screw up close to the nuts on the spokes, thus locking them and preventing them from turning or getting loose.

At the same time the box, A, and the flange, B, are independent of the rest of the wheel, so that if a box should become worn, it can be replaced in 10 minutes by the teamster without resorting to a blacksmith or wagon shop. They are all made to gauge, so that any box will fit any wheel hub made for the same size of spindle. C represents the shell of the hub. It is made of wrought iron pipe, and is surrounded at each end by wrought iron bands, D, D, shrunk on. The spokes pass through these bands as shown.

The felloe is a solid ring of wrought iron, of the shape shown at F. Take particular notice that it is wrought iron—not cast, as many are led to suppose from its shape. This is a wrought metal wagon. Cast iron is used only for the axle boxes and the sleeve through which the resch runs. The tire of the wheel is shrunk on in the usual manner and riveted. The wheel, when complete, weighs no more than a wooden one for the same sized axle and is not less than four times as strong. We think that men who understand the amazing strength of a wrought iron truss will agree with us, after examining the foregoing cut, that this wheel is the most durable, strong and perfect wagon wheel that can be made in the present state of the mechanic arts. There are two parts of this wheel that will wear out, and two only. These are the tire and the box, either of which can be easily replaced. The rest of the wheel will last a life-time. As it can neither shrink in dry weather nor swell in wet, the tire will never get loose and will never require resetting, but will simply have to be renewed when worn out. This immense advantage alone is sufficient to justify our assertion that we are making the most perfect wagon known, but there are also advantages connected with the construction of the gearing that are almost as great as those of the wheel.



No tires to reset, no shrinkage of hubs, no dishing of wheels, in matter of fact, no break downs. All that is required is to see that the

axles are kept well oiled, and a renewal of paint sufficient to keep the iron work covered.

**WEIGHS NO MORE THAN A WOODEN GEAR.**

**FULLY WARRANTED.**

This Wagon is found upon trial to run more easily than a wooden one, owing perhaps to its great rigidity, preserving the wheels in a position perpendicular to the axles.

We discovered when we first made this Wagon that it moved with great freedom and ease under a load, and the teamsters using it declared that it ran easier than a wooden one, but we could hardly account for it, except on the theory before mentioned; but one of our customers, Mr. R. S. CLAY, of Merced, explains the matter in a manner that makes it clear. He says that it is because the wheels have neither "dish" nor "gather," but stand plumb and true, and as he expresses it, "makes a square track in the dust," while a wheel having "dish" and "gather," makes a kind of plowing movement. "Gather" is a technical term used by wagon makers to denote a peculiar way of setting the axles by bending their ends a little forward, so that the distance between the front part of a pair of wheels is less than that between the hind part.

It is given wheels to make them crowd the shoulder of the spindle instead of the nut, and if given scientifically and in just the right degree is beneficial perhaps; but if carried beyond a certain point—as it often is—it adds very much to the draft of the wagon.

To illustrate this idea, let us suppose the "gather" to be so great that the front part of a pair of hind wheels is close up to the bed while the hind part stands off a foot. It will be seen at once that the result would be that the Wagon could hardly be moved at all with a heavy load.

Again, it adds greatly to the draft of the Wagon if it has either too much or too little "set." If too much, the wheels stand under too far; and if too little, they straddle apart too much, in either case creating undue friction on the axles and wearing out the boxes rapidly.

The easiest running vehicle in the world is one whose wheels stand perpendicular, whether loaded or empty, and in an exact line fore and aft, like those of a locomotive, and that is just the way the wheels stand on our Iron Wagon.

Before the axle can yield, except at the shoulders, it must pull apart—a manifest impossibility—and before the bolster can give out, it also must pull apart the bar forming the upper cord of the truss. Herein is the secret of the success of these Wagons, while other iron wagons have failed. When wrought iron is used, so that it is subjected to a bending strain, it has very little strength comparatively speaking, but when it is so used that the strain comes endwise it can hardly be pulled apart. We have carried some tremendous loads on these Wagons, but do not claim for them that they will stand much more dead weight than any other iron axle wagon—though they will some, because the axle is so made that the strain or weight of the load comes close up to the shoulder; but we do claim that the wheels and gearing are strong enough to carry double the weight that they are recommended for.

A two-inch wagon in use by J. L. Kirkham, at San Leandro, has repeatedly, during the past two years, carried loads of coal and iron, weighing over 7,000 lbs.; and on one occasion he brought from San Francisco to San Leandro, on this same two-inch wagon, a load of 9,000 lbs., as shown by the Ferry scales. But this is excessive as well as useless and foolish. Many persons have used our two-inch wagons steadily under loads ranging from 6,000 to 7,500 lbs.; but we do not claim any such carrying capacity for them. From 4,000 to 5,500 lbs. is enough on any ordinary road for a two-inch spindle.

## IRON HEADER WAGON GEARS.

We manufacture for the harvest season a large number of IRON HEADER WAGON GEARS—1½, 1¾ and 2-inch axle, with 3 ft. and 3 ft. 10 inch wheels, tire from 3 to 4 inches wide, and if desired to make Farm Gears of them, can furnish 4 ft. 10 inch wheels. Having made important improvements within the past year, the Wagon, as now manufactured, is perfect in all its parts, and we anticipate an active trade. Orders should be sent in early to insure prompt shipment. Lack of space precludes our giving a more extended description or insertion of numerous testimonials. **SEND FOR CIRCULAR AND PRICE LIST.**

We can supply an EXTRA OUTSIDE TIRE IN SECTIONS, to go over the regular tire, which will save its wear, strengthen the wheel, and can be renewed at any time and at small expense, as compared with welding and resetting; or any person can put it on without the aid of a blacksmith.

We have encouraging and very satisfactory reports from all who have used the wagon, and strong testimonials from some of the most prominent men and farmers of this coast, among whom we would mention a few: Hon. John Bidwell, of Chico; Benj. R. Crocker and Mike Bryte, of Sacramento; A. Wolf and A. McCloud, of Stockton; R. S. Clay and W. P. Colman, of Merced; J. J. Fulton and Messrs. Germain, Montgomery & Co., of Benson, A. T.; Isaac Perkins, of Modesto, Cal., and many others too numerous to mention. Address,

**BENICIA AGRICULTURAL WORKS, Benicia, Cal.**

**Or BAKER & HAMILTON, San Francisco and Sacramento, or Agents.**



## The Convention of Fruit Growers, Etc.

(CONTINUED FROM PAGE 426.)

Resolved, That in Matthew Cooke the State has a first-class Chief Officer and one who, appreciating the duties of his office is willing to devote his labors to their fulfillment.

Resolved, That the convention of Horticulturists here assembled hereby tender him heartfelt thanks for his able essay on our needs and promise him an effort to second him by our industry and perseverance in the good work.

WM. JOHNSTON, Chairman.

Address of Pres. C. H. Dwinelle.

Gentlemen of the Horticultural Convention:— You have assembled from all parts of California, in this her capital city, to consider ways and means for improving the condition of the fruit-growing industries, and other lines of business dependent upon them. Most prominent among the things to which your attention is called, is the need of practical means of exterminating insect pests, now infesting the orchards and gardens of the State.

To those who are not intimately connected with the fruit-growing industries, the call for this convention has probably been strange reading, and perhaps some of you veteran horticulturists have come here with honest doubts as to the need of such an assemblage, and the good that can come of it.

Let us review briefly the history of the industries in question, glance at their present condition and probable future, and see whether we have before us subjects worthy of the consideration of sober-minded men. Among the first acts of the Spanish missionaries who came to California was the planting of orchards. They not only wished to replace the comforts of civilized life which they had left behind them, but also well understood what a hold bearing fruit trees would give them upon the wild children of nature, with whom they had to deal. The vine and fruit tree ever have been, and will be, emblems of contentment and home thrift. Those early planted trees thrive, and, although mostly of inferior seedling varieties, they showed this land to be well adapted to some of the most important species known to man.

But a few years ago our trees and fruits were noted for their beauty and freedom from blemish through insect attacks. Now these tiny adversaries are but too well known to you, and their numbers are legion. Large and valuable parts of our State are already hadly infested, and they are rapidly spreading to new territory.

Whence came these insects? Most of them were imported on trees, scions, vines, or fruit, in packing materials, the crevices of boxes, or the earth of potted plants. Our nurserymen, seedsmen, amateur horticulturists and merchants have been very enterprising. They have spared neither pains nor money in securing new trees and fruits from every country, and, not being entomologists, they have not appreciated the need of the utmost caution to prevent the importation of pests. Besides these foreign pests, there are others that are indigenous, but which take kindly to many of the plants and trees brought in by civilization.

## Loss Occasioned by Insects.

Do some who have not yet felt the weight of the scourge think that this is an overdrawn picture, and that the extent of the evils complained of have been exaggerated? Let us see:

In the year 1873, orchardists east of the Rocky mountains were invited to send specimens of their fruits to be exhibited at the State fair at Sacramento. Among the apples sent in response to this request, some were discovered that were infested with the apple worm, the larva of the codlin moth (*Carpocapsa pomonella*). The officer in charge of the exhibit gave orders to destroy the fruit. One orchardist, who wished to verify the names of varieties on his grounds, took them home with him for comparison. After making the comparison he gave them to another person to destroy.

They were not destroyed, but were thrown upon the ground. Before this the codlin moth and wormy apples were unknown in California, but from that colony the insects spread with amazing rapidity. Up and down the Sacramento river, into all parts of the great valley, the adjoining mountains and the coast region, they have been carried in the empty boxes returned to orchards, until but few parts of the State can now be said to be free from them.

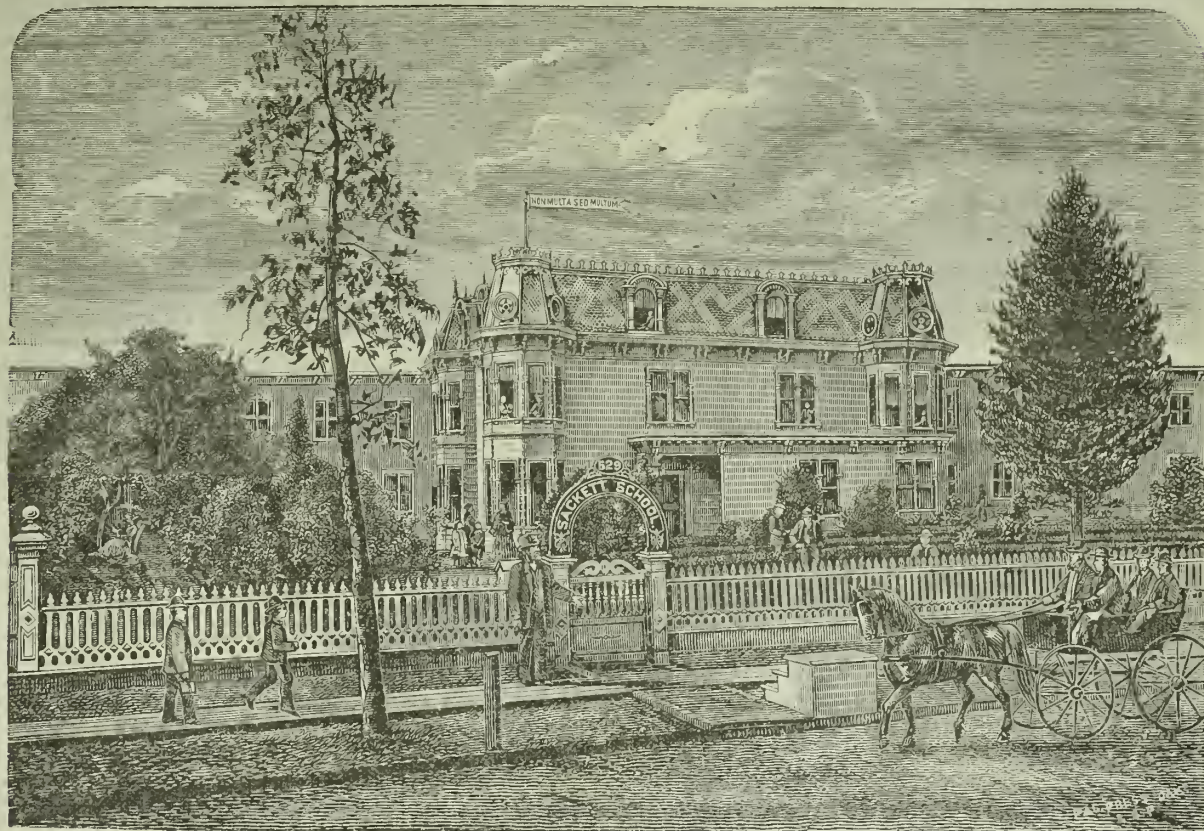
The entire money value of the apples, pears and quinces lost through the attacks of the codlin moth cannot be estimated. Our highest authority on this insect, Matthew Cooke, has published the opinion that not over 33% of the apple crop of the Sacramento valley is this year free from the insect. Other gentlemen who have unusual opportunities for observation say that they consider this as too liberal an allowance for sound apples, by at least eight per cent.

Let us take cases where we can get at values more definitely. Mr. A. had an orchard near Sacramento that was noted for its fine fruit. Formerly Mr. B. bought that fruit for shipment eastward over the mountains, paying as high as \$8,000 in a season to Mr. A. After the advent of the codlin moth, the proportion of the fruit which was left for shipment rapidly diminished, and so did the cash payments, about in accordance with the following scale: \$8,000—\$5,000—\$3,000—\$0.

On one of the islands on the river there was an orchard producing \$5,000 worth of Bartlett pears, besides apples and other fruits worth \$10,000 to \$15,000 per year. Now there is no fruit produced there, of the kinds attacked by the codlin moth which is fit for market in its fresh state. Portions of it only can be dried.

As an instance of a native insect, there is a

## The Sackett School, Oakland, Alameda County, California.



THE Sackett Boarding School has in a brief time gained a leading position among the many private schools of Oakland, which fact affords the best possible proof of superior merit. The Principal, Mr. D. P. Sackett, has been long and favorably known there as a teacher and disciplinarian. The location of the school is convenient, healthful and attractive. The comfort and well-being of the students is an especial feature of the domestic department, and the moral and physical training of the pupil is carefully conducted.

In their mental training great prominence is given to the fundamental branches which must enter solidly into all genuine education. This institution is the youngest of the many private schools across the bay, and has shown rare vigor and enterprise in many ways, and more particularly in providing the most competent teachers. D. P. Sackett, of Yale College, is the Principal; George W. Drew, A. M., of Yale College, is head master; Allen E. Janvier, A. B., of Yale College, is in charge of the English Department; Mary K. Culbertson, State Normal School of New York, has charge of the department of Natural Science; and Mrs. George W. Drew has the department of Music.

Twice has the building (shown in the engraving) been enlarged and beautified until now it stands out as one of the finest educational ornaments of the Athens of the Pacific. The grounds are as home-like and cheerful as those of any private residence, and one feels at once that the young men who have a school home there are comfortably situated. Young men from the interior would do well to send for catalogues, as special advantages are provided for them in the courses of instruction.

species of caterpillar (*Clisiocampa*) closely allied to the Tent caterpillar of the Atlantic States, which has for seven years past been at work in one of the large orchards in Marin county. Although its natural food is oak leaves, it has there attacked apple and plum trees, and stripped thousands of them quite bare. In some instances taking not only leaves but buds, so that no fruit was borne for two years following. The past spring \$1,500 were spent in fighting them, with but indifferent success.

So, too, there are scale insects (*Coccida*), foreign and native, which are disfiguring our fruit and stunting or killing the trees.

Our agricultural papers have from time to time given warning on this subject; often illustrating their articles with pictures of the pests, and means of combatting them. Matthew Cooke published, for free distribution, two small pamphlets on the Codlin Moth, the latter also containing notes on scale insects, which, though very limited, outlined the treatment now most generally found best. Letters to the State University, asking advice, have been answered as well as could be expected, while a Professor of Entomology is still wanting in that institution.

Acting upon the information gathered from these and other sources, some of our horticulturists have vigorously attacked the insect hordes, in many cases with notable success and great pecuniary saving.

Unfortunately, however, apathy and indifference have been too generally the rule. The producer has been willing to send his scale-covered and wormy fruit to market as long as consumers could be found for it. The nurseryman has too often knowingly sold infested trees, quieting his conscience with the fact that no questions were asked, and no guaranty required as to freedom from pests.

Does any nurseryman present resent this imputation? Let us hope that he does so with a clear conscience, for we know that there are as honorable men in his line of business as in any other.

Facts are stubborn things, however. Here are some samples. In 1879 an orchardist, but a few miles from this spot planted 2,000 pear trees. A short time ago our Horticultural Health Officer happened to see them, and immediately informed the owner that they were covered with one of the worst forms of scale insect (*Aspidiotus perniciosus*). So foul and stunted were they that the orchardist decided to burn them. This was the first appearance of that insect in the neighborhood, whereas it is known to swarm in the place where the trees were bought. Strong measures for its extermination were certainly called for. In addition to destroying the infested trees he countermanded a large order for trees from the infested locality, and sent to the Atlantic States. He will probably be abused for not patronizing "home industry." Rather a serious case, is it

not? Lost! The purchase price of 2,000 trees, interest on the same, cost of cultivating two years, cost of destroying and two years time in starting an orchard. Besides this the neighborhood may be so infested as to make fruit raising there a continual fight for the rest of the time. The whole of which might have been prevented by sufficient intelligence to know that those trees were infested, and sufficient honesty to thoroughly cleanse them before shipping them to the purchaser. Here is another case. A gentleman in Kern county sent a specimen of insects for identification to the State University, with the remark that they probably came on the young trees, as his friend in San Luis Obispo county, who bought trees from the same nursery, in a third county, is similarly afflicted. Those who own but a few trees, and do not look to them for an income, do not usually seem to appreciate the wrong which they do to their neighbors in allowing pests to multiply upon them and spread. For these reasons it has been very discouraging for the few to try to fight insects which the many are helping to disseminate.

Thus a demand arose for laws forcing property-owners to see to it that these noxious insects, when within their control, should not be allowed to become a plague to others through their neglect.

## Insect Laws.

At the last session of the Legislature such laws were passed. One provides for County Boards of Horticultural Commissioners. The other secures the appointment of a Chief Executive Horticultural and Health officer, through the authority of the State Viticultural Commission. At an early date the Viticultural Commissioners appointed a Board of Horticultural Commissioners to act as their advisers in dealing with horticultural matters.

The Horticultural Commissioners have felt that, although they had ample authority for the peremptory suppression of the existing nuisances, it was best to first educate the people of the State as to the insect pests among them, and the best methods of dealing with them.

They therefore authorized the Chief Executive Horticultural Officer to prepare and publish a treatise on insects injurious to fruit and fruit trees. That the step was a wise one was shown by the rapidity with which the first edition of 7,800 copies was exhausted, and the second one made necessary.

Great credit is due to the officer who prepared so useful a book in so short a time, and in the midst of a multitude of other duties.

Since ignorance can be no longer pleaded, strict quarantine laws have been made out, and will soon be in force.

This was a serious step, but one which was undoubtedly needed if fruit growing is to continue to be a profitable industry in this State. It was urgently called for by the orchardists in

some of the districts which will be most seriously affected.

To secure the best results in this effort to improve the condition of our fruit interests, there must be a clear understanding of what is aimed at, and a cordial co-operation among all parties interested.

The coercive character of the laws under which the various Horticultural Boards of the State are acting has been complained of, and they have been denounced as an unparalleled invasion of private rights. Who has a right to examine into the condition of my property and dictate as to how I shall manage it? Let us see whether a new principle comes in. Under existing laws, if you set a fire upon your land and through your neglect it spreads to your neighbor's crops, you are responsible to him for the damage done. If you neglect a cesspool, or establish a factory, from which disgusting or dangerous gases are given off, you are ordered to abate the nuisance, and if contumacious, fined and even imprisoned.

So, too, with contagious diseases; you must use all known means to prevent their spread, and submit to the rules of the Health Officer.

Many of our States have laws requiring land owners to prevent thistles from going to seed upon their premises.

Michigan has a law to control the spread of the disease of the peach known as "the yellows," which served largely as a model for our own horticultural bill. It is evidently the particular application of the principle only that is new to us.

In this setting forth of the causes which have made this meeting a necessity, some very disagreeable facts have been mentioned—unpleasant to think of, but facts nevertheless. How much more congenial would have been the task of showing how laud, bought at a low figure could, by a moderate outlay in the purchase and care of trees, in a few years be made to produce a handsome interest on a valuation of \$1,000 to \$2,000 per acre? Such figures could also be supported by facts duly subscribed and sworn to.

Without retracting a word of what has been said of untoward circumstances, it may be boldly asserted that California is the most successful fruit growing State in the Union, and if her citizens will only sufficiently appreciate the choice gifts which nature has bestowed upon her to save them from the destruction with which they are threatened by ignorance and sloth, she will become the most noted fruit producer in the world.

Where can you find a country with such a list of fruits? The apple and all of its relatives; cherries, prunes and plums; peaches and apricots; all citrus fruits; the olive, the fig, small fruits and berries. Not only can these, and many others, be produced within the limits of our State, but many farms of moderate size have sufficient variety in soil, elevation and expos-



ure, to furnish suitable homes for the majority of them.

Our prunes and other choice dried fruits are rapidly becoming the standard of quality throughout the continent. Our canned fruits are eagerly sought for by English buyers. This value of our exports in this line is so rapidly mounting up that one of our highest financial authorities lately pronounced fruit production the coming industry of California. It is an industry in every way desirable, giving employment directly to thousands, and indirectly to tens of thousands more.

Boxes and baskets call for timber and nails; cans for tin and solder; labels for paper, ink and paint, and in transportation wagons, trains of railroad cars, steamers and ships play their part.

What good citizen can be indifferent to the welfare of an interest which keeps so many hands busy? What tax payer can afford to have it languish?

I will close by giving you a sentiment which will, I trust, meet your approval: The horticultural industries of California; they must and shall be preserved.

On the completion of the President's address, it was moved by Mr. Brewer that the same be submitted to the press with the request that it be published and spread in full. Seconded and carried.

#### Address of Welcome.

Mayor J. Q. Brown, of Sacramento, was introduced, and, pursuant to programme, delivered an address of welcome, which, at the will of the convention, he was requested to furnish, in synopsis, to the Secretaries, to be incorporated in the proceedings of the convention. [The synopsis has not been received at the time of making this report.]

Following the above, Dr. Chapin, of San Jose, was introduced, and read a paper on "the scale insects infesting fruit trees and fruit."

#### Address of Dr. S. F. Chapin.

Mr. President and Gentlemen of the Convention.—In compliance with the request of our Chief Horticultural Officer, I will address you briefly upon scale insects infesting our orchard trees and fruit. In the time allotted me for this purpose I can only call your attention to these destructive pests, with the hope that you may be aided to overcome them.

Among those that are least troublesome to the orchardist, I will mention *Aspidiotus conchiformis*, for nearly a century infesting apple trees in the Eastern States, and also known for many years on this coast, where, however, it has not caused such damage to trees and fruit as to seriously alarm fruit growers. All works on entomology will give you information as to its history and habits. This scale is commonly known as the apple bark louse, or oyster shell scale.

Next I will mention *Lecanium oleæ*. This scale is beginning to attack other trees than orange and its kindred. I have lately examined an orchard where it exists in overwhelming numbers upon the German prune, Briggs' Red May and the early Crawford peaches, apricot trees, and, most of all, upon Petite Prune d'Agen trees. This is believed to be the direct result of planting a few orange trees close by. This may yet prove to be a serious matter as affecting deciduous fruits. Next will be

*Aspidiotus rapax*: So named by Prof. J. H. Comstock. It is a scale that is rapidly spreading, and is now found in many places where not known a year or two ago. It seems to be most prominent in Santa Cruz county, where it can be abundantly found. I have observed it this season in many places in Santa Clara county and have had specimens sent me from San Lorenzo, Alameda county, where it was abundant upon pear trees, the branch sent being well covered with the old scale, and also newly hatched young crawling about. This scale seems to be native to the willow and alder and other indigenous trees. It, however, is found in great numbers upon acacia trees, upon the black locust and poplar, and upon some of our orchard trees, as the pear and apple. This scale somewhat resembles one of our most destructive scales, which will be described further on, and is by many confounded with it. I refer to *Aspidiotus perniciosus*. Two other red scales, but infrequently seen, and of less consequence, are found to some extent in our orchards.

A comparatively new scale heretofore, has within the last two years been ravaging many localities in widely different parts of the State. The so-called Dorthesia, or as named by Massell, *Iceryia Purchasi*, and called by Mr. Matthew Cooke, the cottony cushion scale. This scale has been, it is asserted, known to be on the acacia for six years in San Jose—but it is only during the present season that it has attracted attention. Its great prolificness and its destructive abilities, have called widespread attention to it. This pest attacks everything in the way of tree, vine or shrub—all the evergreens as well as deciduous trees that fall in its way are attacked and every ornamental shrub on the lawns of some portions of our cities will show its presence. The ivy even is not proof against it. In San Rafael, San Mateo, Santa Barbara and Los Angeles it is well established. As Mr. Cooke well observes in his treatise on "Insects Injurious to Fruit and Fruit Trees," whenever it shall appear, it should be exterminated regardless of cost. Indeed this should be the rule as against all our orchard pests, for upon the rigid enforcement of this determination depends our success and profit in fruit growing. Let us bear in

mind that no cost is too great to enable us to grow fruits of first quality.

From the rapid destruction which follows the presence of this scale, it is well that it should be widely recognized and its first invasion noticed and checked. In San Jose it was first noticed this season, in May, as the fully developed female, from which the first brood of young then appeared.

The egg of the *Iceryia* is small, pale or orange red, elongated and ovoid.

The young just hatched out are very active, and are very minute, perhaps the twenty-fifth of an inch in length.

The body is pale red; the six legs and two antennae are black. The antennae are long and club-shaped, and have from six to nine joints as they are farther matured. The antennae are covered with long hairs, which bristle forth prominently. The eyes are small and black. Between the pair of forelegs on the under side of the body is to be seen the beak, or sucker, by which the insect secures its nourishment.

The females partly grown, are of a variety of colors, orange-red mostly, and spotted over with white and green; some are nearly entirely a dirty white, and many are a peagreen. It seems that the coloring matter of the plant they are upon colors them to some extent. Their body is ovoid and elongated and flattened, the back being ridged up, with several segments quite prominent. Around the rim of the body are a multitude of hairs, standing out prominently. Around the rear half of the body or its rim are a row of tubercles or spinarcts, from which a white secretion issues, forming a cottony cord, and these placed side by side and the interspace filled up by the same material running lengthwise the body, and projecting from it, gives the whole a ribbed, satin-like appearance, whitish in color.

Gradually as this insect matures these projecting ridges approach each other at the ends, and are joined together and curved under slightly at the point, while the sides are at the same time curved under the whole length, and the edges joined together by a flat ribbon-like band; the whole forming, when complete, a soft elastic white sack, of the size, and somewhat the shape of a medium sized white bean—the length, when mature, is about one-half an inch; width one-fifth of an inch. Inside the sack is deposited the eggs of the female among the interstices of a mass of cotton-like fiber; which under a high magnifying power is shown to be round, and not more than one-sixth part the thickness of pure cotton fiber with which it was compared in the same field.

This mass of cottony fiber is filled with a great amount of granular matter, for the purpose it may be, to afford sustenance to the young insects within the sack. The young hatch out in this sack, and make their way out into the world through a rent in the soft and tender under side of the sack. The female after finding her home, and during maturity, does not move, although she does not lose her legs, but clings tenaciously with her feet to her support leaving the body tipped up in the rear, and the cottony mass movable in any direction.

The male insect was only found during a period of about two weeks from Sept. 25th. It has a long, red body, six legs, and one pair of very long, dark, and transparent wings; prominent eyes; and antennae very long, and covered with hairs arranged very much as the feathers of a peacock. The antennae are 16 or 17 jointed. The winged male is easily seen, and easily caught; as it moves slowly about, and is not readily disturbed so as to fly away. The female insect lives upon the trunk of the tree and large limbs down to the smallest twigs, around which it may be seen clinging in clusters sufficiently great to completely hide the branch, also, upon the leaf, along the stem and ribs of which it is fixed, both above and below, although more abundant on the underside of the leaf. The number of broods of this insect seem to be three in the season; the first appearing in May, the second in August and the third in October, or about three months apart. They have been rapidly increasing since about the 1st of August, and have continually been appearing, and are still hatching out in December. Every female, it is estimated, produces from 200 to 500 young. The young will mature and produce a new brood of young in about three months.

By far the most injurious scale pest infesting our orchard trees and fruit, is the one known recently as the San Jose, small, round, black scale, and named by Prof. Comstock *Aspidiotus perniciosus*. This scale produces terrible results in an orchard when once established. The trees become entirely covered with the scale, so that no portion of the bark can be seen. The fruit also, much of it, is in the same condition, rendering it unfit for use. The losses caused by the ravages of this insect cannot be computed easily. Whole orchards are literally destroyed by it. In many cases those who have recognized its presence and destructive power in time, have made most strenuous efforts to stay its spread and save their trees, but it has been to a great degree discouraging, owing to the difficulties encountered in fighting an unknown foe. Within the past year, however, great progress has been made in destroying this insect, and it is hoped that it may be conquered within a reasonable time. It is altogether probable that within the coming year the fact will be made plain that a sure remedy has become available. As yet, this terrible pest has not become common over many parts of the

State, but it is increasing in localities outside of its starting place, until it now has a foothold which will surely bring sorrow to many orchardists, unless their eyes are opened to the consequences following its appearance, and their efforts at once directed to its extermination.

There is not time here to enter upon the history and description of this insect, but it is not now necessary, as a report upon it has already been made and is in print, and freely distributed to fruit growers. I will merely state here that three distinct broods of this scale have been discovered this season. The first winged males of each brood being discovered on these dates: 1st brood, March 23d; 2d brood, July 21, and the 3d brood, Oct. 17th.

The experiments made this season have been quite extensively carried on, and have, we feel confident, resulted in obtaining knowledge which is of practical benefit to all fruit growers. A large number of these experiments have been printed in the report alluded to, and are available to you all, and will be more fully set forth in a report which will be submitted to the Board of State Horticultural Commissioners.

Experiments have been very carefully made, using many substances, and their effects carefully noted. The most of these materials used have failed to result satisfactorily. This was expected, and were tried with the object of demonstrating that fact, as negative results are often very valuable; as from their accurate record much labor and vexations, and even ruinous delay is saved. The results obtained have been as follows, stated in few words: The fact fortunately obtains, that the treatment effectual in destroying the *Aspidiotus perniciosus* is likewise effectual for the destruction of all these other species of scale insects. The substances found to kill this scale have been concentrated lye first, kerosene next, 110° or 150° test. These two for winter washes and are only to be used when the tree is dormant. Then as an effectual application which can and should be made in summer about the 1st to 15th of June is the mixture of whale oil-soap and sulphur, known as "codlin moth wash." Referring to the experiments above made, examination was made a few days since of the tree No. 21, where this mixture was used in the summer. Its condition is most satisfactory—not a vestige of scale can be found upon the tree, and the tree is in a very healthy condition, the green layer of bark being rapidly restored.

This wash is highly recommended, and should be used in the strength 1 lb to 1 gallon water, and if thoroughly applied at the time named, will afford very satisfactory results. My own judgment leads me to the use of concentrated lye as the best wash for winter use. This should be used as follows: 1 lb. of the concentrated lye of the American Lye Co., broken up, and dissolved in 1 gallon boiling water for badly infested trees; 1 lb. to 1½ gallons water for less infested trees; 1 lb. to 3 gallons is well adapted for washing, to cleanse trees of all accumulations of moss and other filth.

I am prepared to aver that young orchards can be kept free from the *Aspidiotus perniciosus* by the right use of concentrated lye and the codlin moth wash. This, however, can only be accomplished by most patient watching and prompt measures when the pest is discovered. In the orchard mentioned in the report, a careful inspection is often made, and at this date not a specimen of this scale can be found, while I am sure that had the scale first appearing been neglected, the spread of the pest would by this time have been overwhelming. The lesson here presented is, make your examination most searching, and do your work thoroughly. It should be stated that the extensive washing of trees this winter by the use of lye and of kerosene will demonstrate fully the value or inefficiency of these materials.

The best methods of applying insecticides is in the form of washer, and the most economical means thus far discovered is by the use of a force pump with hose attached, and a suitable nozzle, producing a fine spray. Such a pump is the Gould force pump. Another pump, and much cheaper, and as serviceable, is the Merigot force pump, manufactured at San Jose for this purpose. The best known spray tip is the one made at San Jose by the same party and called the San Jose scale bug spray nozzle. One of the greatest difficulties in the use of strong materials is from the spray falling upon the person of the operator, and burning and injuring the skin. In order to overcome this obstacle I have devised a simple extension nozzle of slight cost, which is very light, and which may be made of any length desired, say from four to 15 ft., or even longer. By the use of this extension it is perfectly easy to reach and spray any orchard tree without danger and discomfort.

In conclusion, the cost of apparatus and materials should be given:

The Gould pump costs about \$10 without accessories. The Merigot pump, \$12; 5-ft. suction, 25 ft. best hose, plain nozzle with spray tip complete excepting the extension nozzle, \$9.50; extension nozzle, 4-ft., \$2; 7½-ft., \$3; extension nozzle, 14 or 15 ft. long, \$4; branch for attaching two hoses, \$1.50; Total cost of Merigot pump with accessories, \$27.

Concentrated lye, American Lye Co., 1 lb. cans, by the case, of 48 lbs., 7 cents per lb.; kerosene, 110 test, California, by the barrel, barrel returned, per gallon, 15 cents; kerosene, 150 test, by case, per gallon, 30 cents; whale oil soap and sulphur mixture, called the codlin moth wash, in quantities of 1,000 lbs., @ 6 cents.

Specimens of the several species of scale insects here considered, are presented for your inspection, as also the apparatus used for applying insecticides for their extermination.

(To BE CONTINUED)

## The Difference Between a Cyclone and a Tornado.

The difference between a cyclone and a tornado is defined by Mr. William Ferris, of the United States Coast Survey, to be this: A cyclone is usually a broad, flat, gyrating disc of atmosphere, very much greater in width than altitude; a tornado is a column of gyrating air, the altitude of which is several times greater than its diameter. Cyclones are born of conditions extending over large areas; tornados depend rather upon the vertical relations of the atmosphere, and occur when, owing to local changes of temperature, the under strata of air burst up through the overlying strata. The enormous velocities of the ascending currents of tornados are supposed to be caused by the difference between the gyrating velocities above and those on the surface. It is these ascending currents which carry up the vast bodies of water afterward precipitated in the form of a deluge of rain. The water is sometimes kept from falling by the ascending currents, and is often projected outside the area of the tornado, when it falls in a gentle shower over a larger area. When the weight of the water overbears the force of the ascending currents, there occurs the tremendous fall of rain known as a cloud-burst. When the area of a tornado is very small, a land-spout or a water-spout may be formed, according as it is over land or water. The width of these spouts ranges between 2 ft. and 200, and their height from 30 to 1,500 ft. A white squall is an invisible spout, formed when the dew point is low. The accompanying cloud is invisible because of its height, but below there is a raging and boiling sea, with a gyrating current of air above it. Land-spouts and water-spouts are hollow.

LARGE PHOTOGRAPH.—The wonders and possibilities of photography are constantly increasing. The latest achievement in this direction is recorded as follows: A photograph, probably the largest ever printed on a single sheet of paper, is now on exhibition in the art gallery of the American Institute, New York. It is not uncommon to see several views which have been separately printed on small sheets of paper and pasted together to make a panorama of large industrial works, etc., but this remarkable specimen was printed from seven negatives on one sheet of paper, and covers an area of over 10 ft. in length by about 18 inches in height. It is a panoramic view of the Centennial grounds in Philadelphia, and so perfectly are the negatives joined, that it is impossible to locate the joints. Were it not for the announcement of the exhibitor that it was printed from seven negatives, no lay observer would imagine that it was other than a single view printed from a single negative. Duplicates of this picture have been sold at very high prices as sample works of photo art. One was presented to Queen Victoria, and is said to occupy a conspicuous place in the royal gallery. This work is from the gallery of F. Gutekunst, No. 712 Arch street, Philadelphia. His exhibit includes other fine specimens. A notable one is another picture five ft. long by 18 inches high, also on a single sheet.

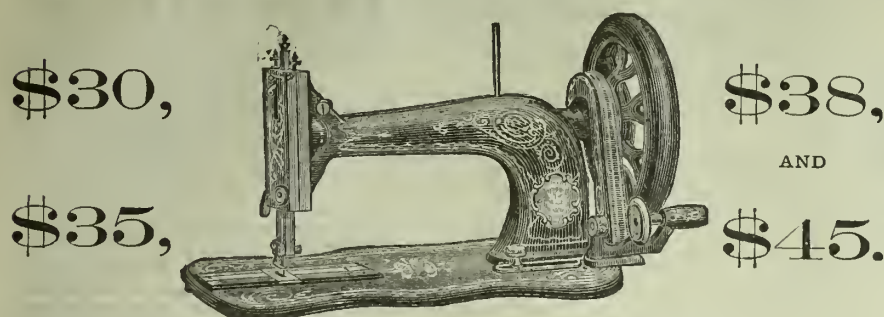
EFFECT OF SUNSHINE.—From an acorn, weighing a few grains, a tree will grow for 100 years or more, not only throwing off many pounds of leaves every year, but itself weighing several tons. If an orange twig is put in a large box of earth, and that earth is weighed when the twig becomes a tree, bearing luscious fruit, there will be very nearly the same amount of earth. From careful experiments made by different scientific men, it is an ascertained fact that a very large part of the growth of a tree is derived from the sun, from the air, and from the water, and a very little from the earth; and notably all vegetation becomes sickly unless it is freely exposed to sunshine. Wood and coal are but condensed sunshine, which contains, three important elements equally essential to both vegetation and animal life—magnesia, lime, and iron. It is the iron in the blood which gives it its sparkling red color and its strength. It is the lime in the bones which gives them the durability necessary to bodily vigor, while the magnesia is important to all of the tissues. Thus it is, that the more persons are out of doors, the more healthy and vigorous they are, and the longer they will live. Every human being ought to have an hour or two of sunshine at noon in winter, and in the early forenoon in summer.

AN ANCIENT GREAT LAKE IN THE WEST.—The last quarterly report of the Kansas State Board of Agriculture contains the following: "In the geological development it is conceded by scientists that the eastern portion of Kansas, a portion of Nebraska, Southern Iowa, Northern Missouri, etc., was once covered by a vast fresh water lake, and this body of water received numerous rivers and smaller streams; and that their turbid waters deposited a sediment, varying from four ft. to 150 ft. thick."

TUNNEL UNDER THE SEVERN.—It is announced that, after some seven years' labor, the tunnel under the Severn has at last practically been made. The workmen are said to have met in the middle of the channel, and joined the two paths of communication from the English and Welsh sides; so that, unless some most unlikely interruption or disaster should now occur, there remains nothing but to enlarge the passage, wall it in and lay the lines of rail.



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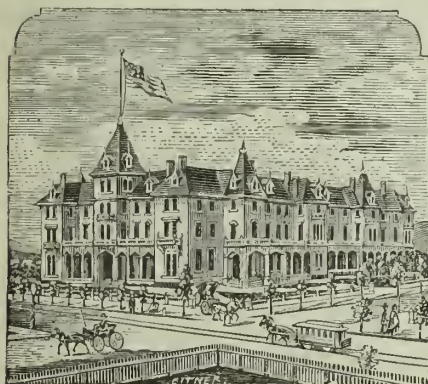
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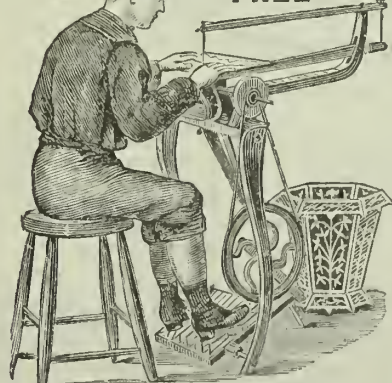
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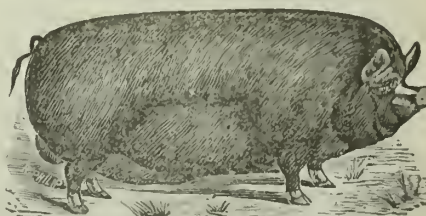
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## A Great Triumph.

The History and Features of the Studebaker Wagon.

[Written for the Press by J. C. H.]

As an illustration of American industry, wrought out and brought to the most perfect system that has ever been devised for the manufacture of the modern wagon in any portion of the world, we produce on this page a cut of a portion of the celebrated manufactory of the Studebaker Bros. Manufacturing Co. at South Bend, Ind. The upper cut, showing a structure whose exterior has the appearance of some grand opera house or bank building, is only the repository and manufactory for the landulet, barouche, phaeton, buggies of every description, and light and fine vehicles that are used by our merchant princes, hackmen, horsemen and pleasure seekers in city, town and country, plantation, ranch and farm, from Maine to Mexico. The exquisite finish, excellence and

following brothers: Clem Studebaker, Pres.; J. M. Studebaker, Vice-Pres.; J. F. Studebaker, Sec'y, and P. E. Studebaker, Treas., had facilities for, and did build and finish, a wagon or carriage on the average for that year at the rate of 100 a day, or one every five minutes, counting eight working hours a day. Their combined capital at the commencement was \$66. At this time it is millions. For these fabulous results there must be a cause, and it may be well for us to stop and inquire what it is. In this connection we shall refer back to the first "Studebaker" wagon ever built.

John Studebaker, the father of the present Studebaker Bros., after six years of an apprenticeship in Gettysburg, Pa., in the wagon trade, commenced business for himself, and built a new wagon for farm purposes, whose contour and style has only been improved by his own boys. The wagon was made as well as intelligent mechanical labor could make it. It laid the foundation upon which he amassed a considerable fortune which was swept away by the betrayed confidence of a friend. Through these dark days he trained the sons in the art of knowing the strength of wood when combined with iron

and the tires shrunken on by lowering it all at once on a horizontal platform; making a wheel that will last as long and longer than other parts of the wagon.

7th—The hubs are all bored true, then the skein boxes are turned on an iron lathe to fit, and pressed in by hydraulic pressure of 150 tons, insuring a perfect joint and allowing no oil or water to soak in, as the case is when the boxes are wedged in.

8th—All the thimble skein wagons have the Studebaker patent skein and truss axle which greatly strengthens the axles. These improvements cannot be found on any other wagon.

9th—In painting these wagons only the pure lead and best oil is used; no cheap minerals or adulterated lead are allowed on a Studebaker wagon.

10th—Every piece of timber and iron or steel is subjected to inspection and scientific tests by the most skilled mechanics, and if not up to the standard is rejected.

11th—They make the best wagon that improved patents of their own or that can be used to advantage, and will not allow any wagon to pass from these works unless it bears the old and reliable brand "Studebaker Bros. Manufacturing Co., South Bend, Indiana."

12th—The Studebaker wagon is the acme of perfection, perfected by the combined mechanical talent and inventive genius of two generations.

It has been and is the ambition of this great American firm to make a wagon that was adapted to the wants of every locality, and that they could have the whole world for a market. They have traveled in different States and countries to gain information as to the requirements of different localities. Over 20 years ago the vice-president, J. M. Studebaker, was a resident of California, where he as a practical mechanic fashioned, built and studied the best manner to construct a wagon for the Pacific coast. His store of knowledge was carried back where improved machinery could be had to fill this demand. From time to time the different members of the firm, J. F. Studebaker, Sec'y, and Supt. of the carriage department; P. E. Studebaker, Treas., and Clem Studebaker, Pres., have visited this State. The president has made frequent visits, extending as far back as 1868. During the past season he traveled extensively on this coast as far north as British Columbia and as far south as Mexico, and with prophetic vision saw that the varied industries, resources and future greatness of this western empire would demand increased carriage facilities.

The large and increased sale of Studebaker wagons in California for 1881 and demand induced the Studebaker Bros. Manufacturing Co. to enlarge the Pacific coast branch, and selected San Francisco as the distributing point, with agencies in all the principal cities and towns.

A repository was opened at 31 Market street, and a large warehouse secured near the railroad depot, 4th and Townsend, for storing their goods. The Studebaker railroad cars were immediately switched up to the five-story shipping and storage apartments at South Bend, and their own cars were filled with all classes of vehicles for the "Pacific Coast Branch House."

The fiat has gone forth and will soon be passed along the line from Alaska to Arizona and to the Islands of the Sea, that the teamster, farmer, drayman, hackman and horseman can have a Studebaker wagon. That landulet and rockaway, buggy and barouche, three and four spring and platform spring wagons, farm and freight wagons, wide and narrow tires, header trucks—in fact, everything that runs on wheels and enters into the development of this Western slope, will be kept in stock, and is now ready for distribution at 31 Market St., to those who wish to secure a wagon, cart or carriage made by the "Studebaker Bros. Manufacturing Co., South Bend, Indiana."

We have endeavored to show how the Studebaker wagon is made, its superiority and growing demand for their modern perfected wagon. Their success and the results that have been attained by following one rule, viz.: They make a safe, durable, easy-riding, light-draft vehicle, adapted to every business and suited to the tastes and requirements of a progressive age; and sell them at fair prices.

The Studebaker wagons and carriages have entered the broad field of competition at county and State fairs; the United States Exposition, 1876; World's Great Fair, Paris 1878, and won first prizes and silver medals, but the best award is the increasing demand each year in the industrial fields of America.

The French government has a Studebaker army wagon on exhibit in the great National Military Museum in Paris.

As a nation we are proud of our national achievements in science, art, mechanical excellence, and improved labor-saving machinery. No better illustration of the way the genius of Americans meets the necessities of this age, can be found than the triumphs of the Studebaker Bros.

In the history of this great American firm, who have followed one line of business for 30 years, and are bound together and as closely allied in their prosperity as in their boyhood days, we have a commendable example of American progress and enterprise. If so much has been accomplished in the broad field of life by these four brothers, whose only legacy from sire to son was mechanical skill, industry and strength of purpose, in so short a time, every American youth and middle-aged man can take heart and with confidence move on where broader fields

and better opportunities for honest, well-directed mechanical labor are brought to view as each new railroad penetrates the stillness of the forests or opens to industry the rich valleys of the West.

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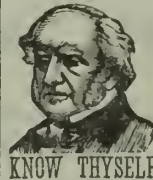
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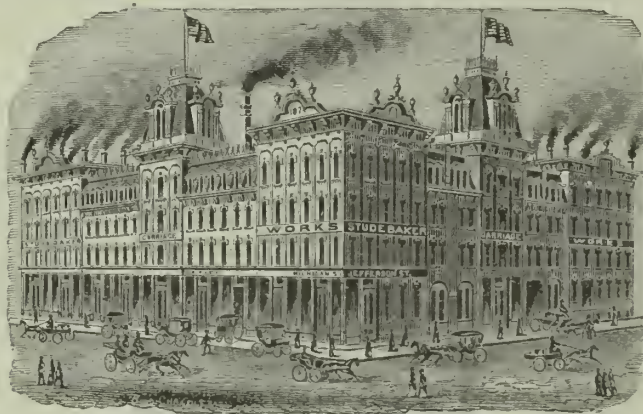
Iron or Wood self-opening and shutting. No stock can unlatch. This gate always opens from you. Iron, \$40; Wood, \$30; Wood, \$20. Send for circulars to A. P. CAMPTON, Rohnerville, Humboldt Co. Farm, County and State rights for sale. Took First Premium State Fair, 1881. Illustrated in RURAL Nov. 5, '81.

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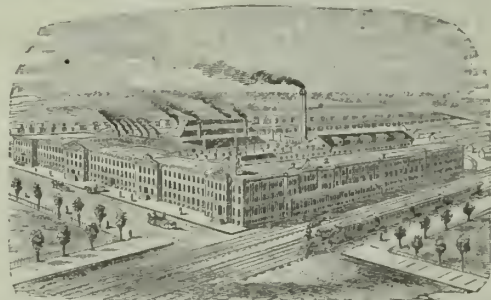


STUDEBAKER CARRIAGE WORKS, SOUTH BEND, INDIANA

artistic taste displayed in this branch of their business is such that large repositories have been established in Chicago and other great centers for the sale and display of this class of goods.

The lower engraving represents the main portion of the Studebaker Bros. Co.'s Wagon Works, which now, with buildings, sheds, drying houses and accessories, cover 27 acres of ground, to which they have added the last year 58 acres more. The main buildings are four stories high, built

and making a neat, tasteful and easy running wagon that would last in use a quarter of a century. That knowledge, to which has been added all that inventive genius, science and modern improved machinery could do, has made their name a household word, and their achievements in keeping with the grandest triumphs in art, and the great inventions of the 19th century. In view of the possibilities and grand results of well directed and intelligent mechanical labor in this country, as shown by this great American firm, who started in life as poor, practical me-



STUDEBAKER WAGON WORKS, SOUTH BEND, INDIANA

of brick, and in architectural design and finish, with turrets and smokestacks, represent a scene of beauty and progress that is part of the history of this country. As we view this labyrinth of American industry, we fail to grasp its immensity, unless with yard-stick and pencil we measure and count. There are over 17 acres of flooring; over 10,000,000 bricks in the main buildings; over 1,000-horse power in steam engines; over 2,000 ft. line shafting, not including counter-shafts; over 4 miles of belting, some of which is 36 inches wide, and over 1,200 men, molding and fashioning the Studebaker wagon, with sunlight by day and the electric light by night. Steadily has the demand and sale of this wagon increased; and as surely preparations have been made to meet the demand. The last year, 1880, 26,000 wagons were sold, and this year, 1881, will exceed 28,000—the largest number of vehicles manufactured and sold by one firm in one year in the United States or any other country.

It is marvels beyond precedent in the history of a wagon manufactory to see in the packing and shipping department and side tracks at South Bend, Indiana, trains of railroad cars built by the Studebaker Bros. for their own use (larger and wider than the ordinary baggage car), filled with boxed carriages and heavy wagons of all kinds, and marked "Afghanistan, Quartermaster's Dep't, British Army," "Egypt," "Syria," "Sandwich Islands," "Australia," "Cuba," "Paris," "San Francisco," and to towns and cities in all parts of this country.

In the year 1852, Clem Studebaker and Henry Studebaker opened a small wagon shop in South Bend, Indiana, in which they managed to turn out two farm wagons during that year, one of which is in use now. During 1874 their loss by fire was 2,400 wagons, and property valued at \$300,000; but the indefatigable brothers soon built on a larger scale than before. In 1880 the Studebaker Bros. Manufacturing Co., consisting of the

chanics and for over a quarter of a century have steadily continued in the same business only to swell into greater proportions and develop the modern perfected wagon—no motto could be more appropriate than that over the main door of the largest wagon manufactory in the world.

"ESTABLISHED 1852."

"LABOR OMNIA VINCIT."

"STUDEBAKER BROS. MFG. CO."

It is often said by men who have used the Studebaker wagon, "I have not had \$5 expense on my 'Studebaker' in five years." "That Studebaker gearing of mine has worn out two bodies and is good yet." "I save one-fourth of a horse-power on every 'Studebaker' wagon I use." Having this reputation we will endeavor to show why and how it was obtained:

1st—The best of timber of every class, and especially that of Indiana, is used.

2d—Every stick of timber is seasoned from five to seven years, and the entire woodwork is saturated in boiling oil to render it impervious to moisture.

3d—The wood passes triple inspection and is tested by machinery and worked by selected and the best skilled mechanics in the world, who work with such precision that if you gather up distinct parts of the wagon made by different persons, they will be found to fit with almost the nice precision of the works of the Waltham watch.

4th—The patent bevel-edge projecting tire saves the paint on the felloe, and consequently on rocky roads and ruts protects the wheel.

5th—The skeins are set by a patent skein setter, which takes exact pattern of the inside of the skein to which the axle is to be fitted, thereby making a true fit and a perfect running wagon. These parts are also made of selected iron, very heavy and are fitted to such an exactness that the farmer of Sacramento and Stockton can exchange wheels with impunity.

6th—The Studebaker is the only wagon in which the slope shoulder spoke is used, which are driven in by a "Tom Sayers" trip hammer



## ANNOUNCEMENT.

## YOUTH'S COMPANION.

## THE PUBLISHERS

Have spared no effort to present an Announcement of new features for 1882 that shall represent the best ability in entertaining literature. The names of writers for the COMPANION and a selection from the topics that will be treated in the coming volume are given below.

## Its Serial Stories.

These are by writers of rare gifts and experience. Several of the Stories will illustrate topics that are engaging public attention.

A Serial Story. Illustrated. . . . . By W. D. Howells.  
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Incidents of Frontier Life and Adventure in the West; in Africa; in Australia; in Greenland; in China, Japan and Corea; in Russia; in New Zealand; on the Ocean. Fully illustrated.

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Perils of a Linesman's Life: Guarding a Telegraph Wire in Sumatra. Illustrated. By H. S. Dearborn, C. E.  
On Recent Battle Fields. Illustrated. By Lieut. Grinnell.  
A Story of South Africa. A Serial Story. By Archibald Forbes.

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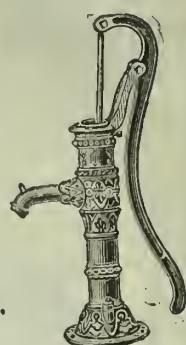
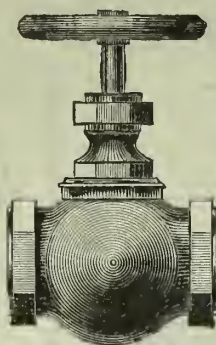
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Any stock upon which this assessment shall remain unpaid on the 26th day of December, A. D. 1881, will be delinquent, and advertised for sale at public auction, and unless payment is made before, will be sold on Monday, the 17th day of January, A. D. 1882, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

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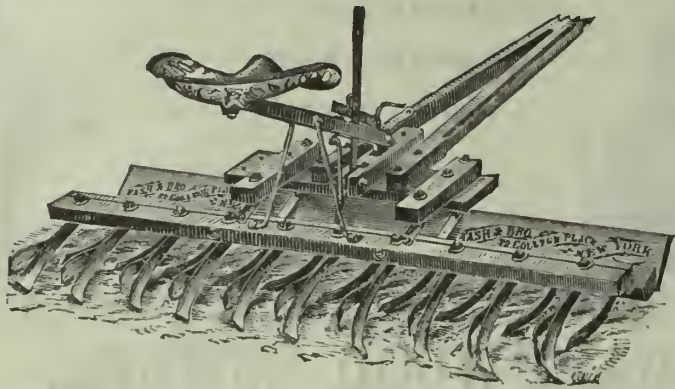
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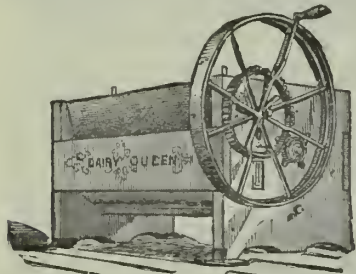
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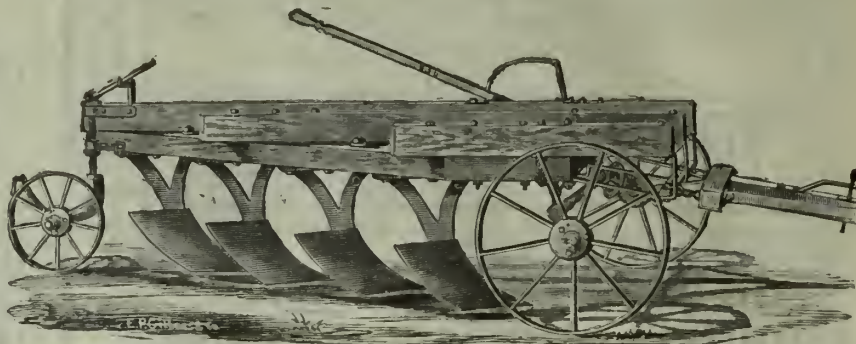
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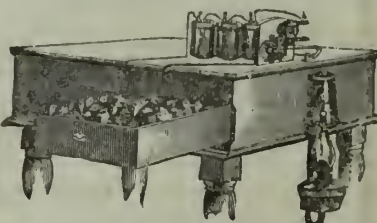
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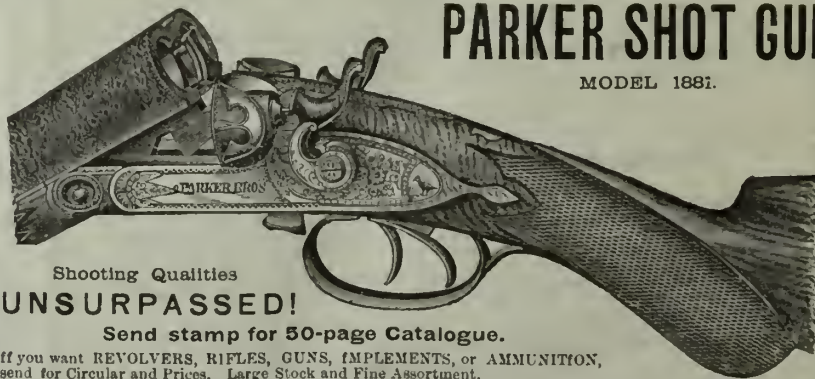
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Positively self regulating with no collspring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information

HORTON & KENNEDY, GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale. San Francisco Agency, LINFORTH, RICE & CO., 323 & 325 Market Street.

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Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.

Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to MATTESON & WILLIAMSON, Stockton, Cal.

SPERRY'S FLOURING MILLS,

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Of all kinds and sizes.

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We Manufacture our own goods and sell Bed Room sets from \$22 up. Our styles are the latest, and made under our own supervision by the best workmen. Our immense stock of Carpets imported direct from the Eastern markets in large stock and of all the latest patterns, and sold at prices to suit the Times.

We are the Agents for the Celebrated Decker Pianos, and Organs from \$85 upwards.

Poultry and Stock Book

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address WILLIAM NILES, Los Angeles, Cal.

HOPE FOR THE DEAF

Dr. Peck's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address, H. P. K. PECK & CO., 553 Broadway, New York.

Improved Patent Rotary Force Pump for Pumping Water by Horse Power.

This is a Durable and Compact apparatus for pumping, that will force water 100 feet and 2,000 to 4,000 gallons an hour. It can be moved from one well to another for Irrigating. For further particulars, address,

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Short Horn Bulls For Sale.

The undersigned now have for sale a few choice Thoroughbred and high grade bulls from the best milk strains. Our herd consists of "Young Marys," "Daisies," "Imp. Britannias," etc. Prices Reasonable.

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H. T. DORRANCE, Manufacturer and Importer of SADDLERY AND HARNESS,

CALIFORNIA, LADIES' AND IMPORTED SADDLES, Whips, Robes, Team, Concord, Buggy, Coach and Trotting Harness, Horse Blankets, Linen Covers, Etc.

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LADIES' Purchasing Agency.

Commissions executed and purchases made of all kinds of household articles, dry goods, art and fancy work materials, etc.

MRS. M. S. HARMON, 131 Hancock St., S. F.

To Fish Raisers.

I am now ready to sell Carp which were imported from Germany in 1872, in lots to suit. Address

J. A. POPPE, Sonoma, Cal.

CRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000, In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$500,000.

Reserve Fund and Paid up Stock, 25,760.

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES OF DEPOSIT issued payable on demand.

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BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1881.



WINDMILLS! HORSE POWERS!

TANKS AND ALL KINDS OF PUMPING MACHINERY BUILT TO ORDER.

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MANUFACTURERS OF

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OF EVERY DESCRIPTION.

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California Washer.

This machine is an improvement on the celebrated "Humboldt." For Families or Hotels it will pay for itself in less than six months. Lace curtains and other delicate fabrics can be washed without injury. Price \$15. Manufacture, 431 Fourth St., S. F. Local or traveling Agents wanted. G. M. PURSELL, Patentee.

California Improved Rotary Churn,

PATENTED AUGUST, 1881.

A Box Churn with dashers, or can be used without dashers. Can be run with reverse motion with one man or two. A trial will convince that this is the best Churn in use. For Churns and Agencies, apply to

E. L. PRIEST & CO., 629 Market St., Oakland.

STILES' GRAIN MILL.

This Mill grinds by corrugated friction rollers. It will grind eight tons to one-horse power per day, and one-half-horse power will run it and do work in proportion. It can be run by a common windmill. Any orders received by W. C. STILES, Nevada City, will be filled at once.

GOLDEN GATE WASHING MACHINES.

The principle used attacks every spot and place in the fabric with force, and will cleanse the most delicate fabrics without injury. The rocking motion used takes but small power, so that a youth can do a washing Strong, Durable and Ornamental. Agents Wanted on Liberal Terms. Address JOHN D. WINTERS, Davisville, Cal.



Calvert's Carbolic

SHEEP WASH.

\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



M. P. HENDERSON Carriage Manufactory.

ALL KINDS OF CARRIAGES AND WAGONS FOR SALE.

Cor. Main & American Sts., Stockton, Cal.

Makes to order all kinds of Carriage and Buggy Work, Express and Thoroughbred Wagons and Stage Work. Painting and Trimming done to order.

Jobbing done with Neatness and Dispatch.



PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, No. 252 Market St., S. F.

- FOR THE WEEK ENDING DECEMBER 6, 1881.
- 250,495.—BARRICADING FIRE ARM.—Thos. Burnett, Eureka, Cal.
- 250,497.—LIFTING JACK.—Geo. Caseres, Freestone, Cal.
- 250,512.—CULTIVATOR.—Aaron Evans and J. Draper, St. John, Cal.
- 250,510.—TIRE WRITER.—Chas. W. Eames, Shasta, Cal.
- 250,552.—GRINDING AND AMALGAMATING PAN.—Isaac Lepley and W. H. Hepburn, Amador, Cal.
- 250,556.—FIRE EXTINGUISHING APPARATUS.—D. R. Lynch, Grass Valley, Cal.
- 9,960.—PHOTOGRAPHIC APPARATUS.—Re-issue.—E. J. Muybridge, S. F.
- 250,355.—ROCK DRILL.—H. F. Parsons, S. F.
- 250,466.—SAFETY STIRRUP.—J. C. Wachite, Sacto., Cal.
- NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

A Compliment to the Rural.

EDITORS PRESS:—Received a marked copy of the PACIFIC RURAL PRESS of Dec. 3d. Thank for introductory compliment. You know from experience, that more than half of the exchanges which are received on the tables of large publishing concerns, are rarely opened for inspection, and that a still less number are ever kept on file for reference. I will take this opportunity to say that the PACIFIC RURAL PRESS, the truly representative agricultural publication west of the Rocky mountains, is carefully scanned by me, and is one of the few select papers which I have always taken an interest in looking through. In my scrap book are quite a number of clippings from it. With wishes of continual success and prosperity which you deserve, I remain, yours truly,

N. H. PAAREN, M. D., State Veterinarian.  
Chicago, Dec. 8, 1881.

ARE MEN'S HEADS GROWING SMALLER.—A correspondent of *Nature* says that an opinion is prevalent in the hat trade that the size of men's heads has undergone a decrease within the last 30 or 40 years. It is held that heads generally are now fully two sizes smaller than 40 years ago. A head of more than 24 inches in circumference is now quite a rarity, while thousands of hats are made of 21 inches. There are some, however, who think that the diminution is more apparent than real—that it is observed mostly among grooms and men of that class in the social scale, and that it is possibly traceable to alteration in the style of hair-cutting or of wearing the hat.

CELLULOID.—A new celluloid is said to be obtained from well-peeled potatoes, which are treated for 36 hours with a solution of eight parts of sulphuric acid in 100 parts of water. The mass is dried between blotting paper and then pressed. It is further stated that in France smoking pipes are manufactured with this new material which are quite equal to meerschaum. By heavy pressure the material acquires such a hardness that billiard balls can be manufactured from it.

METALLIC FENCING.—Attention is called to the advertisement in this issue of metallic fencing, by the well-known firm of Huntington, Hopkins & Co., of this city and Sacramento. The increasing inclosure of lands on this coast is constantly calling for fencing materials and we know that large need has been made of barbed fencing. The advertisement will give inquirers a clue as to where the material may be had, in quantities to suit, at reasonable rates.

TREES AND PLANTS.—C. M. Silva & Son, the well-known fruit growers and nurserymen of New Castle, Placer county, have issued their descriptive circular and price list for the season of 1881-82. The specialties of the firm are small fruits and new fruits of all kinds, and the planter can find a multitude of things in these lines. We see, also, a good stock of the standard fruits of all kinds.

FELIX GILLET.—This progressive and devoted horticulturist is too well known to our readers to need introduction, and his stock of rare but well-tested fruits, nuts, etc., is also continually in the minds of those who like to grow good things. Mr. Gillet's announcement for the present season appears in our advertising columns this week.

NEW TANNING PROCESS.—A process of tanning with bichromate of potash has recently been discovered, and a company, which includes a number of capitalists in New York and some Boston leather dealers, has bought chrome mines in California, and will manufacture the bichromate and carry on a tanning business.—*Springfield Republican*.

FRESNO ORANGES.—Some fine oranges from Fresno Colony, Fresno county, have been on exhibition at the office of Thos. E. Hughes, 314 Montgomery street, during the last week, and have attracted much attention.

MARRIED.—Our occasional contributor, Angie E. Marjesson, was married last week to Dr. O. F. Shaw, of Sebastopol, Sonoma county. We extend congratulations.

The Pacific Rural Press.

[Established in San Francisco in 1870.]

This is the leading farming journal on the western half of the continent, and second to none in America. It is well printed and illustrated weekly. Contains an unusual amount of fresh, original farm, household and family circle literature. Careful attention is paid to giving full and reliable weekly market reports. The following are among its ably conducted departments: Editorials on agricultural and other timely and important subjects of live interest to farmers and their families; agricultural, and other useful and ornamental illustrations; correspondence from various quarters of our now and rich developing fields of agriculture on the Pacific coast, embracing new hints and ideas from progressive men and women in all branches of rural industry; Horticulture; Floriculture; The Garden; The Home Circle; The Grange; Young Folks; Domestic Economy; Good Health; Entomological; Sheep and Wool; The Dairy; The Stock Yard; Poultry Yard; The Swine Yard; The Apiary; The Vineyard; Queries and Replies; New Inventions (and illustrations of new and improved machinery); Agricultural Notes; Items of General News, etc. Its columns are studiously filled with choice, interesting, fresh and useful reading, devoid of questionable literature for old or young and fancifully alluring clap-trap advertisements. Send for sample copies.

Subscriptions, in advance, \$3 a year. Agents wanted, on liberal pay. DEWEY & CO., Publishers.  
No. 252 Market St., S. F., Cal.

Business Offices and Sunny Rooms to Let.

We have some desirable rooms to let adjoining the offices of this paper which will be rented on favorable terms. Stair entrance, No. 252 Market St. Elevator, No. 12 Front St. Parties wishing offices, etc., will do well to call and see them.

DEWEY & CO.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.  
M. P. OWEN—Santa Cruz county.  
J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
JARED C. HOGG—California.  
E. W. CROWELL—Yuba and Sutter counties.  
C. W. KELLEHER—San Mateo and Santa Clara counties.  
C. E. WATKINS—Alameda county.  
EDWARD A. WEBB—San Francisco.

The Best Reading.

Every family that desires to provide for its young people wholesome and instructive reading matter should send for specimen copies of the *Youth's Companion*. Its columns give more than two hundred stories, yearly, by the most noted authors, besides 1,600 articles on topics of interest, anecdotes, sketches of travel, poems, puzzles, incidents, humorous and pathetic. It comes every week, is handsomely illustrated, and is emphatically a paper for the whole family.

Annual Meeting.

The regular annual meeting of the stockholders of the Grangers' Bank of California and the election of Directors for the ensuing year will take place at the office of the Bank, in the City of San Francisco, State of California, on Tuesday, the 10th day of January, 1882, at 1 o'clock P. M.

ALBERT MONTPELLIER,  
Cashier and Manager.

Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

LIVERY STABLE IN OAKLAND.—We call the attention of farmers visiting Oakland, and others to hire teams or stable teams in Oakland, to the Hay, Sale, Boarding and Livery Stable of T. A. Cunningham, 1303 Broadway, Oakland. Mr. Cunningham (recently from Maywards where he still owns a ranch) has purchased a homestead in Oakland, and will do his best to give satisfaction to his new customers and old friends who may call.

PERSONS receiving a sample copy of the PACIFIC RURAL PRESS with this notice marked, are requested to examine the merits of the same, and consider fairly its claims for support, and if consistent, subscribe for the paper through the P. M. or agent delivering it, or otherwise. We will send it on trial, at the rate of \$3 per annum for any period the reader may wish. Please notice our terms elsewhere, and if desired, send for further samples and information. Those who can circulate this No. further to our advantage are invited to do so.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

POSTMASTERS having their attention directed to this notice by the publishers, are requested to act as agent for this paper (whenever they can do so without interference with our published list of solicitors), and we will allow them a favorable commission on subscriptions, as per terms published elsewhere.

MANHATTAN HOUSE.—First class in every respect, and reasonable prices.—When you visit Stockton stop at the Manhattan House. Free Coach to the house.

J. H. CROSS, Proprietor.

ST. JAMES HOTEL. First-class in every respect. When you go to San Jose, take free coach to the St. James. TYLER BEACH, Proprietor.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIDGOUT & Co., 10 Barclay St., N. Y.

THE TAMALPAIS HOTEL is open the year around for rural guests. It has a charming location in the pleasant and friendly climate of San Rafael.

THE Thanksgiving number of the RURAL PRESS, was a great credit to Dewey & Co.—*Headbury Flag*.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Dec. 21, 1881.

The Wheat market is still out of condition and quota ble rates are lower, while there is practically no business being done, as no one seems to care to invest just now. Charterers have fallen but that does not help the Wheat market just now. There is little to expect of the holiday season any way in the grain trade and dealers seem disposed to lay off rather earlier than usual. The latest from abroad is the following:

LIVERPOOL, Dec. 20.—Wheat: California spot lots, 10s 5d @ 10s 10d. Cargo lots are dull, at 4s 6d for just shipped, 50s, 6d for nearly due, and 50s 6d for off coast.

New York Dried Fruit Markets.

NEW YORK, Dec. 17.—Foreign fruit of all descriptions, with the exception of Currants and Dates, are much weaker, and Raisins are again lower. Layers and looses, \$2.50, London layers, \$2.70, Valencia, 9s, new Prunes, 7c @ 7 1/2c. Dried Apples are dull and easy.

Eastern Grain and Provision Market.

NEW YORK, Dec. 17.—The usual quietude of this season pervades the market, and as the close of the year draws nigh there is less and less doing. Prices generally were steady, and, to a great extent, nominal. The Wheat market develops no new feature, and remains in a state of almost total inactivity, so far as cash business is concerned, with very little promise of any material improvement in the near future. With prices considerably in excess of shippers' limits, export business remains at a standstill. Barley is fairly active and prices steady. Provisions of all kinds are extremely dull and prices nominal.

CHICAGO, Dec. 17.—The week's business on 'Change presents few features not already outlined in the daily reports. The five days show no decided movement of prices, the range being pretty nearly the same day after day, and the closing is about the same as the opening. Prices ranged for Wheat, \$1.25 @ \$1.28; Corn, 60 @ 61 1/2; Oats were weaker than any of the grains, the corner apparently proving unprofitable, and sold 4 1/2 @ 4 5/8; Pork, \$16.40 @ \$17; Lard, \$10.90 @ \$11 1/2. The receipts for the week are only fair, but exceed by nearly 750,000 bushels the shipments, which are unusually small. They are as follows: Flour, 98,000 bbls; Wheat, 209,000 bush; Corn, 658,000 bush; Oats, 480,000; Rye, 36,000; Barley, 274,000; Shipments: Flour, 84,000; Wheat, 141,000; Corn, 575,000; Oats, 196,000; Rye, 23,000; Barley, 122,000. The receipts for the same time last year were nearly double this year's record, being as follows: Flour, 160,000; Wheat, 708,000; Corn, 1,172,000; Oats, 454,000; Rye, 41,000; Barley, 123,000. Shipments: Flour, 120,000; Wheat, 131,000; Corn, 291,000; Oats, 232,000; Rye, 32,000; Barley, 113,000.

The Foreign Review.

LONDON, Dec. 20.—The *Mark Lane Express*, in its review of the British Grain Trade for the past week says: The week's temperature has been lower. Some earlier sown Wheats are exceptionally forward. The trade during the week was unsatisfactory. Samples of native Wheat are more difficult to sell. First-rate samples are very exceptional, indeed marketable English white Wheat was vainly offered at a reduction. Farmers deliveries at the market are decreasing. Foreign Wheat is firm. There was a restricted demand and steady sales. There was ample Flour in fresh supply. Only the best makes sell freely. Foreign Flour is firm. American makes are in moderate supply. Fine malting Barley sold steadily, other grades being rejected. Foreign Barley was unchanged. Winter Oats sold freely. New Foreign are easier. Corn in Liverpool declined 3d on Friday. The trade depends upon the short supply. Eleven cargoes arrived off coast, of which seven were sold. Pacific coast white Wheats are in restricted demand. Sales of English Wheat during the week were 43,656 quarters at 44s 9d 1/2 quarter, against 42,500 quarters at 44s 1/2 quarter for the corresponding week of last year.

Eastern Wool Markets.

BOSTON, Dec. 17th.—There is a better feeling in Wool with an increased demand and prospects of a better and more active market. The sales of Wool for the week have been 2,350,000 pounds of all kinds.

PORTLAND, Dec. 20th.—There is a steady demand for Wool. The market is dull for all desirable grades. Ohio and Pennsylvania are quotable at 42 1/2 @ 43c for X, 43 @ 47c for XX and XXX and above; Michigan and Wisconsin held at 41 @ 42c for X, and are in good demand, but bidders do not care to sell except at full rates. Unwashed continues firm and has been in fair demand at 15 @ 22c for coarse and low, 25 @ 32c for fine, and 25 @ 34c for medium and good grades. Combing and delaine are at 46 @ 50c for fine delaine and fine medium combing. Unwashed combing, 30 @ 33c for medium grades. California is quiet. Pull d Wools are in fair demand at 46 @ 50c for choice super, and 34 @ 40c for common and good. Foreign Wool is scarce and remains unchanged.

NEW YORK, Dec. 17th.—Wool is steady with an improved demand for fine and medium, and California stocks move fairly. Sales include 100,000 lbs of Spring at 23 @ 25c.

Freights and Charters.

There have been a number of changes in the tonnage market since Saturday. The ship Alex. Gibson, 2104 tons, and the ship Baring Brothers, 2100 tons, have been chartered at 65s to Liverpool direct. The rate is an extremely low one if contrasted with those paid during the past week.

BAGS—Bags are rated higher. Sales on spot have ranged up to 9c in large lots, and sales for next summer delivery are quoted at 9 1/2 @ 9c.

BARLEY—Rates are unchanged. We quote sales: 800 sks Brewing, \$1.60, and 1,000 eke do, \$1.55.

CORN—Corn is nominal at \$1.45 @ \$1.47 1/2 for all kinds. Sales are but few.

DAIRY PRODUCE—Choice Butter is still scarce, and for the fancy brands has sold up to 40c @ 41c. Cheese is in very ample supply, and the best goes at 17c.

EGGS—Eggs have turned upward again and have reached 37 1/2c @ 38c for choice Californias.

FEED—Bran and Middlings are reduced in sympathy with the decline in Wheat.

FRESH MEAT—The Beef market is very strong and there are reports of centralizing supplies among certain wholesale butchers. Mutton and other meats are about the same as last week.

FRUIT—Apples are a little higher. Oranges are selling well. Reports of sale of one of the best Riverside orchards at \$40 @ \$45 M. to go East, and of 15 Los Angeles groves to a S. F. agent are received.

HOPS—Hops are easier and rated about 2 1/2c lower per lb. The New York market by telegraph is quiet and nominal.

OATS—Oats are still high. The best sales from Sur-

prise have gone to \$1.75, and Surprise are nominal. ONIONS—Rates are about 10c lower per ctl. POTATOES—There is little change, \$1.30 @ \$1.35 being the range for the best lots.

PROVISIONS—The trade is fair and prices unchanged. POULTRY AND GAME—Turkey are still doing a little better. Other fowls are unchanged.

VEGETABLES—There is no change this week.

WHEAT—The market is flat, and 5c lower per ctl than last Wednesday. We note sales: 500 and 300 sks No. 1, \$1.55, and 3,000 sks No. 2, at \$1.50 per ctl.

WOOL—There has been more trade this week, though no appreciable change in values. A shipment by sea to New York of 1,600,000 lbs. lightens up the stock somewhat.

General Merchandise.

WHOLESALE. WEDNESDAY M., December 21, 1881.

Crystal Wax.....16 @ 18	Cement, Rosen- dale.....1 75 @ 2 00
Paraffine.....20 @	Portland.....3 75 @ 4 00
Patent Sperm.....25 - 23	
Assorted Pig Fats.....25	Assorted sizes, keg. 3 75 @ 4 00
2 1/2 lb cans.....2 25	
Table do.....3 50 @	
Jams and Jellies 3 75 @	
Pickles, hf gal.....3 25 @	
Sardines, q box.....1 67 @	
11 lb boxes.....2 50 @ 1 90	
Merry, Paul & Co's	
Preserved Beef	
2 lb, doz.....3 25 @ 3	
do 4 lb doz.....6 50 @ 6	
Preserved Mutton	
2 lb, doz.....3 25 @ 3	
Beef Tongue.....5 75 @ 6	
Preserved Ham	
2 lb, doz.....5 50 @ 6	
Deviled Ham, 1 lb	
do.....3 00 @ 3 50	
Boneless Pig Feet	
3 lbs.....3 50 @ 3 75	
2 lbs.....2 75 @	
Spiced Fillets 2 lbs 50 @	
Head Cheeses 3 lbs 50 @	
COAL—Jobbing	
Anstralian, ton.....8 50	
Coos Bay.....6 50 @ 7 50	
Bellingham Bay	
Seattle.....7 00 @	
Cumberland.....@ 13 00	
Mt Diablo.....@	
Lehigh.....@	
Liverpool.....@	
Wellington.....@ 9 00	
West Hartley.....@ 8 50	
Scotch.....@	
Scranton.....@	
Vancouver Id.....@ 9 00	
Wellington.....@	
Charcoal, sack.....@	
Coke, bush.....@	
COFFEE.	
Sandwich Id lb.....@	
Costa Rica.....12 @ 14	
Java.....12 @ 20	
Manilla.....15 @	
Ground, in cs.....@ 2 1/2	
FISH.	
Sack to Dry Cod.....@ 5	
do in cases.....@ 5	
Eastern Cod.....@ 7 1/2	
Salmou, bbl.....7 00 @ 7 50	
11 lb bbls.....3 50 @ 4 00	
1 lb cans.....1 12 1/2 @ 1 22 1/2	
Pick Cod, bbls.....@	
Hf bbls.....@	
Mackerel, No. 1.....9 50 @ 10 00	
Hf bbl.....1 75 @ 1 85	
In Kits.....3 50 @ 4 00	
Ex Mess.....3 50 @ 4 00	
Pickled Herring, box.....3 00 @ 3 50	
Boston Smoked Herring.....65 @ 70	
Plaster, Golden Gate Mills.....3 00 @ 3 25	
Land Plaster, ton.....10 00 @ 12 50	
Lime, Santa Cruz bbl.....1 25 @ 1 50	

Fruits and Vegetables.

WHOLESALE. WEDNESDAY M., December 21, 1881.

Apples, bx.....75 @ 1 50	Pears, sliced.....9 @ 94
Bananas, bnch.....2 50 @ 4 00	do whole.....7 @ 8
Cocoanuts, 100.....6 00 @ 7 00	Plums.....5 @ 6
Cranberries, bbl. 113 @ 117	Pitted.....13 @ 14
Figs, bx.....50 @ 75	Prunes.....9 @ 12 1/2
Grapes.....1 25 @ 2 25	Raisins, Cal, bx.....@ 2 75
Limes.....1 00 @ 7 00	do, Haats.....@ 3 00
do, Cal, bbl.....1 50 @ 2 00	do, Haats.....@ 3 25
Lemons, Cal, bx 100 @ 2 50	do, Haats.....@ 3 50
Sicily, box.....6 50 @ 7 50	Zante Currants.....8 @ 10
Australian.....@	
Oranges, Cal, bx 200 @ 3 50	Artichokes, doz.....@ 50
do, Tabl M.....@	Beets, ctl.....@ 65
do, Mexican, 15 @ 20 00	Beans, Lima, lb.....@ 5
do, Loretto.....@	do, String.....7 @ 10
Pears, bx.....50 @ 1 50	Cabbage, 100 lb.....75 @ 1 00
Pineapples, doz 7 @ 8 00	Carrots, sk.....30 @ 50
Plums, bx.....50 @ 75	Cauliflower, doz.....85 @ 1 00
Strawberries, ctl.....14 00 @ 15	Cucumbers, doz.....@ 15
	do, String.....@ 10
	Green Peas, lb.....@
	do Sweet.....@ 5
	Gr'n Pepp'r, bx.....@ 50
	do, Chile, bx.....50 @ 75
	Blackberries.....14 @ 16
	do, Lettuce, doz.....@ 10
	Clifton.....25 @ 30
	Dates.....9 @ 10
	do, Okra, lb.....5 @ 8
	Figs, pressed.....4 @ 6
	do, loose.....3 1/2 @ 5
	Horseradish.....@
	Nectarines.....14 @ 15
	Peaches.....11 @ 12
	do, pared.....14 @ 18
	Tomatoes.....@ 75
	Turnips, ctl.....@

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending December 20, 1881.

HIGHEST AND LOWEST BAROMETER.	Dec. 14	Dec. 15	Dec. 16	Dec. 17	Dec. 18	Dec. 19	Dec. 20
	30.291	30.144	30.176	30.277	30.256	30.339	30.319
	30.144	30.004	30.049	30.176	30.207	30.261	30.216

MAXIMUM AND MINIMUM THERMOMETER.	53	61	52	61	53	55	63
	45	48.5	45	45	43	45	46

MEAN DAILY HUMIDITY.	80.3	91.7	89.3	93	87	80.3	83.7
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PREVAILING WIND.	NW	NE	SW	W	NW	NW	NW
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WIND—MILES TRAVELED.	115	114	66	83	79	195	128
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STATE OF WEATHER.	Fair.	Fair.	Foggy.	Fair.	Fair.	Clear.	Clear.
	RAINFALL IN TWENTY-FOUR HOURS.						
	.52						
	Total rain during the season, from July 1, 1881, 5.70 inches.						

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, December 21, 3 P. M.

SILVER, 1. GOLD BARS, 990 @ 910. SILVER BARS, 10 @ 13 1/2 cent. discount.

EXCHANGE on New York, 1 premium; London, 49 @ 50; Paris, 5.20 francs @ dollar; Mexican dollars, 90 @ 91. New York (4 per cent), 118 1/2.



## Domestic Produce.

WHOLESALE.

WEDNESDAY M., December 21, 1881.

BEANS & PEAS.		Peanuts.	
Kayo, chl.	1 75 @ 25	Peanuts.	6 @ 6 1/2
Butter.	3 00 @ 25	Filberts.	14 @ 15
Castor.	3 50 @ 40	ONIONS.	
Pea.	3 50 @ 30	Red.	— @ —
Red.	1 75 @ 15	Silverskin.	40 @ 70
Pink.	1 75 @ 15	Oregon.	— @ —
Large White.	3 00 @ 25	POTATOES.	
Small White.	3 50 @ 30	Early Rose.	85 @ 90
Lima.	— @ 40	Petaluma, chl.	25 @ 35
Field Peas, blk eye.	50 @ 75	Tomatoes.	1 20 @ 35
do, green.	2 60 @ 25	Humboldt.	1 30 @ 35
BROOM CORN.		" Kidney.	1 30 @ 35
Southern.	3 @ 3 1/2	" Peachblow.	1 30 @ 35
Northern.	4 @ 6	Jersey Blue.	1 30 @ 35
CHICKORY.		Cuffey Cove.	1 25 @ 32 1/2
California.	4 @ 4 1/2	River, Red.	1 00 @ 15
German.	6 1/2 @ 7	do, Oregon.	85 @ 100
DAIRY PRODUCE, ETC.		Sweet.	1 25 @ 1 37 1/2
BUTTER.		POULTRY & GAME.	
Cal. Fresh Roll, lb.	35 @ 37 1/2	Hens, doz.	5 00 @ 6 50
do Fancy Brands.	— @ 40	Roosters.	5 00 @ 5 50
Pickle Roll.	— @ 32 1/2	Broilers.	3 00 @ 4 50
Fresh, new.	27 @ 30	Ducks, tame, doz.	5 00 @ 6 50
Eastern.	20 @ 25	Mallard.	2 50 @ 2 75
New York.	— @ —	Sprig.	1 25 @ 1 50
CHEESE.		Teal.	75 @ 1 00
Cheese, Cal., lb.	15 @ 17	Widgeon.	1 00 @ 1 15
EGGS.		Geese, pair.	1 50 @ 2 00
Cal. Fresh, doz.	36 @ 37 1/2	Wild Gray, doz.	50 @ 60
Ducks.	— @ 35	White.	50 @ 60
Oregon.	36 @ 38	Turkey.	14 @ 15
Eastern, by express.	32 1/2 @ 35	do, Dressed.	13 @ 16
Pickled here.	— @ —	Turkey Feathers,	10 @ 20
Utah.	— @ 32 1/2	tail and wing, lb.	10 @ 20
FEED.		Snie, Eng.	1 00 @ 1 25
Bran, ton.	— @ 16 00	do, Common.	50 @ 60
Corn Meal.	— @ 32 00	Quail, doz.	— @ 75
Hay.	9 00 @ 15 50	Rabbits.	1 00 @ 1 25
Middlings.	— @ 23 00	Hare.	2 00 @ 2 25
Oil Cake Meal.	— @ 25 00	Venison.	5 @ 7
Straw, bale.	62 1/2 @ 67 1/2	PROVISIONS.	
FLOUR.		Cal. Bacon, extra	14 @ 14 1/2
Extra, City Mills.	5 25 @ 5 50	clear, lb.	13 @ 14
do, Country Mills.	75 @ 80	Medium.	13 @ 14
do, Oregon.	4 75 @ 5 12 1/2	Light.	13 @ 14
do, Walla Walla.	4 50 @ 5 00	Lard.	13 @ 17
Superfine.	3 50 @ 4 25	Cal. Smoked Beef.	11 1/2 @ 12 1/2
FRESH MEAT.		Shoulders.	9 @ 10 1/2
Beef, 1st quality, lb.	6 1/2 @ 7 1/2	Hams, Cal.	13 @ 13 1/2
Second.	4 1/2 @ 5 1/2	Dupee's.	16 @ 17
Third.	4 @ 4 1/2	Whittaker.	16 @ 17
Mutton.	4 @ 4 1/2	Royal.	16 @ 17
Spring Lamb.	6 1/2 @ 7	Stewart.	16 @ 17
Pork, undressed.	9 @ 9 1/2	Eastlake.	16 1/2 @ 17 1/2
Dressed.	9 @ 9 1/2	SEEDS.	
Veal.	6 1/2 @ 7 1/2	Alfalfa.	12 @ 13
Milk Calves.	7 1/2 @ 8	do Chile.	— @ —
do, choice.	— @ 8 1/2	Canary.	2 1/2 @ 4
GRAIN, ETC.		Clover, Red.	14 @ 15
Barley, feed, chl.	1 45 @ 1 50	White.	45 @ 50
do, Brewing.	1 55 @ 1 62 1/2	Cotton.	2 @ 2 1/2
Chevalier.	1 55 @ 1 57 1/2	Flaxseed.	2 1/2 @ 3 1/2
do, Coast.	1 42 @ 1 45	Hemp.	— @ 5
Buckwheat.	— @ 1 62 1/2	Italian Rye Grass.	25 @ —
Corn, White.	1 42 1/2 @ 1 47 1/2	Perennial.	25 @ —
Yellow.	1 45 @ 1 47 1/2	Millet, German.	10 @ 12
Small Round.	— @ 1 47 1/2	do, Common.	7 @ 10
Oats.	1 57 @ 1 62 1/2	Mustard, White.	13 @ 22
Milling.	1 55 @ 1 75	Brown.	24 @ 3
Rye.	2 40 @ 2 45	Rape.	21 @ 22
Wheat, No. 1.	1 55 @ 1 57 1/2	Ky Blue Grass.	20 @ 25
do, No. 2.	1 50 @ 1 52 1/2	2d quality.	16 @ 18
do, No. 3.	1 45 @ 1 60	Sweet V Grass.	— @ 75
Choice Milling.	— @ 60	Orchard.	20 @ 25
HIDES.		do Red Top.	— @ 10
Hides, dry.	18 @ 18 1/2	Hungarian.	30 @ 40
Wet salted.	9 @ 10 1/2	Law.	10 @ 12
HONEY, ETC.		Mequit.	10 @ 12
Beeswax, lb.	23 @ 25	Timothy.	9 @ 10
Honey in comb.	15 @ 20	TALLOW.	
Extracted, light.	9 @ 10	Crude, lb.	7 @ 7 1/2
do, dark.	7 1/2 @ 9	Refined.	9 1/2 @ 10
HOPS.		WOOL, ETC.	
Oregon.	20 @ 21	San Joaquin.	9 @ 14
California, new.	25 @ 27 1/2	do, Lamb.	13 @ 15
Wash. Ter.	23 @ 24	do, Southern Fall.	9 @ 12
Old Hops.	— @ —	do, Lambs.	13 @ 14
NUTS—Jobbing.		Northern, free.	16 @ 20
Walnuts, Cal.	10 @ 11	do, 14.	14 @ 15
do, Chile.	7 1/2 @ 8	Mountain, free.	16 @ 18
Almonds, hshl.	8 @ 10	do, slightly seedy.	13 @ 15
Soft shell.	14 @ 15	Humboldt & Men-	— @ —
Brazil.	10 @ 11	do.	18 @ 21
Pecans.	13 @ 15	TAILOR.	

## Retail Groceries, Etc.

WEDNESDAY M., December 21, 1881.

Butter, California.	45 @ 55	Rice.	8 @ 10
Choice, lb.	45 @ 55	Yeast Powder, doz.	1 50 @ 2 00
Cheese.	17 @ 25	Can O, sters, doz.	2 00 @ 3 00
Eastern.	25 @ 30	Syrup S F & Gold'n.	75 @ 1 10
Lard, Cal.	— @ 18	Dried Apples, lb.	10 @ 15
do, Eastern.	20 @ 25	Cer. Fruit.	12 1/2 @ 20
Flour, ex. fin. bb.	8 00 @ 9 00	Figs, Cal.	9 @ 10
Corn Meal, lb.	21 @ 3	Peaches.	15 @ 25
Sugar, wh. crushd.	12 1/2 @ 13	Oils, Kerosene.	5 @ 60
Light Brown.	8 @ 9 1/2	Wines, Old Port.	3 50 @ 5 00
Coffee, Green.	23 @ 35	French Claret.	1 00 @ 2 50
Tea, Fine Black.	50 @ 1 00	Cal. doz bot.	2 0 @ 1 50
Finest Japan.	55 @ 1 00	Whisky, O K, gal.	3 50 @ 5 00
Candles, Adm. te.	15 @ 25	French Brandy.	1 00 @ 2 00
Soap, Cal.	7 @ 10		

## Bags and Bagging.

[JOBBER PRICES.]

WEDNESDAY M., December 21, 1881.

Eng Standrd Wheat.	8 1/2 @ 9	45 inch.	9 1/2 @ 9 1/2
Cal Manufacture.	— @ —	40 inch.	8 1/2 @ 8 1/2
Hand Sewed, 22x36.	8 1/2 @ 9	Wool Sks Hand Swd	— @ 47
20x36.	8 1/2 @ 8 1/2	3 1/2 lb.	52 1/2 @ 55
23x40.	12 @ 13 1/2	Machine Sewed.	— @ 49 1/2
24x40.	12 @ 13 1/2	Standard Gunnies.	18 1/2 @ 19
Machine Sewed, 22x36.	8 1/2 @ 9	Bean Bags.	6 1/2 @ 7
Flour Sks, halves.	9 1/2 @ 10 1/2	Twine, Detrick's A.	32 1/2 @ 35
Quarters.	6 @ 6 1/2	do.	AA. 35 @ 37
Eighths.	4 1/2 @ 4 1/2		
Hessian, 60 inch.	— @ 12		

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The most successful Poison in use for Squirrel Killing

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Moore's Sulphur Dip; Safe, Sure and Cheap prepara-

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PETALUMA INCUBATOR.

[Illustrated in RURAL PRESS, Dec. 3, 1881]

Awarded the first premium over the Axford or National

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Furnishing ample heat, easily managed and nothing to

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PRICES:

200 Egg capacity..... \$60.00

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LAUREL RANCH!

Thoroughbred

Spanish Merino

SHEEP.

We offer for sale 400 HEAD OF YOUNG EWES AND

RAMS. Prices always reasonable and terms liberal. Qual-

ity and condition superior to any flock in this State.

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Harvey's Hot-Water Radiator

For Warming and Ventilating Private

Residences and Public Buildings.

Introduced into TEN PUBLIC BUILDINGS and over

FORTY PRIVATE RESIDENCES the past year with satis-

factory results. Less attention and less fuel required to

heat 4 rooms with this system than would warm 1 room

with the open grate. Highest testimonials. Address

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Field, Grass, Flower and Tree Seeds.

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We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

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FLOWERING PLANTS, BULBS, FRUIT AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE, ETC.

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Our Specialty.

Many new and old varieties of

STRAWBERRIES,  
RASPBERRIES and  
BLACKBERRIES.

A large and choice stock of

"Monarch of the West."

Write for circular, C. M. SILVA & SON,  
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SEED WHEAT and OATS,

Direct from AUSTRALIA by late steamer. Sold in lots to suit by S. L. JONES &amp; CO., 207 &amp; 209 California St., and

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Trees, Seeds, Shrubs, Ornamental Fruit and Shade Trees. Nurseries at Mountain View, near Cemetery. Floral, Plant and Seed Depot, Seventh St., bet. Washington and Clay. Send for catalogue and price list. Address KELLER &amp; CO., Oakland, Cal.

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I have a few thousand left of my half-yearling or June Budded Trees, from 15 to 18 inches, consisting of Lemon Cling, Smock's Free, Crawfords, etc. Also, Royal and Large Early Apricot.

Price, \$15 per 100 this season. I am also prepared to make contracts for the season of 1882-83.

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## CYPRESS and GUM TREES.

Blue or Red Gum trees. Monterey Cypress, Acacias, and Pines of all sizes or the seed of each kind, very cheap for cash. Trees in condition to ship long distances. Send \$1 in stamps for samples of each kind, with prices. GEO. R. BAILEY, Berkeley, Cal.

PEPPER'S NURSERIES.

Established in 1858.

For sale, all kinds of Fruit Trees, Vines and Fruiting Shrubs raised without irrigation. Also, a general assortment of Evergreen Trees and Shrubs, deciduous Flowering Shrubs; Roses in assortment. Conservatory and Bedding Plants in great variety. Send for Catalogue and List of Prices. Address W. H. PEPPER, Petaluma Sonoma County, Cal.

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Dealers in all Kinds of Field and Garden Seeds at Reduced Prices in Large Quantities.

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ALFALFA, RED AND WHITE CLOVER; AUSTRALIAN, ITALIAN AND ENGLISH RYE GRASS; BLUE GRASS, LAWN, ORCHARD, MISQUIT, RED TOP AND TIMOTHY SEED; CALIFORNIA FOREST AND EVERGREEN TREE SEEDS. ALSO FRUIT AND ORNAMENTAL.

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## SEED WAREHOUSE.

No 409 and 411 Davis Street, - - San Francisco, Cal.

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Every description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. Can be obtained at our Establishment Fresh, Pure and Genuine, at the Lowest Rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. (Seed and Tree Catalogue sent by Mail free on Application.)

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Special attention will be given and prompt returns rendered for Consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates.

Our constantly increasing line of customers attest to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.

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ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

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## SEEDS, TREES AND PLANTS.

Alfalfa, Red and White Clover,

Australian Rye Grass, Timothy and Orchard Grass, Kentucky Blue Grass, Hungarian Millet Grass, Red Top, etc.

Also, a large and choice collection of FRUIT and ORNAMENTAL TREES, BULBS, ROSES, MAGNOLIAS, PALMS, ETC., AT REDUCED PRICES.

Budding and Pruning Knives, Greenhouse Syringes, Hedge and Pole Shears.

Price List ready Jan. 1st

THOS. MEHERIN, 516 Battery St., San Francisco.

Agent for B. S. Fox's Nursery.

## CHOICE TREES FOR SALE.

We will soon be in receipt of the following varieties of choice yearling trees:

Silver Prunes, Yellow Egg, Coe's Golden Drop, Petite Prune de Agen.

The above trees are all selected and on Peach Roots and free from scale and other injurious insects.

Orders taken now for above trees in lots to suit.

HIXSON, JUSII &amp; CO.,

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An English Veterinary surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letters. I. S. JOHNSON &amp; CO., Boston, Mass., formerly Baugor &amp; Co.

50 Lithographed Chromo Cards, no 2 alike 10c. Name in fancy type Conn. Card Co., Northford, Ct.

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Lowest prices ever known on Breeds - Loaders, Rifles, and Revolvers, Illustrated Catalogue (B) P. POWELL &amp; SON 224 Main Street CINCINNATI, O.

## MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

## TREES! TREES! TREES!

-AT THE-

CAPITAL NURSERIES, SACRAMENTO,

-AND-

Orange Hill Nurseries,

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We desire to call attention to our stock of native fruit trees, viz: Petite Prunes, Silver Prunes, Yellow Egg and Coe's Golden Drop Plums, Bartlett Pears, Apricots, Apples, Cherries, Peaches, etc. Also 100,000 Rooted Grape Vines of leading kinds, such as Muscat, Tokays, Hamburgs, Zinfandel, Seedless Sultan, etc. Also ornamental trees and plants, such as Magnolias, Arbor Vites, Pines, Cypress, Palms, etc. Orange and Lemon trees, best budded varieties. Also Elms, Maples, Poplars and Nut-burries for avenue and street planting—in fact everything usually kept in first-class Nurseries. We have many new and rare Fruits and Plants, for description of which our Catalogue will be mailed free to any address. Office and Tree Depot, 14th and Seventh streets, near Court-house, Sacramento. Address all communications CAPITAL NURSERIES, P. O. Box 407, Sacramento, or ORANGE HILL NURSERIES, Penryn, Placer county, Cal. WILLIAMSON &amp; Co., Proprietors.

## IMPORTANT TO THE FARMER.

-USE-

## Larroche's Fertilizer.

It is manufactured solely of Bones and residues of Meats dried and pulverized in such manner that all the Calcium, Phosphates, Carbonates, Nitrates and Potassium, which are the main assimilators to plants, are entirely preserved in the Fertilizer and render it most valuable to the cultivators of the soil.

Stable manures require frequent irrigation in order to develop its properties; it is expensive, voluminous, and requires great labor to spread and subsoil it; it propagates weeds, worms, snails and destructive animalcules, the pests of the farmer. On the other hand, Bone Powder can be easily handled, transported at low rates of freight, in bags. It checks the propagation of insects and luxuriates the growth of hops, vines, fruit trees, etc.; can easily be spread around the plants and is most efficacious as an impediment to the rapid and terrible encroachment of the PHYLLOXERA. The Fertilizer should be sown by hand on the ground when it is most like seed, and then harrowed. About 400 pounds is the quantity for an acre. Price, \$40 per ton. For further information apply or address to,

F. LARROCHE.

Stall 21, San Francisco Market, San Francisco, Cal.

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SEVIN VINCENT &amp; CO., Seedsmen.

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## CHOICE NEW CROP

## ALFALFA SEED.

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Carload or in lots to suit buyers.

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## GRAPE VINES.

CUTTINGS.—Zinfandel, Golden Chasselas, Black Malvois, White Riesling, Gray Riesling, Berger, Mission, Muscat, etc., all selected. \$4 per 1,000, from well ripened, healthy wood. All selected.

ROOTED CUTTINGS, same varieties, \$25 per 1,000; in quantities exceeding 5,000, \$22.50 per 1,000.

Rooted Clinton, phylloxera-proof stock, \$30 per 1,000. Rooted Wild Riparia, \$1 per 100.

CUTTINGS—Phylloxera-Proof—Taylor, \$9 per 1,000. Wild Riparia, \$10.50 per 1,000; Elvira, Lenoir, Cynthiana, etc.

## FRUIT TREES.

Full assortment for family orchard; also Coe's Golden Drop, Yellow Egg, Petit d'Agne, Felle, Green Gage, Columbia, Early Crawford, Foster, Bartlett, etc., at reasonable rates.

JAPANESE CISTENITS, very profitable as well as ornamental, \$40 per 100.

Trees grown WITHOUT IRRIGATION. No scale bug or other noxious insects.

LEONARD COATES, Box 2, Napa City, Cal.

## LOS GATOS NURSERIES.

I offer the trade this season a LARGE and GENERAL ASSORTMENT of

## FRUIT TREES AND SMALL FRUITS.

My trees are healthy, stately and well grown. Prices low down. Address S. NEWHALL, San Jose, Cal.



B. K. BLISS &amp; SONS,

Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address B. K. BLISS &amp; SONS, 34 Barclay Street, N. Y.

## JAMES HANNAY'S NURSERY,

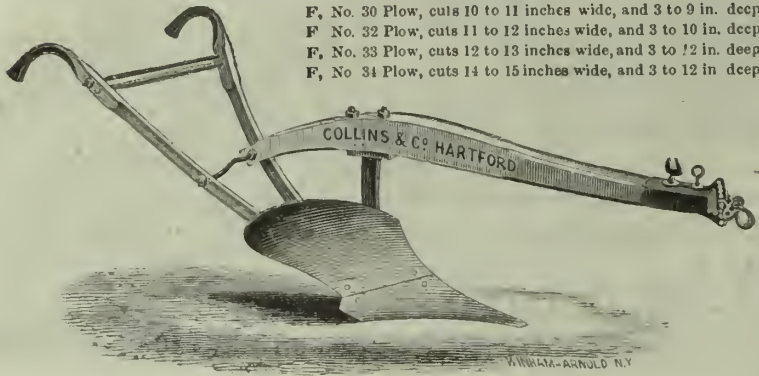
East San Jose, Cal.

I offer for sale, at low prices, a well assorted, healthy, and well grown stock of one and two-year-old Nursery Stock. Prompt attention given to all orders. Address JAMES HANNAY, San Jose, Cal.



# PLOWS!! PLOWS!! PLOWS!!

## COLLINS PLOWS.



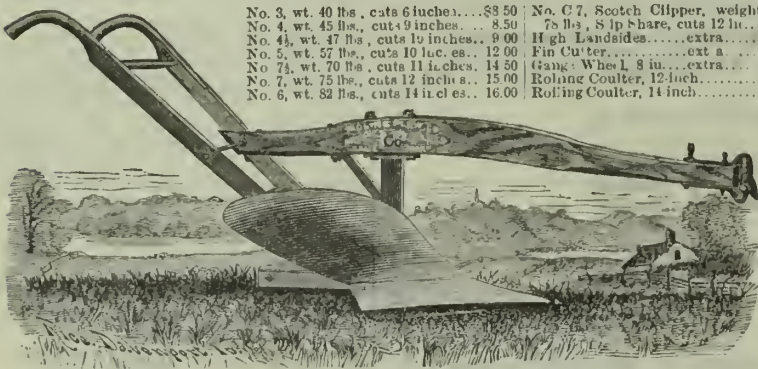
F, No. 30 Plow, cuts 10 to 11 inches wide, and 3 to 9 in. deep  
F, No. 32 Plow, cuts 11 to 12 inches wide, and 3 to 10 in. deep  
F, No. 33 Plow, cuts 12 to 13 inches wide, and 3 to 12 in. deep  
F, No. 34 Plow, cuts 14 to 15 inches wide, and 3 to 12 in. deep

## Hill's Plows, Nos. 2, 3 & 4.

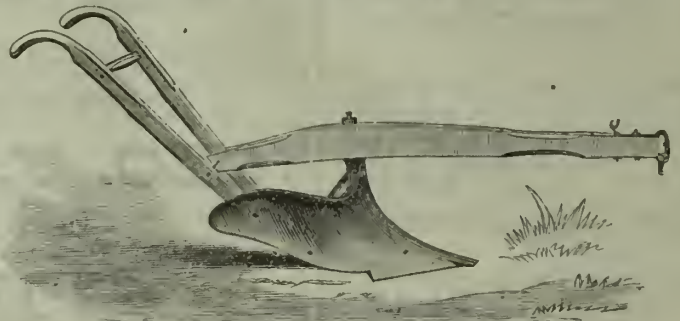


Hill's No. 2, Single Plow, cuts 10 inches, Cast Steel Point and Double Shin Steel Mold; weight, 86 lbs. .... \$ 7 00  
Hill's No. 3, Single Plow, cuts 12 inches, Cast Steel Point and Double Shin Steel Mold; weight, 87 lbs. .... 17 50  
Hill's No. 4, Single Plow, cuts 13 inches, Cast Steel Point and Double Shin Steel Mold; weight, 89 lbs. .... 19 00  
Extra shares—10-inch, \$3.75; 12-inch, \$4; 14 inch, \$1.50—without Fin Cutters.

## STAR MOLINE Plows.



No. 3, wt. 40 lbs., cuts 6 inches. .... \$3 50  
No. 4, wt. 45 lbs., cuts 9 inches. .... 8 50  
No. 4 1/2, wt. 47 lbs., cuts 10 inches. .... 9 00  
No. 5, wt. 57 lbs., cuts 10 1/2 in. ea. .... 12 00  
No. 6, wt. 70 lbs., cuts 11 inches. .... 14 50  
No. 7, wt. 75 lbs., cuts 12 inches. .... 15 00  
No. 8, wt. 82 lbs., cuts 14 inches. .... 16 00  
No. C7, Scotch Clipper, weight 75 lbs., 8 1/2 share, cuts 12 in. .... \$17 50  
High Landsides. .... extra. .... 1 00  
Fin Cutter. .... extra. .... 1 50  
Gang Wheel, 8 in. .... extra. .... 1 75  
Rolling Coulter, 12 inch. .... 2 70  
Rolling Coulter, 14 inch. .... 3 50



### CAST PLOWS, Nos. P 20; P 21; P 22.

Our Cast Iron Plows are made of strong, tough Cast Iron, with high standard to prevent clogging, and are shaped very much like a Steel Plow.

### Price List of Cast Iron Plows.

P18, Light Plow, cuts 9 inches, weight 55 lbs. .... \$3 00  
P20, Medium Plow, cuts 10 inches, weight 80 lbs. .... 10 50  
P21, Light 1-horse Plow, cuts 10 inches, weight 42 lbs. .... 6 00  
P22, Medium 1-horse Plow, cuts 8 1/2 inches, weight 45 lbs. .... 7 00  
P23, Heavy 1-horse Plow, cuts 9 inches, weight 50 lbs. .... 7 50  
P19, Light 2-horse Plow, cuts 9 1/2 inches, weight 70 lbs. .... \$2 00  
P24, Medium 2-horse Plow, cuts 10 inches, weight 85 lbs. .... 10 50  
P25, Heavy 2-horse Plow, cuts 10 1/2 inches, weight 81 lbs. .... 11 00  
P26, Heavy 2-horse Plow, cuts 12 inches, weight 111 lbs. .... 14 00  
No. 14, Double Mold-board Plow, weighs 18 lbs. .... 10 00

## THE GALE'S CHILLED IRON PLOWS.

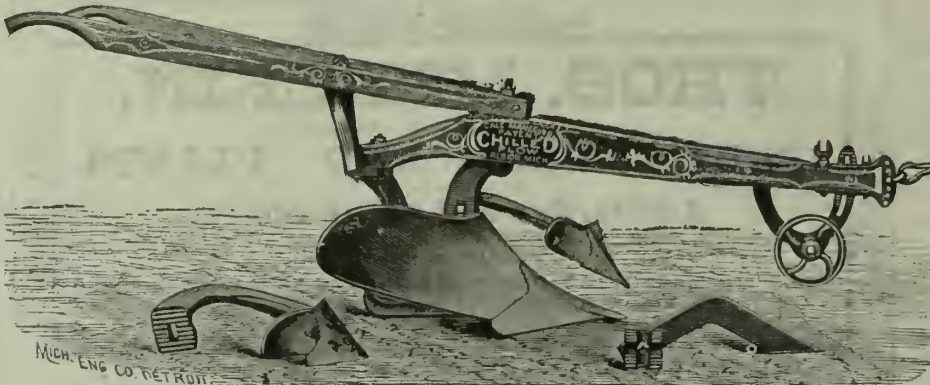
### THE GALE'S CHILLED PLOWS. AHEAD OF THEM ALL.

We are now prepared to put on the market a Plow that is much superior to any Plow heretofore made, which obviates all the objections made to any other plow. In addition, it embraces several new features, of the greatest value, for which we have the exclusive right to manufacture.

### Gale's Chilled Metal.

Metal presents itself as the important feature, being harder than any other Plow Metal, and so fine in fiber that it will receive a polish almost equal to a mirror. Its fiber does not run parallel with the surface of the casting, as with cast iron and steel, but its direction is through the mold-board, thus bringing the friction of the soil on the end of the fiber, grain. This feature avoids all reasonable possibility of imperfections being hidden below the surface.

The wood work of the Gale's is made from the best quality or white oak timber, carefully selected with reference to the use intended. The beam is placed in the center of its work, thus securing a center draft under all circumstances. It is secured to the plow by two bolts; one through the slotted standard head in the center of the beam, and the other through the handle brace at its rear end.



Gale's Chilled Iron Plow, with Patented Jointer and Gauge Wheel.

### PRICES OF

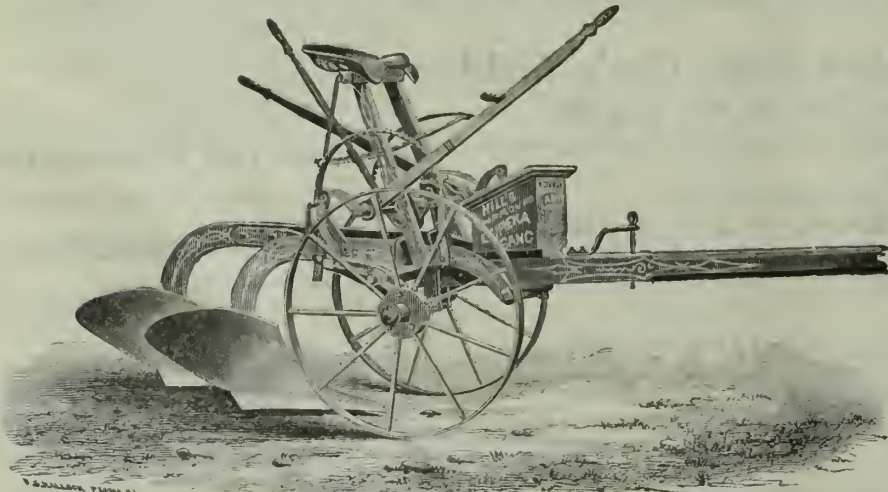
### Gale's Chilled Plows.

No. 15. .... \$15 00  
No. 17. .... 12 00  
No. 18. .... 14 50  
No. 20. .... 14 00  
No. 22. .... 15 00  
No. A2. .... 17 50  
No. A1. .... 19 00

### NEW SERIES.

No. 25. .... \$ 8 00  
No. 26. .... 14 00  
No. 24. .... 14 00  
No. 21. .... 13 00

## EUREKA GANG PLOWS.

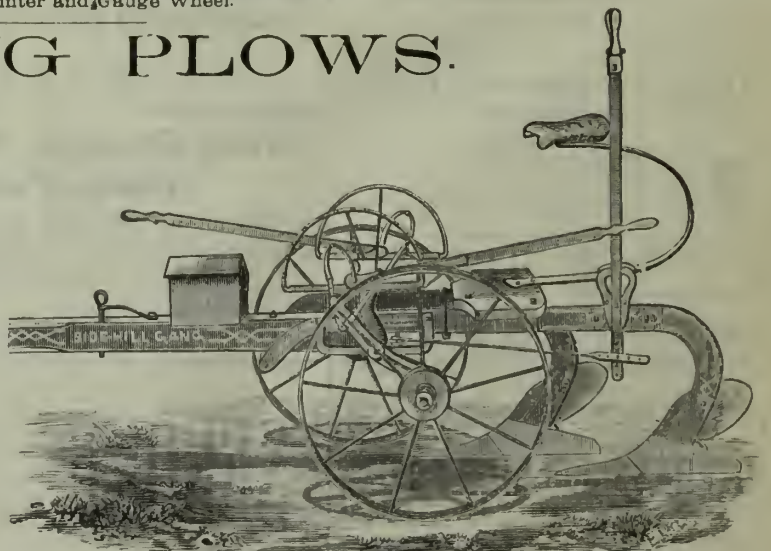


NO. 7 C.

The above implement has received more State and County Fair Premiums, has been successful in more plowing contests, and has met with a more extensive sale than any Gang Plow ever invented. It has been the Plow against which all dealers and manufacturers interested in the sale of other Gangs have waged their fiercest war, and the one by which inventors have measured their efforts, well knowing that if they could make a more satisfactory implement than the Eureka that they could justly claim to have the best.

### PRICES.

No. 6. Hill's Eureka Gang, Star Moline Bottoms, two extra points, single lever, Weight, 560 lbs. .... \$100 00  
No. 7. Hill's Eureka Gang 5-16 inch cast steel, extra-hardened Moulds, CAST CAST-STEEL Points, two extra points, single Lever, weight 625 lbs. .... 100 00  
No. 7a. Hill's Eureka Gang, with Collins' Moulds and Points, weight 585 lbs. .... 105 00  
No. 7c. Hill's Eureka Gang, with right and left hand Levers and Land Gauge, weight 600 lbs. .... 110 00



NO. 10A.

It has an arrangement whereby the side of the wheels can be set, by means of a lever, obliquely across the beams, thus turning the wheels so that they run to land or up-hill. Thus, while the beams and tongue are going straight ahead, the wheels run slightly up-hill, which counteracts the tendency that the Plows have to work or slide down hill. The lever that governs this movement is situated where it can be conveniently reached by the driver, so that he can give the wheels more or less "shear," as may be required by the side of the hill being more or less steep. This device is the only thing yet tried that fully accomplishes the object sought.

### PRICES.

Same style of leverage and same kind of bottoms as those used on the Eureka Gang.

No. 10. Wood Beam and Wheel, Eureka Gang with Land Brake for Side Hill, weight 550 lbs. .... \$110 00  
No. 10a. Iron Beam and Wheel, Eureka Gang with Land Brake for Side Hill, weight 625 lbs. .... 115 00

San Francisco

BAKER & HAMILTON,

Sacramento.



# PACIFIC RURAL PRESS

Volume XXII.]

SAN FRANCISCO, SATURDAY, DECEMBER 31, 1881.

Number 27

## Apple Growing in California.

At the last meeting of the State Horticultural Society there was a discussion on apple growing, following the paper by Mr. Dwinelle, which was published in the *RURAL* of Dec. 10. We have been prevented hitherto from writing out our notes on this discussion, and take the present opportunity of presenting some of the points brought out.

Mr. Shinn, of Niles, asked the reason for the prevalence of poor apples in San Francisco market. Have the orchards gone down with woolly aphids or from some other cause? He is digging up apple trees, some of them are hopelessly gone with aphids. He burns up the old trees and begins again. The old trees were on the place when he bought. They were 25 years old, the trees having been brought from the East. Varieties were not good and the product included a mass of contemptible apples from poor varieties, inroads of aphids and the worn-out condition of the trees. Apple growing is certainly profitable if healthy trees of good varieties are grown. He had taken 13 boxes of Newtown pippins from a single tree—certainly there is profit in that. Many parts of California are excellently adapted to apple growing. Especially are the mountain districts, both along the coast and in the Sierras. There are many places where the trees will produce as good apples as can be raised. In planting he would select a few varieties, 10 or so is abundance. There is no use in growing so many kinds. Of the woolly aphid Mr. Shinn remarked that he had found very few on sandy soil near the creek. The reason why trees infested with aphids still go on bearing for a long time, is because the insect does not puncture to the wood of the roots, but draws merely from the epidermis.

Matthew Cooke affirmed this observation, and alluded to the great injury wrought by the woolly aphid in different parts of the State. Many infested nursery trees had been burned in Visalia. He instanced a Santa Cruz orchard which had been destroyed by it. Along the Sacramento six-tenths of the trees have been dug out. The aphid, he said, has done more harm than the codlin moth. The best remedy he knew of for the roots of young trees was to grow tobacco, dry it and then put it around the crown of the root and sprinkle it over with saltpeter.

Mr. Dwinelle observed that niter is good. It might be a question how far around the tree the tobacco thatch should be placed. He had found the insect four ft. from the trunk. Other remedies which are useful are wood ashes piled around the base of the tree, also gas lime.

Mr. Lewelling said he had fought the woolly aphid since he was a boy. It stays long in the soil. If the tree grower starts with healthy roots he need have but little trouble. Seedlings grown from the Royal Genet and the Russet are free from the aphid, but seedlings grown from promiscuous seed will have the insect. If the nurseryman grafts with clean scions

upon these seedling stocks which are free from aphids, and puts wood ashes around the trees, he will thwart the pest. He never knew the aphid to appear upon the body of the tree until after it had established itself on the roots.

If the aphid once gets into the soil, he knows of no way to get it out. If it gets into his nursery ground, he moves the nursery to clean ground.

Mr. Trumbull spoke of the need of feeding trees. He instanced a man who had complained to him of getting but little fruit from his trees. He questioned him, and found that the trees were 25 to 30 years old, and had never been manured in any way. This was reason enough for their unfruitfulness.

Some one asked about the value of plowing under a green crop for manure. Mr. Webster

**DROUTH PICTURES.**—Plants get sometimes terribly deceived by the freaks of the elements. During the last extra dry year in California (1877), there were a host of exhibitions of bewilderment in plants, such as unseasonable blooming and the like. The fearful drouth at the East last summer seems to have thrown plants and trees all out of their reckoning, and they took the stoppage of growth by lack of moisture to be the dormant season of winter. In consequence of this mistake they went to work blossoming when the moisture came in the autumn, thinking they were answering to vernal influences. The *Rural New Yorker* says: "Apple trees and horse chestnuts in flower in November are a rare sight. It is one of the

## Holstein Cattle.

We present to our readers upon this page an excellent cut of the wonderful Holstein cow "Anggie." She was bred in North Holland, and calved in 1874. In the fall of 1879 she was brought to this country by Messrs. Smiths & Powell, of Syracuse, N. Y., the most extensive importers and breeders of Holsteins in America. The year following that in which "Anggie" was imported, and before she was fully acclimated, she made the unprecedented and still unequalled milk record of 84½ lbs. in one day, 2,362½ lbs. in one month, 10,692½ lbs. in six months, and 18,004 15-16 lbs. in one year. In the same herd are also "Egis," with a record for a year of 16,823½ lbs., "Netherland Queen," with a record at two years old of 58½ lbs. in one day, 1,670 lbs. 9 ozs. in one month, and 13,574 lbs. 3 ozs. in 345 days, or a trifle more than 11 months. These records stand alone and unparalleled, and should convince the most unbelieving of the excellence of Holsteins as milch cows. The entire milking herd of mature cows averaged 14,164 lbs. 15 ozs. and the two-years-old heifers (excepting two prevented by accident from making records), averaged 9,711 lbs. These herd averages have not up to this time been approached by any other herd or breed, and speak eloquently of the superiority of this breed of cattle and this herd in particular. Smiths & Powell have now the largest and best selected herd in this country, containing about 200 pure bred, recorded animals. Nearly all are imported, and were selected by a member of the firm in person from the best herds and most celebrated deep milking families



IMPORTED HOLSTEIN COW, AAGGIE, PROPERTY OF SMITHS & POWELL, SYRACUSE, N. Y.

said he at first used to plow his Fruitvale orchard early in the fall. Afterward he deferred plowing until February or March and then turned under the rank growth of green stuff which had sprung up. He finds this acts well on the soil, enriching and lightening it. Mr. Dwinelle approved this method. He saw no advantage in early plowing and thought it profitable to wait until a good growth of alfalfa or bur-clover covered the ground, and economical, too, as the cost of labor is lessened. The soil is made loose and friable. Wood ashes are especially valuable. Lime is also of use and can be bought cheaply. In some localities limestone can be burned at home and a lime cheaply made which will answer every purpose.

Mr. Wolfe spoke of the phosphates and potash as essential to the well-being of fruit trees. Wood ashes are especially valuable to pear trees.

Mr. Cooke gave a recipe for making a special fertilizer for fruit trees. Take 400 lbs. of bone-meal, and moisten it with water in which 50 lbs. of potash has been dissolved; stir up well, and put in barrels, covering the tops of the barrels with a layer of lime.

There was some general talk about bonemeal, several members stating that bonemeal, which is offered very low in this city, has been burned two or three times over in the sugar refineries, and thus has been robbed of its organic matters.

curious results of the drouth, of which quite an interesting list might be made. The wonderful crop of mushrooms formerly referred to was checked by a frosty night, but again made their appearance in less numbers. Cannas cut down by the frost and left in the ground have now (Nov. 11th) made a new growth of three or four inches. At this time, too, salvias in sheltered places present a midsummer brightness, while roses have not looked so fresh since June. How sad for an Eastern plant to awaken in November, and then have the whole Eastern winter before it.

The incorporation of the Central Pacific Railroad Co. of Utah has been perfected in Salt Lake. It covers that portion of the proposed new road from Corinne to Yankton, D. T., which is to pass through Utah. The preliminary surveys are all made, the capital subscribed, and the amount required by law is deposited. Chas. Crocker is President. The road will be 110 miles in Utah, and it is expected that it will all be completed to the coalfields in Wyoming in 1882. It will form a link in the Central Pacific transcontinental road from San Francisco bay to the Missouri river, and, when completed, will make another eastern outlet for Utah, direct with the Atlantic States.

in Holland. This season's importation contained the prize bull of all the Netherlands, "Prince of Edam," winner of the first prize at the great cattle show at Leyden, Holland, where he competed with over 20 bulls. "Prince of Edam" is now three years old. This show was open to all the Netherlands. The stock now owned by Smiths & Powell and the characteristics of Holsteins in general can be learned from Messrs. Smiths & Powell's handsome illustrated catalogue which will be sent to any address. This firm is also large importers and breeders of Clydesdale horses, and breeders of the best strains of Hambletonian horses, concerning which they are always ready to impart information.

The average production of Spanish vineyards is estimated at 450,000,000 gallons, and the annual consumption of wine in Spain is reckoned at 10 gallons per head of the population, or less than half the consumption in France. The exportation of wine to France has largely increased of late years.

Work on the extension of the San Luis Obispo & Santa Maria Valley railroad between Arroyo Grande and Central City is progressing rapidly and satisfactorily to all concerned. The grading will be completed in three or four weeks, if the favorable weather continues.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### The Present Status of the Debris Question.

EDITORS PRESS:—It is now clear that the hydraulic companies, numbering between 70 and 100, are pursuing operations for their profit, to the desolation of the Sacramento valley, and to the wholesale violation of rights. This fact is established indisputably by an overwhelming accumulation of evidence. There is, first, the report of the Legislative committee of 1878. Following this, comes the report of State Engineer Hall, for 1879-80, in which he estimates the conspicuous depreciation and destruction, visible in houses, orchards and lands destroyed upon the Yuba, Bear and Feather alone, exclusive of the destroyed American bottom, the orchard land upon the Sacramento rendered unfruitful and the swamp lands rendered unreclaimable, and exclusive of the immense consequential damage, in money sunk in ineffectual levees, in losses from floods, etc., at \$4,717,259. Succeeding this report comes the inferential evidences of the destructive nature of hydraulic operations, to be drawn from the fact that three counties, Yuba, Sutter and Sacramento, the city of Marysville, and several incorporated districts have felt their very existence so imminently threatened, that they have entered into costly suits, upon the issue of which that final testimony, the report of the committee of San Francisco merchants, shows that their very existences, the integrity of their private property and of their public municipal rights, is at stake. For the committee says of the people of these counties, cities and districts—"They can stand but little more, and they must have relief or abandon their homes;" of Marysville, "If the debris is allowed to flow into the rivers as in the past, the ruin of the city is inevitable;" and of the valley—"It will render sterile and barren that entire section of the country—blotting out its cities and towns." Before this evidence was accumulated, it could be denied, and there was a want of reliable testimony to the contrary—that the hydraulic operations were producing such devastation; or if destruction was, in truth, being worked in the valley, that it was traceable to such operations. But now, there is no longer a pretense for denying, and no longer an excuse for failing to perceive that the hydraulic companies are pursuing conduct inconsistent with the integrity of rights of property guaranteed by this Constitution, and are actually preying upon the prosperity of communities and of individuals. And conduct, which if sanctioned by the Judiciary or by the Legislature, will work an effective subversion of civil rights. The case is made out against the industry. Previously a presumption existed in its favor, that an industry established for 20 years in a civilized society, could not be inimical to civil rights and to public prosperity. But that presumption is satisfied, and the presumption now stands against the hydraulic industry. It lies upon the hydraulic companies to show why they should be permitted to continue operations, and why hydraulic mining as an industry should be permitted to exist.

The debris committee of all bodies was in a position to clearly perceive this state of the facts, and yet their report did not proceed upon this manifest condition of things. They went to the question, not as moved by the necessity of securing justice and protection to the parties and communities injured, to the securing of respect for rights and to the establishment of equitable relations; but regarding the desideratum to be achieved to be the relief of the hydraulic-mining companies from the inconvenience and disturbance that the remonstrances and suits of the valley were causing them. Their findings and resolutions were all directed to the end of affording relief to the hydraulic companies, and not to the valley; or, if relief was to be extended to the valley, it was as a means of relief to the hydraulic companies. The steps which were promising to those companies they recommended in the entirety, the building of dams and the withdrawal of legal proceedings by the valley, a conference and a compromise; but the only step that could afford relief to the valley, the temporary stoppage of hydraulic operations until those operations could be prosecuted without detriment to the valley, and the only step which was essential to an equitable adjustment they thought of doubtful propriety to recommend and of doubtful necessity to require. They reported that they found "a considerable population" deriving "its support from these mines, and their stoppage even temporarily would entail much hardship;" but they did not consider that in the valley were thousands suffering far greater hardship in the absolute deprivation of property, and suffering in addition gross legal wrong at the hands of the parties above. Their position was that those parties would suffer loss if caused to discontinue their wrongful acts; therefore, they must not be constrained, even though the many below suffer inconceivably greater and utterly wrongful injury in consequence.

A specific defect in the report was the failure to ascertain and define the exact

magnitudes and consequence of the hydraulic operations. One great obstacle to action by the public looking to a constraint upon the operations of the hydraulic companies, has been the impression sedulously conveyed by agents of the hydraulic companies, that the hydraulic industry was the main industry of the mountain regions, and supported its entire population, or the bulk of its population. The public has, of course, been averse to an action that, apparently, would prostrate whole communities. The committee, holding out to the public that it would ascertain the exact state of affairs, really confirmed this impression by their report. But there are good grounds for believing that the hydraulic industry does not support even a major part of the mountain population. The committee accepted and presented the statement made to them, that the value of property invested in hydraulic mines was over eighty million, and thereby gave it a quasi sanction. Yet they did not adduce other evidence that ought to have accompanied this testimony, to show that the whole assessed value, at least, of the hydraulic property, was perhaps not more than \$8,000,000 or \$10,000,000, if that much; that in Yuba county with its hydraulic mines at Smartsville upon the Yuba, hydraulic property is assessed at only about \$300,000 out of over \$5,000,000, and in Nevada county the same property represents something over \$2,000,000 out of an assessment role of over \$6,000,000. The committee did not definitely announce the distinction between hydraulic, and drift and quartz mining; and state the fact that while in each of the six or seven counties in which hydraulic mining is carried on, there are on the average from 10 to 15 mines only, there are hundreds of quartz and drift mines in each; and that the latter employ many more laborers compared to the extent of their operations than the former. The hydraulic companies have attempted to make the term hydraulic mining synonymous with mining in general in the public apprehension. This enables them to maintain a foothold upon public consideration, when they would be abandoned and universally condemned were they isolated and clearly separated from the innocent and harmless industries of drift and quartz mining. The report of the committee, silent upon this point, and enhancing the importance and magnitude of the hydraulic industry by the whole tenor of its findings and recommendations, concealed the indefensible nature of its position, and gave it a specious appearance of support in equity and in public necessity.

The fourth resolution reads: "The hydraulic mining interests, in which so much capital is invested, is one of great importance and magnitude and its encouragement is not only desirable but a duty, for its wants will tend to benefit and develop the very lands which it will now destroy." Is the declaration contained in this resolution consistent with the dictates of justice and public safety? True it exactly tallies with the advantages of the hydraulic companies, but how true does it appear when viewed in the light of facts, the State Engineer's report and the report of the Citizen's Committee show to exist. Had the report first responded to the manifest demand of justice, by providing for that relief to the valley to which it was entitled, and then resolved that consistently with such security and protection to the valley it was not only desirable but a duty to encourage hydraulic mining, its position would have been unexceptionable. But throughout the report the convenience and advantage of the hydraulic companies has first consideration; not that we say that private individuals, when they are under no duty, moral or legal, have not a right to favor one individual or class rather than another in their gratuitous favors. But in this case the committee were the recipients of a confidence at the hands of the public. They had pledged themselves, were under a moral duty, and they were relied upon to do justice, whatever the consequences. The first demand of justice was the relief of the valley which was indisputably and manifestly suffering injury, legal and moral, from the hydraulic companies. They were bound to make that relief the first object of their action, and then were at liberty to contrive the advantage of the hydraulic companies. But the relief of the valley is everywhere subordinated to the advantage of the hydraulic mining industry. The recommendations were contrived, and were actually calculated in their nature to effect the preservation and the advantage of the hydraulic industry, and only incidentally security and justice to the valley communities; and, then, only at such time and to such extent as such protection could be accomplished consistently with the advantage and profit of the hydraulic companies.

The final points in which the report failed to express the demands of equity were in the neglect to recommend the temporary stoppage of hydraulic mining during the building of the proposed dams, and in the recommendation of the withdrawal of legal proceedings. There is a want of consistency between the committee's professions and conduct. They profess to call a conference and propose a compromise only, and not to pass upon any of the inevitable terms of compromise. For this reason they refrain from prescribing the temporary stoppage of hydraulic mining; yet, while reluctant to prescribe a condition to the hydraulic companies, they readily prescribe, immediately thereafter, a material condition to the valley namely: that the valley communities shall stop legal proceedings.

The committee treats the temporary stoppage as of doubtful necessity; yet such stoppage would be a necessary and inevitable condition

of compromise. By such doubt, the committee impliedly declare the demand for such stoppage of questionable equity, yet it is highly equitable. It is conceded that wrong and damage are being done to the communities in the valley. Were operations permitted to continue during the building of dams, what would be the object? To assure to the hydraulic companies uninterrupted enjoyment of their profits. That is to say, it is equitable, in order to preserve those companies from a temporary loss, that the valley be adjudged to suffer a continuation of the present process of ruinous injury. By what principle of equity is the proposition supported? But the temporary stoppage would not only be equitable, but essential. One winter would necessarily intervene before dams were built, and it is highly improbable that they could be perfected and secured in less than two. But the committee themselves represent that speedy relief must be given to the valley, or ruin will result not only to the city of Marysville but to the whole region; yet, in the face of this knowledge, they deliberately affirm it of doubtful necessity that the companies should cease operations temporarily. The loss of profits for a season or two suffered by the hydraulic companies was held to outweigh this destructive damage and the wrongful loss in the valley.

The recommendation for the withdrawal of legal proceedings was alike inequitable. It was calculated merely to secure an advantage to the hydraulic companies by exempting them from constraint, and by no means to advance an equitable settlement. In the first place, such suits are the only security the farmers and valley communities can have against the hydraulic companies that they will faithfully perform their promise. The suits and threatened injunctions have alone inclined the hydraulic companies to be willing to do anything to prevent the disastrous effects of their tailings in the valley. Before injunctions were imminent, they steadily enlarged operations, and refused to take a single step to that end. Were they now to defeat the farmers in the present suits, they would go on with their operations and put in more capital to gain larger profits, totally regardless of the property rights violated and the property destroyed in the valley. Were legal proceedings withdrawn, the valley communities would be at their mercy; and should the companies be disposed to build dams not adequate to the protection of the valley, but making such a show of efficiency as to mislead the public opinion of the disinterested portion of the State, the valley communities would have no means to protect themselves. Thus the possession of the legal weapon by the valley is necessary to enable it to constrain the hydraulic companies to good faith. It is folly to depend upon the honor and honesty of those companies when their interest so strongly dictates a contrary course. But the decision of these suits, in so far from accomplishing anything inequitable, will merely conduce to an equitable settlement. It will merely determine the respective rights of the parties, and that will conduce to justice; for so long as rights are uncertain, there is room for injustice. If the legal rights of the valley property holders were clearly laid down and defined, there would be no chances for the hydraulic companies to injure them as at present, while the latter would not be harassed by suits. If the decision results in placing an injunction in the hands of the farmers, that will be a weapon to defend their rights only, not to do a wrong. If it is necessary for the farmers to forbear from using it at any time, in moderation and generosity, and they can do it without ruinous loss, they will do it, for they are not actuated by a malignant hatred of hydraulic mining. Nor is it a good objection that the hydraulic companies cannot depend upon the forbearance of the farmers. How much less can the latter dare to depend upon the former to act with exalted good faith in discharging their promise to build adequate dams? If the hydraulic companies should so modify operations as to cease doing injury in the valley, the courts would not enforce injunctions, because the occasion for them would have ceased. The companies would no longer be doing injurious and illegal acts. Therefore, if they propose in good faith to place themselves in a position where they will do no injury, they have nothing to fear. They can only object to legal proceedings through a desire to be under no necessity to do justice, so that they may be at liberty to embrace an opportunity to realize an inequitable advantage. The necessity for the prosecution of legal proceedings, the justice of it, and its advantage to an equitable adjustment of this question, is thus plain. The committee recommended the contrary step—a step the farmers and valley communities could not take—and thereby unjustly prejudice the cause of the latter, because the public would suppose that in refusing to withdraw legal proceedings the farmers and valley communities were refusing an equitable concession.

This discussion manifests the inadequacy of the report of the committee to the question and to the demands of equity, and displays some of the particulars in which it was actually prejudicial to the valley. The proposition of dams into which the committee was misled is utterly folly, and is only a device under which the equitable and fair settlement is sought to be evaded by the parties interested—the hydraulic companies. But that proposition will not be discussed at this time. While these reflections are made upon the report, it must be understood that no sinister motives are deputed to the members of the committee. They

wished undoubtedly to be just to all parties, but their proclivities overcame their clear judgment as to what was just and equitable.

J. H. D.

Oakland, Cal.

### San Bernardino Valley.

EDITORS PRESS:—I desire, through your excellent journal, to call attention of those seeking homes in southern California to the advantages offered in San Bernardino valley. Much has already been said, and much remains to be said, in favor of the superior natural advantages of the valley of the Santa Ana.

Up to this time there has not been any regularly organized effort to bring the merits of this part of the valley to the notice of those seeking homes, either for health, pleasure or profit; and insaying that it is unsurpassed by any other locality in this State of widely diversified advantages and climates, is only expressing the unanimous views of the members of the late editorial excursion, as well as many others temporarily located here.

After a residence here of three years, I have no hesitation in saying, that in every element and condition that goes to make a desirable place to live, with all the surroundings calculated to make a home in every sense of that word, this portion of San Bernardino county is, not, and cannot be, surpassed.

My object in this communication is not to write in general terms so much with references to what is known as the valley of the Santa Ana, as to call attention more particularly to a portion of the valley lying east of the city of San Bernardino known as Lugonia, or Sunnyside. It is rapidly coming into prominence. In addition to the settlement commenced three years ago, there has been a steady, healthful increase, but not so rapid as some colonies can boast.

Recently several families of wealth and culture, from New York and Brooklyn, have purchased extensive tracts of land and invested large sums in beautifying homes. Mr. I. L. Hewitt, one of the solid business men of Brooklyn recently purchased 240 acres, and is now engaged in putting it in the best condition for fruit and vine culture under the able supervision of his son. Dr. Stillman, late of San Francisco, under the energetic management of his son, a recent student of the State University at Berkeley, is getting his large estate of 400 acres in condition; on which he has just completed a fine residence with all modern improvements and is now awaiting the arrival of the Dr. with his family from the East where they have spent the summer months. This is one of, if not the largest vineyard in Southern California, and will soon become a fortune to the possessor. The varieties planted are mainly Muscat and Sultanas.

Two gentlemen from Salem, Mass., D. M. Balsh and L. C. Simonds, recently bought forty acres with some improvements, finely located, on Sunnyside avenue, for \$6,000, which I have no doubt will double in value within one year.

Much has been written, and truthfully, about Riverside, Pasadena, and other settlements, but none surpass, and I think I can truthfully say, none equal in beauty of location and the grand panoramic view from Sunnyside six miles east of San Bernardino. A few miles to the north, east and south, the mountain range in the form of a semicircle, overlooks this gem of nature, protecting it from the fierce winds of the Mohave, which sometimes sweep down to the west of us through the Cajon pass, and from the hot winds of the Colorado desert to the east. Looking to the west the beauty of the landscape cannot be excelled, San Bernardino and Colton at a less elevation by 400 ft., with the Courthouse and principal streets plainly visible and surrounded with evergreen verdure; the valley stretching away to the very limit of vision, towards the sea, from whence come our invigorating breezes during all our summer months. For many miles the S. P. R. R. can be traced with its increasing traffic, passing within one mile of this settlement as it makes the ascent to the summit at San Geronimo.

The marked increase and prosperity which has attended our sister colony at Riverside under the judicious management of its genial and energetic President, Mr. Evans, shows what can be done under our semi-tropical conditions. What gives this immediate locality pre-eminence over almost every other is the great variety of fruits capable of being produced, both deciduous and citrons. Here the orange, fig, chestnut, almond, apricot, peach, nectarine and grape, with most of the smaller fruits, are raised to perfection. All of them I have in bearing upon my ranch without any signs of rust, blight, curl-leaf, or any other tree or fruit disease found in many other localities. The comparative profits the past two years preponderate in favor of peach and apricot, ranging from \$200 to \$400 per acre. During the driest part of the year irrigation is required, but our watersupply is abundant and taken in its purity from the Santa Ana canyon, where it leaves the mountains and conducted in a paved ditch to the various distributing points. It has the very desirable feature of being held in perpetual right by each stockholder, and owned and conveyed the same as real estate. The right of the stockholders in the Sunnyside ditch date back nearly a quarter of a century, and the title is unquestioned.



The only assessment made is to keep the ditch in repair.

Our soil is of a sandy or alluvial nature, easily irrigated and very easy to cultivate. Our educational advantages can and need to be improved; we need a larger schoolhouse to accommodate our growing population; church services and Sunday school are conducted regularly every Sabbath.

We have a fruit drier, which handled about 250 tons of fruit the past season besides a large quantity of grapes and raisins; this with the extensive cannery at Colton, seven miles distant, give a ready market for all the fruit product of the valley, except what is shipped East by rail. The drier above referred to is owned by two young men, Messrs. Brown & Judson and known as the "Lugonia Fruit Packing Co." These gentlemen are entitled to much credit for the energy and enterprise that have characterized all their operations. I understand they contemplate adding a cannery the coming season to their already extensive packing establishment.

I fear I am occupying too much space in your valuable journal but I will add that I have the honor of occupying a place among the pioneers of California. Like the Argonauts of old I early sought the golden fleece, and for over 30 years I have claimed for California pre-eminence over any other part of the globe, and while I have been somewhat familiar with the State of my choice, from San Diego to Shasta, I have found no other spot, taken all in all, more desirable for a home than the eastern part of the valley of San Bernardino. It will be remembered that Mr. Barnes claimed for Riverside as the identical spot where Adam and Eve sewed fig leaves together—I claim that Sunnyside, and I think without exaggeration, as combining the balmy skies of Italy, the mountain scenery of Switzerland, with the delicious fruits of Palestine. Any one looking for a pleasant home where health and all the comforts of life can be produced, with at present a moderate price for land, can not do better than look at Sunnyside, near the orange groves of old San Bernardino. I had intended to have said something in regard to our growing city and its largely increasing trade with the extensive mining region to the north of us, but I must defer that with other topics, for a future communication. D. A. SHAW.

Sunnyside, Dec. 18, 1881.

## ARBORICULTURE.

### The Filbert and its Culture.

EDITORS PRESS:—The following inquiry on filberts having been referred to me as having had quite an experience on nuts of all kinds, and of which I have made a specialty in California for the last 12 years, I will gladly comply with your request. The inquiry from your Lake County correspondent reads as follows:

What is the proper distance apart to plant filberts? Do they make a tree, or only a bush, similar to hazel nuts? What is the method of cultivation? How long ought they to be in coming into bearing? Are they regular bearers after they commence to bear? How much do they bear?

#### Varieties.

The filbert is nothing but an improved variety of the common hazel nut, a tree to be found in almost every part of the temperate zone. It grows to a height of 12 to 15 ft. when raised as a bush; but if trained as a tree, it will grow to a still larger size. The filbert is cultivated for several and different purposes, viz: Its fruit, oil, wood, and also as ornamental shrubs for gardens and parks. However, such varieties as are kept in park grounds for their fancy and beautiful foliage, like some American kinds, are not worth keeping for their fruit, which is as small as the hazel nut of our woods. When the filbert is planted for its wood, the kinds to be preferred are those that grow most vigorously and high. But here in California, and for the present, it is chiefly for its fruit that we care to cultivate the filbert. I will therefore describe fully those species that have enjoyed a general reputation for their exceptionally good bearing qualities. Those species are, the Red Aveline, White Aveline, the Grosse of Piedmont, the Sicily, the Cluster filbert, and other named kinds which are only sub-varieties of the above ones.

The Aveline (*Corylus avellana*) was first cultivated in the neighborhood of Avellino, a town of the old Kingdom of Naples, and was introduced from Italy into Spain, where it has raised ever since into a very important branch of commerce; Spain supplying yet most all the markets of Europe with those fine Aveline nuts. The fruit of the Aveline is of rather a large size, ovate, shell thin, kernel sweet and nutty. The kernel is invested with a very thin and "smooth" skin, which is a characteristic of Avelines. In the red Aveline, the skin is red; in the white Aveline it is white. This is the only difference between the red and white Avelines. The Aveline does not grow so bushy or so high as the round kinds of filberts, but it is a heavier bearer, the nuts coming generally in clusters of two to eight nuts to each cluster.

The Grosse of Piedmont is a very pretty bush, with leaves of a lighter green than those of the Aveline. The nut is round and large, shell half thick; kernel of excellent flavor; a good bearer. This is the kind generally sold at the stores in this country.

The cluster filbert (*Corylus racemosa*) is another fine variety; nut large, round, shell thick, kernel with excellent flavor.

The Sicily is a well recommended variety; fruit also large and round; shell thick, kernel sweet and good; a good bearer.

The *Corylus Americana*, Rostrata, Columna and Purpurea are only cultivated as ornamental shrubs; their small nuts having nothing to compare with Spanish and Italian filberts.

The Bysance, the variety that grows the largest, is more than an ornamental tree. The nut is medium large, round, easily known by its handsome, deeply cut husk; shell half thick, kernel very good. This is the species best adapted for thickets and bowers. It is a vigorous grower, with long, upright branches and very thick foliage. There is, in fact, a marked difference between the Aveline, Grosse of Piedmont and Bysance. The Aveline makes the smallest bush of the three. The Grosse of Piedmont is also well adapted for thickets, though not growing so high as the Bysance.

#### Cultivation.

Next to the selection of varieties, comes the question of how to plant, cultivate and train the bushes. The filbert requires a moist soil, and wherever it is not naturally so, moisture must be given artificially through irrigation. In fact, the filbert will thrive in any kind of a soil, provided that moisture enough be given to the trees. Though a northern exposure is the best, a great many people make a sad mistake by planting filberts completely under the shade of larger trees, and then they complain about the bushes bearing so little. Filberts, if the trees are grown for the fruit, must have plenty of air; if not, plenty of sun. It is to say, that if set out orchard-like, they must be far enough apart so that their branches will not meet. Sometimes the hot sun in July and August will roast some of the leaves; but I never saw it hurt the wood or fruit, the latter being at that time fully grown and almost mature.

As I may be asked how large a filbert raised as a bush will grow here in California, I might state it right here. Upon my own place I have Avelines, Piedmont and Bysance bushes, which were 3 years old when set out in the spring of 1871; they are now, therefore, 13 years old. I planted them among some rocks, in well broken up ground, and though I was unable to give them much water, still they did splendidly. Those bushes are now: Bysance, 15 ft.; Piedmont, 13 ft.; Aveline, 11 ft. The greatest thickness of hushes is from 8 to 10 ft.; that is their branches spread out that much. Thus your readers will be able to see that taking the above as the average size, filberts grown as bushes must be set out in rows at least 15 ft. apart. The rows, however, may be had still farther apart, so as to permit to raise some other crops between the rows. In the county of Kent, in England, farmers have been in the habit for a century to raise filberts and hops right in the same fields, they planting hops between the rows of filberts, and it was not rare for the growers of that county to have the filberts yielding them a larger income than the hops.

When setting out a plantation of filberts I would recommend the bush system. Everybody knows, I suppose, that filberts will more readily grow like a bush than like a tree, on account of suckers being always ready to shoot up from the roots. Of course the filbert might be made to branch out one ft. or two ft. from the ground, but one must be constantly at work to take off suckers. I would prefer to let the filbert throw out five to seven limbs right from the ground and take off all suckers outside of those limbs. This method of training filberts gives them, too, a very pretty shape. For thickets and bowers this bush system must certainly be resorted to.

All that has to be done in a filbert orchard is to keep the ground in good order, irrigate when the soil does not contain moisture enough, and keep the inside of the bushes well thinned out and clear of dead wood. It may be well to prune or cut back young shoots one-half every spring, in gardens where half a dozen to a dozen of filberts may be kept without crowding up the place. The best way to train filberts is to have them rather closely set to form a thicket or hower. In that case, the Bysance, Piedmont or Park's species would answer the purpose better. If it would be desirable to train the filbert as a tree, it can be easily done by the taking off of suckers as soon as they shoot up, and the clipping off of all lateral branches, the tree being finally permitted to branch out at five ft. from the ground. As soon as a filbert trained as a tree has grown to a good size, suckers will not grow so fast from the roots.

#### Propagation.

There are five modes of propagating the filbert, viz: From suckering, layering and cutting; also by grafting, and from the seed. The only two modes in use for propagating filberts in first-class nurseries in France is from suckering and layering, the very same species being thus obtained. Filberts grown from cuttings are very poorly rooted, and for that reason that mode of propagating filberts has been generally abandoned. As all species of filberts do sucker more or less, suckering may be, therefore, regarded as the simplest method of propagating filberts. Still as some species, like Piedmont and others, do not sucker much, layering has to be resorted to. Of course it is a slow way of propagation, but good plants are thus obtained. Grafting is only used when it is desirable to propagate certain species on the common hazel nut; suckers in that case have to be absolutely kept down.

The last mode of propagating the filbert is from the seed. The filbert does readily grow from the seed; no trouble about that; but the

species is liable to degenerate, and trees so raised will bear later than those grown from suckers and layers. If the trees, however, are to be kept in parks or gardens, as well as shade and ornamental, as fruit trees, then it would not make much difference.

I may say then that the only true modes of propagating filberts are: 1st, suckering; 2d, layering; 3d, grafting. From the seed one has to take chances, and surely will have to wait longer for a crop. Suckers and layers when taken from the main bushes, have to be planted in nursery rows, from 12 to 24 inches apart, according to the size of trees to be raised for transplanting.

#### Harvesting the Fruit.

The filbert gets in bloom here in California from December to February, according to localities, and as the bees get much pollen from the catkins or staminate blossoms, it is very desirable to have bushes of filberts wherever bees are kept. When the catkins are fully out, the pistillate blossoms may be seen then on the extremities or points of leaf buds, like very small bunches of crimson hair. In August and September the nuts get fully ripe, and most of them drop off naturally from the husks to the ground. When gathering time has come, all that has to be done is to shake up the hushes and make the balance of the nuts come to the ground, from where they are picked and preserved like we do walnuts.

A good way to preserve filberts and prevent the oil contained in the meat getting rancid, is to put them in dry sand or sawdust.

The oil extracted from the nuts of the filbert is a most splendid article, and superior to walnut oil for culinary purposes. It is also much recommended against coughing; and in China, mixed in tea, it is regarded as a first-class beverage.

The fruit of the filbert is as much praised fresh as dry. To give back the dry nuts that fresh state, all that has to be done is to fill up bottles with nuts, seal them hermetically close, and set the bottles in water in the cellar. The meat of the nuts will soon swell up and get back that former fresh flavor so admired at dessert.

In the woods and forests of Europe filberts are planted for their wood, especially those vigorous kinds like the Bysance. The wood of the filbert, as all your readers know, is very flexible; and, on account of that great flexibility, is much employed for the manufacturing of baskets, sieves, hoops and the like. To obtain very long, straight and stout limbs, the bushes are cut back to the ground and only a certain number of shoots allowed to grow; then the side branches are all taken off, before they get of any size, so as to have long, stout switches and poles without knots.

#### Conclusion.

I have no doubt, by the experience I have had on nut trees, that the filbert would do very well in all parts of the State, if properly planted; more so in light, moist soil, or in any kind of soil if irrigated.

As to specify in this article about its bearing qualities, and how much it would bear per hush or per acre, I must say, as I do not wish to deceive anybody on this important and main point in filbert culture, that I am not able to answer positively that query of your correspondent. I will only say this, that the Avelines have been, with me, regular and heavy bearers, and early bearers, too; that is hushes obtained from suckering and layering. The Piedmont is also a good bearer; the Bysance, though not bearing so heavily as the Aveline and Piedmont, is, nevertheless a regular bearer.

How long ought they to be in coming into bearing? is another of your correspondent's queries. This I am able to answer. The Aveline will get into bearing as quick as apple trees, that is at five years; but trees grown from the seed, might not come into bearing before eight or ten years.

To those of your subscribers desirous to set out filberts on a rather large scale, I would give the following advice: First procure a given number of well rooted plants, set them out in pretty good soil, irrigate them well through the summer, so as to make them grow plenty of suckers and much wood, and in this way obtain every year so many more plants from suckering and layering; and keep on until you have set out all the plants you want.

Plants may also be readily procured by grafting and budding on the common hazel-nut. There is always a chance if one is willing, to dispense in a certain degree with the nurseryman and save money at the same time.

It is a wonder, indeed, that in a State like California, so well adapted to filbert culture, and as well, I will add, as Arragon in Spain, filbert raising is yet in its infancy; and the only filbert nuts to be found at our fruit stores are an imported article; those round things so inferior to the delicate and beautiful Avelines. Let us hope that those persons better able to wait for a crop, will start at last some filbert plantations on the plan outlined through this paper, and show to our people what really there is in it. FELIX GILLES.

Nevada City, Dec. 18, 1881.

NEW TANNING PROCESS.—A process of tanning with bichromate of potash has recently been discovered, and a company, which includes a number of capitalists in New York and some Boston leather dealers, has bought chrome mines in California, and will manufacture the bichromate and carry on a tanning business.—*Springfield Republican*.

## THE VINEYARD.

### Varieties of Vines Cultivated in Portugal.

[Written for the RURAL PRESS by REV. JOHN I. BLEASDALE.]

I respectfully append a few observations of my own to the notes on Portuguese varieties of vines, by Viscount Villa-Maio. Professor, the Viscount Villa-Maio, of the University of Coimbra, is an owner of extensive vineyards in the Alto Douro; one of the three royal commissioners for vineyards and wines of Portugal, a practical vineyardist, and an experienced wine maker and taster. The world owes him and his late friend, Baron Forrester, a heavy debt of gratitude for their exertions in attempting to bring their countrymen of the Alto Douro, the port wine country par excellence, back to the ancient practice of making none but pure, unfortified wines, and shaming them out of continuing to prepare a thing called "port wine" for the English market, and others that have taken their tone from it. As port wine can only be made from the kinds of grapes used in that country for that purpose, in the following lists will be particularized and described more fully those which form the staple of the vineyards of the Alto Douro, in the hope that the vineyardists of this State will be convinced that it will be to their interest to make port wine, for which the warmer parts of the State are peculiarly suited, instead of the highly fortified, sweet, black stuff which is now made here and called "port wine."

In 1875 J. B. Keene, Esq., the head of the distillation department of H. B. Majesty's Customs, reported on 318 samples of Portuguese wines in their natural state, upon which he remarks after analyzing them, that "those from the district of Porto were the lowest strengths of any—none of them belonged to the category of what we are accustomed to call 'port wine.' The average of 41 samples was: alcohol, 13.48, British proof, 23.62, and consequently would be admitted at 1 shilling the Imperial gallon."

Names of the Kinds of Vines Cultivated in Portugal—Introductory Note by Viscount Villa-Maio.

It is no easy matter to draw up a methodical catalogue of the numerous varieties of vines, cultivated in the different provinces of our country, with their synonyms, for we have not all the data requisite for it. On this account I shall limit myself to presenting simply a list of the names of the principal kinds cultivated in the more important wine regions, with a succinct indication of their respective merits and qualities, adding, however, in the instance of some of them, a more ample notice of their distinguishing characteristics, the results of my own studies, or those of our writers on ampelography.

In drawing up the following lists beyond the materials which I had got together for my work on the ampelography of the Douro, I availed myself of the printed lists, to be found at the end of the "Theoretical and Practical Treatise of Vineyard Agriculture," by the first Viscount of Villarinho, of S. Roman (A. L. de B. F. T. Gyrao, of the "Vineyard Agriculture," by Vincencio Alarite) of the few descriptions which I met with in the reports of Dr. Rebello da Fonseca, and those of V. C. de Seabra Silva, and such as are to be found in the "Memorias Sobre os Processos de Vinificacao," collected by the members of the Royal Commission of 1866-7.

For the convenience of readers, I have made three lists, viz: White, black and colored, beginning with the white, and in each following the alphabetical order.

The greater portion of the varieties here described are already represented in the ampelographic collection of the Botanical Garden of Coimbra. Still only after some time, when the vines have borne fruit, shall it be possible to study their characters, make the necessary comparisons, assign their synonyms and write out their ampelographic descriptions.

#### White Varieties.

1. ABELHAL. Cultivated in the Douro—a poor bearer, very sweet. It requires moderately good soil and southern exposure.
2. AGUDELHO. Trinca—deute. Agudanho. Carasquinha. Cultivated in the Douro and other localities. It is not a good bearer; bunches straggling, herios hard, very agreeable taste, yields excellent wine. It requires land of medium quality—but rather light.
3. ALFROCHEIRO. Locality: Douradinho. Beira Alta. Ripens late, from 5th to 8th of October; bears well on trellises, requires strong soil—it dies out in light land. Its leaves are five-lobed, with deep sinuses, bunches eight or nine inches long, berries close set, oval, fleshy, juicy, sweet with a little sharpness, yellowish white. It rots before becoming perfectly ripe—a good reason for not cultivating it, remarks Seabra.
4. ALICANTE. This seems to be the White Grenach of the Herault.

[TO BE CONTINUED.]



## PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully requested for this department.

### Meeting of National Grange—No. 5.

#### Report of Committee on Agriculture.

Worthy Master—The Committee on Agriculture has instructed me to report the following and ask its favorable consideration:

The power that has established the credit of this people on a firm basis, reduced interest rates, regulated exchanges and guaranteed prosperity in all branches of useful industry, is agriculture.

During all the years when these tasks were of doubtful achievement, its workers were quietly, steadily and surely effecting a purpose not fully comprehended by the wisest statesmen. Their productive industry was laying safe foundations of financial greatness and commercial prosperity, enriching the people, multiplying and extending the blessings of peace, and dignifying labor by proofs of its beneficent ends.

In a single decade this grand industry has added to the permanent wealth of the people a sum too great for computation. Even the small proportion of its products that has gone into foreign markets in that period (a portion of the surplus alone) is a contribution to the material welfare of the people incomparably greater than any other country has offered in a like period in the history of the world. A thousand million dollars of balance is inadequate expression of its commercial value, an insufficient measure of its greatness, a deficient estimate of its volume. Yet this is but the fraction of magnificent production gauged by demands abroad, far exceeded in each year by home consumption.

The grand industry that has done so much is yet far within the measure of possibilities. Its rapid development has no bounds, except in the indifference of the millions engaged in production to the encroachments upon their civil rights; or, in more comprehensive phrase, these millions who till the soil with such beneficent effect have yet grander achievements in prospect, if they can be true to their own interests. Their danger lies in the neglect of civil duties or intelligent appreciation of such duties. It is a fact, supported by incontestable proof, that agriculture pays far more than its just share of taxes for the support of government, and it is equally true that its products are cheapened in the hands of producers that they may yield larger percentages of profit to the various interests intervening before ultimate use.

Let us confess, in full sincerity, and with plain understanding of the facts, that these exactions of agriculture and its products are in nowise singular or strange, but rather the inevitable consequence of folly displayed by farmers themselves. They have tilled their fields, cared for their flocks, gathered their harvests, and marketed the increase, without reference to influences constantly tending to reduce their part in the rewards.

They have yielded to the direction and dictation of other interests with astonishing self-abnegation, until at last the prevailing sentiment relegated them to the soil as fixturs, too low in the scale of intelligence to deserve part or share in the administration of affairs. In politics they are willing, obsequious slaves, ready always to heed the behests of party leaders. They glorify and worship party idols, and at the polls debate their manhood in perfunctory articulation of the party shibboleth; then go to their labor hampered and worried by hardships invited by their ballots.

If all this be true, may we not say, with the earnestness of conviction, that the American farmer deserves no greater share of the rewards that follow his labor until he displays manhood enough to assert his rights in the direction of affairs. If his land and his products be too much taxed, he cannot enter effective protest against the exaction except through the proper channel and by lawful means—the ballot.

Having surrendered to his masters use of the one, and lost intelligent appreciation of the other, we lament the conclusion that his fate deserves no amelioration until he is able to summon manhood to shape his own destiny by intelligent and independent exercise of all political rights and privileges. Standing in the first rank of labor; feeding, clothing and sustaining a thousand industries with lavish freedom, he deserves for his own no more than he gets, until he resolves to exert decent care over his rights, not in the field of labor alone, and the byways and highways of commerce, but in the making of rules affecting the products of his labor—the laws of the land—in which his sole part, as now ordered, is submission.

As the representatives of an organization based on agriculture, having no purpose hostile to any other useful calling or profession, we deplore the apathy of American farmers on the question of their rights in the body politic, and invoke action designed to restore equitable balance between the various interests, industries and professions, so that no one shall dominate others, but all shall have free and equal chance in the race of material and intellectual progress. We ask no gifts of place, no concessions from others, no recognition or reward except the free and equal opportunity too long abandoned, but which we are inflexibly resolved to reclaim, in the hitherto sterile field of politics, long

ago relinquished to place-hunters, whose interest is to foment and perpetuate party strife, and whose methods have debauched the sacred privileges of citizens, until the ballot-box has become the repository of mercenary favors, procured by the lavish use of money, or corrupt promises of place, a shame and reproach to republican government, and a menace to the liberties of the people.

Recognizing as we do the origin of artificial hardships placed on agriculture in the indifference of farmers to their civil duties which can not be deplored to others without certain harm, and recognizing also corrupt party usages as the outgrowth of such neglect, we, as the representatives of that calling which enlists the greatest number of laborers, do solemnly declare ourselves absolved from all allegiance to whatever political party does not invite support by wisdom of purpose and purity of method, and we declare our unalterable purpose to manifest our independence by refusing our votes to all candidates claiming them when such candidates do not exhibit fitness in known integrity, capability for the discharge of duties designated, and full sympathy with the principles herein enunciated.

As an expression of this determination, we submit the following declaration, and invite thereto careful consideration from all good citizens of whatever calling or profession:

*Resolved*, That this National Grange, representing a membership spread over the entire Union, will exert all its force with unflinching zeal and persistent purpose to encourage independent political action, to the end that dangers lurking in partisan management of public affairs may be eliminated; that corrupt party strife may incur the odium that it deserves; that the elective franchise in its exercise may become the true expression of the desire of the citizen; that the useful industries of all our people in every calling may receive just consideration; that intelligence, capability and worth may become the recognized qualifications for persons designated to official trusts; that money shall cease to be a potent factor in determining nominations and elections to office; and that the Government may return to that simplicity that befits a frugal, industrious people.

By this pledge we solemnly declare our purpose to abide steadfast and resolute, and with good will and unselfish desire we ask the workers of every other calling or industry to join us in earnest effort to attain the objects named.

Respectfully submitted.—Put Darden, W. A. Armstrong, C. G. Luce, A. B. Smith, J. M. Blanton, L. Rhone, Committee.

Concurred in.

### Elections.

**PILOT HILL GRANGE.**—Nathan Wentworth, M.; John Bishop, O.; A. M. Gregg, L.; J. W. Davis, C.; H. C. Ewing, Sec.; Jas. T. Bayley, T.; C. S. Rogers, S.; Chas. Warner, A. S.; Mrs. Thos. Furguson, L. A. S.; Miss Eva Tucker, Ceres; Miss N. Marsten, Flora; Miss Nellie Palmer, Pomona, and S. Lovejoy, G. K.

**LODI GRANGE.**—Charles T. Elliott, M.; Sam Furdum, O.; Gerbie De Force Cluff, L.; Reuben Pixley, S.; George Hogan, A. S.; A. A. Gernsey, C.; Joseph Fowler, T.; D. Huffman, Sec.; E. Sabin, G. K.; Mrs. T. Stoddard, Ceres; Mrs. W. H. Post, Pomona; Mrs. C. T. Elliott, Flora; Mrs. Eda Woods, L. A. S.

**PLYMOUTH GRANGE,** Amador county.—E. S. Potter, M.; Frank Vanderpool, O.; Mrs. S. J. Worley, L.; M. L. Gregg, S.; Leon Lefevre, A. S.; Mrs. M. Ford, Ceres; John Sharp, T.; J. Sallee, Sec'y; S. C. Wheeler, G. K. Will complete roll of officers at next meeting.

**SACRAMENTO GRANGE.**—John Reith, M.; A. S. Greenlan, O.; Nettie H. Raymond, L.; Wm. Tibbets, S.; Chas. H. Flint, A. S.; Geo. Rich, C.; Moses Sprague, T.; O. S. Flint, Sec'y; C. A. Hull, G. K.; J. S. Browning, Ceres; A. E. Holland, Pomona; Rose L. Hull, Flora; Flora Greenlan, L. A. S.; C. D. Tibbets, Organist. Installation Jan. 14th.

**ROSEVILLE GRANGE.**—J. F. Cross, M.; Fred Leonard, O.; Milton Johnson, L.; Geo. Williams, S.; W. S. Cook, A. S.; Sister E. J. Atkinson, C.; E. Daly, T.; N. Mertes, Sec'y; W. H. Murry, G. K.; Sister Martha Leall, Ceres; Josephine Daly, Pomona; Nettie Murry, Flora; Mary Neher, L. A. S.; Carrie Schellhouse, Organist.

**LOMPOC GRANGE,** Santa Barbara county: L. F. Potter, M.; Mrs. B. F. Tucker, O.; P. Hodges, L.; Thomas Robinson, C.; D. C. Vanciliff, S.; B. F. Tucker, T.; W. H. Schnyler, Sec.; J. Farmer, A. S.; J. W. Moss, G. K.; M. A. Davis, Pomona; N. E. Moss, Flora; Miss R. A. Allen, L. A. S.; Rosa Lawrence, Ceres.

**WOODBRIDGE GRANGE,** San Joaquin county: L. N. Williams, M.; H. M. Wood, O.; E. Fisk, L.; H. C. Gillingham, S.; J. Hemphill, A. S.; E. McIntosh, C.; J. L. Hutson, T.; Mrs. E. J. McIntosh, Sec.; Mrs. L. N. Williams, Ceres; Mrs. H. Beckman, Pomona; Mrs. H. Plummer, Flora; Mrs. W. B. White, L. A. S.

**TEMESCAL GRANGE,** Alameda county.—Election, Dec. 23d. Christ'an Bagge, M. (elected third time); A. T. Dewey, O.; Mrs. S. H. Webster, L.; W. G. Klee, S. (re-elected); J. V. Webster, A. S.; Mrs. S. H. Dewey, C. (re-elected); L. Frink, T. (re-elected); Mrs. Nellie G. Babcock, Sec. (re-elected); Edwin Walley, G. K.; Mrs. Emily Bagge, Ceres (re-elected); Mrs. Eliza Brooks, Pomona (re-elected); Miss Ida Bagge, Flora; Mrs. Kate McGrew, L. A. S.; Miss M. Bagge, Organist; D. E. Collins, Trustee.

**DANVILLE GRANGE,** Contra Costa county.—D. N. Sherburne, M.; J. M. Stone, O.; Chas. Wood, L.; M. W. Hall, S.; S. L. More, A. S.; R. S. Symington, C.; R. O. Baldwin, T.; C. E. Howard, Sec.; S. F. Ramage, G. K.; Mrs. C. Howard, Ceres; Mrs. W. Z. Stone, Flora; Mrs. L. Labaree, Pomona; Miss O. Labaree, L. A. S.; W. Z. Stone, Trustee. The officers will be installed on the third Saturday in January.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### COLUSA.

**GRAIN.**—Sun. Dr. H. J. Glenn, at Jascinto, has now 35,000 acres in wheat, and expects, with good luck, to sow 25,000 more. He has a large force at work on the levee building from Bounds' to Sheppard sloughs, a distance of five miles. His force at present is 48 teams and scrapers, and over 50 men.

#### MENDOCINO.

**WOOL GROWERS' ASSOCIATION.**—*Democrat*: The wool growers of this county met at the Courthouse on Saturday, Dec. 17th. The meeting was called to order by Pres. E. R. Shimm. On motion of Judge McGarvey, Messrs. E. R. Shimm, F. O. Townsend, R. Angle, T. R. Lucas and S. Baechtel were elected directors of the association to serve for one year. As the homes of the five directors were widely scattered over the county, rendering it expensive and inconvenient to attend all the meetings, it was thought best by some to add two more to the list, whose residences should be near Ukiah, so that a quorum would always be in attendance at the meetings. On motion of Mr. Townsend, the Coar appointed Messrs. J. S. Reed and Wm. Ford as additional directors.

#### SANTA CLARA.

**AGRICULTURAL SOCIETY.**—*Herald*: A meeting of the directors of the San Mateo and Santa Clara County Agricultural Association, No. 3, was held at the office of the Secretary, T. S. Montgomery, at 10 o'clock this morning. Present—Directors King, Adel, Tennent, Bement and Clayton. Absent—Gordon and Weller. Minutes of last meeting read and adopted. On motion of Mr. Adel, the thanks of the society were tendered to the President, Secretary and Treasurer, for the very efficient manner in which they attended to their duties during the past year. The old Board then adjourned sine die. The new Board then organized with J. A. Clayton as temporary chairman, and T. S. Montgomery, temporary Secretary. Cyrus Jones and Wm. Tennant presented their certificates of appointment from the Governor as directors of the society. On motion of Mr. Adel, Mr. Abram King was elected President by acclamation. T. S. Montgomery was then elected Secretary, and W. D. Tisdale, Treasurer, in like manner. On motion of Mr. Jones, the salary of the Secretary was fixed at \$400 per annum. The time for holding the next fair was fixed for the second week after the State fair, and the Secretary was instructed to notify the Secretary of the State fair thereof.

#### SANTA CRUZ.

**BERRIES FOR CHRISTMAS.**—*Editors Press*: I send you to-day some raspberries and strawberries for Christmas, which grew in the open air, in the gardens of Mr. Z. S. Devoe and Mr. Runge, of Santa Cruz. Now, this is not the first time that we have had strawberries in the open field in Santa Cruz on Christmas, and now we have raspberries, large and well ripened; and you will observe, also, that on the same branches with the ripe strawberries and raspberries, there are green berries in every stage of development, from the blossom, all the way down to the ripe and green berries. I send you some tomatoes in bloom, and nearly grown, on the same branch, that have grown in my garden, without shelter or care. Now, Mr. Editor, is there another country than California within your knowledge as far north of the equator (at 37°) as this, where strawberries, raspberries and tomatoes can grow in the open field as late as Dec. 25th, and show no signs of frost, as you see these berries? And then remember our summers are not hot, but pleasantly cool, with clear sunshine, and positively no storms. Besides these berries, we grow apples, pears, plums, apricots, peaches, cherries, prunes, quinces, grapes and many other fruits, to great perfection. We have green pastures for our cows, which keep our dairies going, without any other feed; and according to the general rule here, we shall have good pasture until the latter part of next summer. Now, if there is any place on this earth where a person can have a pleasant home and enjoy life, it is in Santa Cruz; there is nothing lacking but a little energy and calculation.—M. P. OWEN, Santa Cruz. [The berries sent us are just as described by our correspondent. Concerning Mr. DeVoe's fruit, the *Courier* says: Mr. Z. S. DeVoe, on Ocean View avenue, brought up town a raspberry cane nearly two ft. in length loaded with berries mostly ripe, but also holding several half-grown berries which would not have matured until two weeks later. On the first of the week we visited the garden of Mr. DeVoe, and there saw berries ripe on the bushes, others partially grown and a few just going out of blossom. The canes which are in bearing were set out last summer, have made their growth and are now fruiting. The first picking for the table was made on Dec. 1st. The variety Mr. D. cannot name, but the berries were, some of them, nearly as large as hickory nuts.]

#### SAN DIEGO.

**THRIFTY GROWTH.**—*Union*: Mr. J. P. Jones brought to this office yesterday a shoot 9 ft. 10 inches long, cut from a lemon tree growing on his Bernardino ranch. For one season's growth, Mr. Jones says he has never seen it equaled. That is to say, this is a remarkable growth for a main limb or shoot of a tree. A shoot from the stub of a tree that has been cut off, and the growing impetus centered in it alone, may have equaled it, but no other citrus growth has ever attained to such proportions in the same length of time.

#### SAN JOAQUIN.

**DR. GRATTAN'S GANG PLOW.**—*Evening Mail*: We lately had opportunity to observe the working of Dr. Grattan's double gang plow, invented and patented last February. The plow is a double gang carrying twelve plows. To it eleven horses were attached by fours with three for leaders; hence reached out no farther than an ordinary team of six horses arranged as leaders, swing and wheel horses. The plow was as easily turned as a common sulky plow. It moved on two wheels back and a roller in front, the wheels having six-inch tires. The shares were arranged to cut from four to five inches deep and did their work to perfection. The plow has no side draft. The shares turn each way toward the center. This leaves the ground with a small ridge in the center of the furrow—if the track of the plow can be said to be a furrow—and a small dead furrow where one furrow meets the other. In many places in this country this manner of leaving the land is most advantageous since the ridges throw the water each way into the dead furrows. If, however, it is desirable to have the land lie level, a harrow run crosswise over the furrows accomplishes that end. The plow leaves the soil thoroughly pulverized and in excellent condition for sowing, and the seeder was yesterday following close after it. The plow is intended to cut 8 ft. wide; but its full cut is just enough over to make it true of it that it plows an acre for every mile that it runs. It is not heavy on the eleven horses even in the saturated soil of winter. It depends on how far a good team will walk in a day how much it will plow. In heavy soil it is not difficult for a team to turn with it 20 acres a day. On light soil 5 acres more can be added to the number without any increase of team. Last summer T. S. and A. H. Cole had it and with seven horses one man plowed 100 acres in four and a half days. It only needs one man to run it and he rides and drives. But the part in use yesterday is not the whole machine. There belongs to it an addition of six plows cutting 4 ft. wide, making its total sweep 12 ft., and when run in this way it will go over as much ground as an ordinary header. When thus rigged it is especially adapted to summer-fallowing. With it the ground can be gone over twice or thrice without any trouble, since it will easily turn with ten horses when the weight of the water is out of the ground 30 acres, or an even acre and a half for every mile driven per day. In plowing the second time the ridges can be turned into the little dead furrows and the field leveled if desired. In looking at the construction of the plow and the manner in which the sides carrying the shares are joined to the center, a new and important use for it, made in different sizes, is suggested. For cultivating orchards and vineyards it is just the thing. It can be adapted to any width wanted. As now arranged it would leave furrows for irrigation near the trees or vines. Should it be desirable to turn the dirt to the trees or vines so as to throw the water away from them, the sides are easily taken off and reversed, leaving the dead furrow in the middle. The plow can be made of any width needed, and its use in gardening, orcharding or in cultivation of large tracts is only a question of time.

#### SONOMA.

**PETALUMA FROSTS.**—*Argus*, Dec. 24: We are indebted to W. A. T. Stratton for the following information: Since Oct. 14th we have had ice form 13 times—the lowest temperature being 28° on Nov. 18th and Dec. 21—39 frosts to date, being a greater number than in any season for the past 10 years. Total rainfall to date, 5.71 inches. To the same period in 1880, 7.07; 1879, 8.21; 1878, 2.96; 1877, 5.62; 1876, 5.90; 1875, 6.82; 1874, 8.90; 1873, 5.61. The season of 1876-77 gave us a total rainfall of 13.66 inches, with very frosty weather in early fall, very similar to our present season—a severe hail storm occurring Jan. 17th, in '77—the mercury marking freezing 24 mornings during December. The season of 1873-74 was also a remarkable one—continuous cold weather, with 33 consecutive frosts from Nov. 14th—with a total seasonal rainfall of 17.62.

**AGRICULTURAL PARK.**—The Directors of the Sonoma and Marin Agricultural Society have purchased the old Payran place, in East Petaluma, for a park and mile race track. This is a little nearer Main street than were the old fair grounds. It is a good selection and well adapted to the purposes for which it is intended. The work of planting trees and making the necessary improvements will be commenced immediately, and it is the intention of the Directors to hold the next fair at the new park.

#### STANISLAUS.

**WORK.**—*News*, Dec. 24: The farmers of this county are well advanced with their work. The rainfall, though not heavy, has been opportune and of such character as to admit of operations to the greatest advantage. The soil has generally been plowed when in good condition, and



the young grain has not ceased to grow. Thus far none of the seed has either rotted in the ground or dried out. In fact, it has steadily rooted, and now looks of a steady and strong color.

**DRIVING OFF COYOTES.**—A couple of friends, whose broad possessions are at the western base of the Bear mountain range, in Calaveras county, some months since accidentally stumbled upon a practical as well as novel mode of ridding their section of coyotes, and thus protecting their sheep and pigs. Through good luck a large, full-grown coyote had been captured alive and so tormented that it became sullen. In fact, Mr. Coyote was "playing dead." He did not, however, deceive our friend Deas, who, by the way, is up to all the pranks of American wild animals, from the opossum in a persimmon tree to the huge grizzly roaming the Sierras. A bright idea flashed upon the tormented rancher, as he remembered his slaughtered pigs and decimated flocks by the incursions of the villainous coyote before him. Seizing the pretended dead coyote by the head he belted securely and closely around his neck a sheep bell; then out with his knife and cropped his ears close to the head. Still coyote played his part. The tail was next cut off, yet the varmint insisted that he was dead. Finally a torch was applied, when suddenly consciousness took possession of the animal, and he bounded off over the hills, ringing his sheep bell as he went. Two weeks after, ringing his bell as he went, he was seen in full pursuit after a band of coyotes, who would not recognize nor own his relationship. So persistent, however, was he in claiming their fellowship, that all the rest of the tribe fled the country in dismay. He was both too horrid in looks as well as noisy, when he should be most quiet, for the company of sly coyotes. Hence, the old chap is left in his glory. His bell apprises herders and dogs alike, of his presence, and Bear mountain slope is free from all coyotes, save the harmless hob tail bell-ringing chap marked by Deas and Ross.

#### SUTTER.

**COUNTY NOTES.**—Farmer, Dec. 24: We have been interviewing a number of friends from different sections of the county during the past week in reference to the amount of farming that is being done, etc. Supervisor Davis, of South Butte, says: Young grain never looked better than at this time. More summer-fallow is being sown than ever before. That when the grain got started it used to be considered that half the battle was won. If there are no floods this year the crops will be excellent. Supervisor Brock, from the section near Wheatland, says that as a rule the grain sown on summer-fallow land is up and looks well. A great deal of plowing is being done, and all are working early and late. The only drawbacks are fears of floods and slickens. Wild geese are numerous and troublesome. Richard Barnett, who resides about three miles southwest of here, says he will finish seeding this week. The grain in his vicinity looks well. T. B. Hull says that all in his neighborhood are as busy as can be. About half of the land in that section is summer-fallow, and that a great deal more is being plowed. Mr. I. Winship, who resides on the south side of the Sacramento, opposite Grand island, says all are plowing and getting ready to put in grain. Much more land than usual will be cultivated. The crops in his neighborhood are later than in most parts of the county. Mr. Ramsey, of Vernon, says that not much plowing is being done on the river as the fear of floods and slickens prevents the farmers from early sowing, but if the winter is favorable, a large portion of that section will be cultivated. B. F. Frisbie has sown 400 acres of summer-fallow and has 300 acres yet to sow, 150 acres of which is winter plowing. He has about 300 acres up, and he says he never saw grain look finer than it does so far this year. M. C. Wood, from Reclamation District, No. 70, says that some summer-fallow in his neighborhood has been sown, and the farmers generally are sowing now, but the fear of winter floods makes all his neighborhood put off sowing as long as possible. A great many are plowing. He proposes to put in 600 acres this year, and has 250 acres sown. His contribution to the support of hydraulic mining this year in the form of levee tax, in addition to his State and County tax, is a few cents over \$2,900. We give these amounts paid by individuals to show just how we are situated. Hugh C. Jones informs us that he has visited all portions of the county, and never saw as much land being seeded as there is this year, and if the weather lasts as it is now 2 or 3 weeks longer, there will be no land to speak of for summer-fallow in the spring. The prospects are unusually excellent. The loss of last year's crop in consequence of high water, makes the farmers anxious to secure a good yield this season, if the weather and hydraulic mining permits. He will seed 260 acres this year, all of which is summer-fallow except about 40 acres. S. E. Wilson has 600 acres of summer-fallow that has sprouted and is looking well, and will put in 400 acres more. He says that farmers generally are farther advanced with their work now than they usually are a month later than this.

#### VENTURA.

**POISONING LINNETS.**—Signal: It is known that the little bird called the California linnet is the greatest pest fruit men of California have to contend with. They annually destroy thousands of dollars worth of fruit. Mr. C. G. Finney gives a very simple remedy for their

destruction, which just now, owing to the scarcity of grass seed, proves very efficacious. He takes a shallow box, and puts it on the end of a pole 4 or 5 ft. from the ground. It is there out of the reach of the chickens. In this box he sprinkles corn meal and a very little strychnine, which mixture the birds eat, and are very soon killed. It will not hurt dogs or cats to eat the dead birds, for the reason that there is not enough of the poison absorbed by the bird.

#### News in Brief.

**SMALLPOX** is reported spreading in New Jersey.

**TRAVEL** is unusually light at present on the Virginia and Truckee railroad.

**GREAT BRITAIN** is said to have lost \$1,000,000 in the last three years in crops.

**THE SAN JOSE** fruit cannery employs 400 hands in the season, and puts up 2,000,000 lbs. of fruit.

**ONE THOUSAND** men are wanted in the Yellowstone valley, M. T., for railroad work—wages \$2 per day.

**THE YIELD** of potatoes of all kinds last year in Ireland amounted to 3.6 tons per acre, against 1.3 tons in the previous year.

**NEWS** from Magdalena, Mexico, is to the effect that work has been resumed on the Guaymas road, via the Magdalena route.

**TRAVELERS** report that in Africa there are falls on the Zambezi river 500 ft. high, or more than three times the height of Niagara.

**WITHIN** the next twenty months Yavapai, A. T., expects 150 miles of railroad crossing that county, running from east to west.

**THE NOTED** Mullan Pass Tunnel, M. T., is to be 16 ft. wide, 20 ft. high, and 3,800 ft. long (about  $\frac{1}{3}$  of a mile) through solid granite.

**THE A. T. and S. F.** surveyors are now running their lines from Tucson up the Santa Cruz to Calabesas, the end of the Bensou and Calabesas road.

**THE TOTAL** amount of funds for the relief of the Michigan fire sufferers raised in Chicago is \$43,000, besides a large amount of clothing and other supplies.

**BEGINNING** June 29th next, a musical festival, lasting a week, will be held in Philadelphia, to which the music societies of the country are invited.

**H. T. HOWE**, Inspector of Butter, has sworn out warrants against five Chicago jobbers for dealing in adulterated goods. One sample was found to contain 80% of lard.

**THE TOTAL** values of exports of domestic provisions for the 11 months ending Nov. 30th, were \$210,318,432, as compared with \$257,231,045 for the corresponding 11 months of last year.

**A PROJECT** is on foot, under the supervision of Mme. De Koerber of Berlin, now in Boston, to establish an International Emigration Society to aid the emigration of German girls and women to the United States.

**A NEW ORLEANS** firm has woven bagging by machinery from jute, and if the manufacture proves as successful as it promises to be, it is thought that jute growing will take a considerable place in Louisiana agriculture.

**THE LATEST** link of fashion in Parisian circles is a "telephonic at home." This is telephonic communication with one of the great theaters. Les Italiens, Salle Ventadour, etc., and the salon of some women of fashion, who invites a party to listen to the performance in her drawing room. President Grevy inaugurated this unique entertainment.

#### Immigration Association.

The Immigration Association of California is under the control of merchants of the city of San Francisco, and is for the purpose of furnishing information, free to all those who are seeking homes in this State, in relation to the unoccupied Government lands, character of soil, average rainfall, climate and production. The rooms of the association, at No. 10 California street, are fitted up with the view of making them the headquarters for immigrants. Newspapers from different portions of the State are kept on file. The rooms are open from 9 o'clock A. M. until 5 o'clock P. M. daily (except Sundays), and all information furnished free. No officer or employee is permitted to make any charge to immigrants whatever. The association has no land for sale, nor does it undertake to sell land for anyone. All immigrants are invited to make free use of the rooms.

**WHEAT GROWERS' MEETING.**—According to an announcement in our advertising columns, there will be a meeting of the Wheat Growers' Association, in this city, Jan. 9th, at Grangers' Hall, corner California and Davis streets. There should be a good attendance, as business of importance is to be transacted, and the present situation in wheat is one which calls for the fullest wisdom and co-operation among the growers.

**CARRIAGES.**—We call the attention of our readers to the advertisement of R. F. Briggs & Co., of Amesbury, Mass., one of the ablest carriage manufacturers in the United States. They have opened a repository in the large brick house 220 and 222 Mission, and are receiving each month carloads of all classes of fine carriages and wagons direct from the factory, which they offer at wholesale and retail.

#### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**FRUIT-PITTING MACHINE.**—Antonio Donatella, Healdsburg, No. 250,794. Dated Dec. 13, 1881. This fruit-pitting machine consists in the employment of a peculiar combined punch and knife, which is brought down upon the fruit with a sudden force, the effect of which is to drive the pit downward through a perforated bed plate, and cut the fruit in half. The bed plate is provided with a rubber cushion for the purpose of more thoroughly cleaning the pit as it is forced through. The employment of the rubber cushion is beneficial in that it scrapes the pit cleaner, and presents a softer surface to the fruit than the metal could, and thus is not liable to bruise or injure it. For different fruits the apertures in the cushion and plate are made of different sizes, to permit the passage of different sized pits. The device is worked by the foot.

**ROLLER DEVICE FOR SEAMS OF TIN ROOFS.**—Chas. D. Morin, Woodland, Yolo Co., Cal. No. 250,446. Dated Dec. 13, 1881. This is a machine or roller device for rolling and flattening out the seams on tin roofs of houses. It consists of a heavy roller, journaled in a frame having a handle, in combination with a brake for said roller, and an upper or supplementary frame, on which additional weight may be placed when necessary. The object of the inventor is to provide a device which will save labor and flatten out the seams regularly and easily, thus preparing them for the better reception of the solder. It therefore has application merely to such seams as require to be flattened and is not for making and rolling upright seams on tin roofs.

#### Business Offices and Sunny Rooms to Let.

We have some desirable rooms to let adjoining the offices of this paper which will be rented on favorable terms. Stair entrance, No. 252 Market St. Elevator, No. 12 Front St. Parties wishing offices, etc., will do well to call and see them. DEWEY & CO.

#### Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. MCGREW—Santa Clara county.  
M. P. OWEN—Santa Cruz county.  
J. W. A. WRIGHT—Merced, Tulare and Kern counties.  
JARED C. HOAG—California.  
B. W. CROWELL—Humboldt and Trinity counties.  
D. W. KELLEHER—Merced, Fresno and San Benito.  
A. C. KNOX—State of Nevada.  
EDWARD A. WEEP—San Francisco.

#### Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

#### Annual Meeting.

The regular annual meeting of the stockholders of the Grangers' Bank of California and the election of Directors for the ensuing year will take place at the office of the Bank, in the City of San Francisco, State of California, on Tuesday, the 10th day of January, 1882, at 1 o'clock P. M.

ALBERT MONTPELLIER,  
December 1, 1881. Cashier and Manager.

**LIVERY STABLE** in OAKLAND.—We call the attention of farmers visiting Oakland, and others to hire teams or stable teams in Oakland, to the Hay, Sale, Boarding and Livery Stable of T. A. Cunningham, 1308 Broadway, Oakland. Mr. Cunningham (recently from Haywards where he still owns a ranch) has purchased a homestead in Oakland, and will do his best to give satisfaction to his new customers and old friends who may call.

PERSONS receiving a sample copy of the PACIFIC RURAL PRESS with this notice marked, are requested to examine the merits of the same, and consider fairly its claims for support, and if consistent, subscribe for the paper through the P. M. or agent delivering it, or otherwise. We will send it, on trial, at the rate of \$3 per annum for any period the reader may wish. Please notice our terms elsewhere, and if desired, send for further samples and information. These who can circulate this No. further to our advantage are invited to do so.

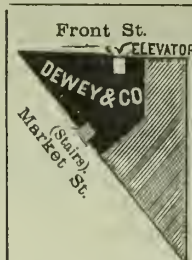
We call attention to the advertisement of Mr. Bibbee in another column of the PRESS. Those desiring to secure a splendid home place in the warm belt climate of Los Gatos will do well to see this place so well started in fruit in such a lovely place.

**MANSION HOUSE.**—First-class in every respect, and reasonable prices.—When you visit Stockton stop at the Mansion House. Free Coach to the house.

J. H. GROSS, Proprietor.

**ST. JAMES HOTEL.**—First-class in every respect.—When you go to San Jose, take free coach to the St. James. TYLER BEACH, Proprietor.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIDEOUT & Co., 10 Barclay St., N. Y.



#### Dewey & Co.'s Patent Agency and Newspaper Offices.

Dewey & Co.'s Patent Agency and the business offices of the Mining and Scientific Press, Pacific Rural Press, Pacific States Watchman and the Fraternal Record are now favorably situated at No. 252 Market Street. Elevator entrance, No. 12 Front St., S. F.

THE old adage, "The best is always the cheapest," will apply to no article with greater force than to seeds. Nothing is quite so worthless as poor seeds. D. M. Ferry & Co., of Detroit, Mich., seem to be one of the very few firms engaged in the seed business who have fully realized the importance of putting up and selling only the freshest and best of all varieties of seeds, and as a legitimate result their brand of seeds has become exceedingly popular all over the land. We take pleasure in referring to their advertisement in our columns, and would advise all our readers who will be likely to require seeds to send and obtain their beautiful catalogue, giving prices, instructions for planting, etc.

IMPORTANT additions are being continually made in Woodward's Gardens. The grove walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sealions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

#### S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

#### Weekly Market Review.

##### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Dec. 23, 1881.

There is a better feeling in Wheat owing to better advices from abroad, which has also brought in a revival in New York and Chicago. Holders are now strong and hopeful, and there is little being sold. It looks very much as though the revival of business after the holidays would bring in a higher range of values for Wheat. Charters have advanced somewhat from the low figures which prevailed at the time of our report a week ago. The latest from abroad is as follows:

LIVERPOOL, Dec. 27.—Good to choice California Wheat, spot, firmer at 10s 5d to 10s 10d. Cargoes have an upward tendency, at 4s 6d to 5s 6d per quarter.

##### Eastern Wool Markets.

BOSTON, Dec. 27.—The market is firm, the demand steady and prices are well sustained. Sales of Ohio and Pennsylvania fleeces have been made at 43¢ to 44¢ for X, and 44¢ to 45¢ for XX and above. There is very little choice Ohio to be had under 45¢, and some dealers would not accept that price. Wisconsin and Michigan fleeces have been selling at 41¢ to 42¢ per lb., and are firm. Combing and Delaware selections are steady at 47¢ to 50¢ for fine Delaware and fine Combing, but coarse and hard is low, and continues to be neglected. Unwashed Wools have been in fair demand and are firm. Sales of fine and medium have been made at full prices. Cuba Wool is quiet and low. Fall Wools dull, but in comparatively small stock here. Pulled Wools are firm, and continue in demand. Low and good super have been selling at 34¢ to 40¢; choice and fancy lots, 45¢ to 52¢. Foreign Wool has been quiet, and there have been no sales of any importance.

##### Eastern Grain and Provision Market.

NEW YORK, Dec. 27.—The markets, with few exceptions, are dull. Wheat is more active and higher under more favorable advices from England, and with slightly better limits. Exporters showed more disposition to buy, but speculation carried prices up, and foreign buyers were unable to execute orders. Barley is quiet. Provisions are firmer, but quiet.

CHICAGO, Dec. 27.—Wheat, strong and higher, \$1.26 1/2 cash. Corn, strong and higher, 6 1/2¢ cash; 62 1/2¢ to 63 1/2¢ for February. Lard, strong and higher, \$11 cash; \$11.17 1/2 for February.

BAGS.—Bags are quiet and unchanged. BARLEY.—Barley is higher and is firmly held in view of expected export demand. Bright feed has sold up to \$1.52 1/2 ¢ ctl.

CORN.—Corn is quiet and unchanged.

DAIRY PRODUCE.—Butter has held its own, the fancy dairies bringing 40¢ ¢ lb. Cheese is unchanged.

EGGS.—Eggs also hold up well, fresh Californias bringing 40¢ ¢ dozen.

FRUIT.—There is no change in semi-tropicals. Apples and Pears sell higher—the best selections.

FRESH MEAT.—Fresh Beef continues its advance and the first quality has reached 8¢, the highest rate for a long time. The country is being well cleaned of good stock. Pork alive is a shade lower.

HOPS.—Quiet and unchanged.

OATS.—The feeling continues, and sales have gone higher than before. Sales: 340 sks Washington Territory, \$1.77 1/2; 288 sks do, \$1.76 1/2, and 1,400 sks Oregon, \$1.72 1/2. The market is about 2 1/2¢ higher than last week.

ONIONS.—Onions are 5¢ lower.

POTATOES.—The best have dropped about 5¢ per ctl this week.

PROVISIONS.—All is quiet, as is usual at this season, and no fluctuation.

POULTRY AND GAME.—There were too great supplies for Christmas, and the surplus has been slaughtered, about 50¢ per doz. going off Hens and Roosters, 2¢ per lb on Turkeys, while game birds have been dumped in considerable quantities.

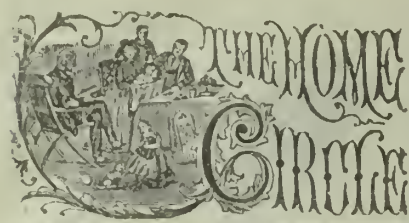
VEGETABLES.—The market is quiet and unchanged.

WHEAT.—There has been an advance of about 4 to 5¢ per ctl since our last report, but little has sold because of the confidence of holders.

WOOL.—The market has been quiet and rates unchanged.

(CONTINUED ON PAGE 452.)





### The Years To Be.

O grandeur of the Years to Be!  
O Future all sublime!  
Fulfilled within thyself we see  
The promises of Time!  
There bloom within thy balmy air  
The rarest flowers of speech,  
And action in thy sun shall bear  
The sweetest fruit for each!

We sow the goodly seed to-day  
Thy many hands shall reap;  
We give the golden grain away  
Thy garner soon shall heap!  
Who tills to-day the teeming field  
Slight recompense shall earn;  
Thy harvest-time shall only yield  
The glorious return!

Thy nights with newer stars shall blaze,  
Thy suns shall brighter glow;  
No gladder, grander yesterdays  
Thy consciousness shall know.  
Thy song shall be a psalm grand,  
Borne proudly on the breeze,  
Re-echoed over every land,  
And wafted o'er the seas.

We plant to-day a single tree,  
Or drop a single seed,  
And millions in the Years to Be  
Shall praise the simple deed.  
The thing we do outreaches far  
Beyond our furthest thought;  
The toiling of the present ear  
With freest blessings fraught!

With thy new light, O Years to Be!  
Shall beam a brighter morn,  
A manhood with thy dawn shall see  
Its truest being, born!  
The earth will ring thy coming in  
With gladdest peal on peal,  
For then shall gloriously begin  
Humanity's best weal!

And then shall all the echoes cheer  
Man's rapid onward march;  
For him angelic hands shall rear  
A grand triumphal arch!  
No land shall know a desert bare,  
No trackless waste a sea,  
The world shall smile a garden fair  
Within the Years to Be.

A. A. Hopkins.

### Lost and Found.

#### A New Year's Story.

##### CHAPTER I.

"Stir up the toddy, James," said Mr. Close, knocking the ashes from his pipe.

"Caleb!" ejaculated his wife, with a deprecating look.

"Well, cider then. It's just the way we used to make flip in my younger days—heat the poker red hot and stirred it round. Why, we always had it. Never thought of letting a neighbor go home of an evening without a sip of toddy, no more'n I think this minnit of going to Texas."

His wife smiled at his enthusiasm.

"Well, times change, and manners, too," he sighed.

"And I'm glad of it," answered the dame, quickly. "It was a heathenish custom, that swilling down hot liquor. I'm a teetotaler to the back bone!" And she straightened herself in her chair.

"Nevertheless, Phoebe, you'll not object to a taste of cider," laughed her husband.

"Cider is good in its place, I know," she rejoined, cautiously eyeing the pitcher on the hearth. "Boiled cider makes the only decent apple sauce in the world."

"So it does," warmly assented her husband.

"Saleratus and cider's good for a sour stomach, too. I've known it answer where everything else failed," she continued. "Once—"

"Bring out the saleratus, James, and some glasses!" interrupted Mr. Close.

"Now, Caleb—" began she; but their good humored colloquy was brought to an end by James' re-appearance with the glasses. James was their son, a sturdy youth of 15. He was their only child now. They had a daughter once, bright-cheeked and black-eyed, with motions as graceful as a gazelle's, and a laugh, the music of which echoed still to their longing ears through the lonely rooms.

She was "gone." They always spoke of her thus to themselves; others never mentioned her name in their presence. Oh, yes, she's "gone." If only she had been dead!

Poor Nelly Close! Five years had passed since she left the old home, allured by the siren tongue of a man her father detested, and who repaid such enmity with false flatteries of his daughter. Misguided love thought nothing of worldly position, her own honor, her friends, but madly wrenched herself apart from known ties to join her fate to unknown. Miserable fate!

Where was she now? They did not know—they had never heard from her directly since she left. The undaring had been complete. Only to such fathers' and mothers' hearts as these there can be no absolute ruptures. The old tenderness lives still, deep down under the canker induced by disappointed pride. This will gradually change, exalting itself into forgiving pity as time gently strokes their locks with his frosty fingers.

Nay, it had changed already. Such pity they felt for the lost one, that in still midnight the mother would wake to think and grieve and recall the past, and toss restlessly with the recollection, and sigh so pathetically, that it seemed as if the distant wanderer might be drawn by its intense longing to her father's house. Then her husband would comfort her, his own heart aching full as sorely.

"Can't we have some but'nuts, father?" asked James, as the cider foamed in the large tumblers. "It's New Year's eve, and one ought to be jolly."

The elderly couple looked at one another. Five years ago that very night the life of their house vanished. Ought they to be "jolly?" James, heedless youth, did not understand their silence, nor why they always kept such sad New Year's eves. Anything absent was out of mind with James.

"Shall I bring down some?" And James took up a candle.

"Certainly. And bring up some apples, too. As you say, we ought to be jolly," said his father.

"Why, Caleb!" Mrs. Close's look was more expressive than her exclamation.

"Well, Phoebe, if James wants a little fun, I'm sure there's no harm," as the youth left the room.

"Be careful of the light!" called his mother after him; "and don't set us all afire! We should burn up in no time. I never sleep a wink after James has raced around with a candle."

"Nor when he hasn't," thought her husband, sadly. "I'll go, too," he said, "and keep him straight."

He followed, as fast as his rheumatism would let him go, to the garret.

The husband and wife indeed kept lonely anniversaries of this evening. James usually went off to a singing school, or, rather rarely, as one of a sleighing party. His father objected usually, on account of his youth, but always relented at last, thinking that they would be poor company at home for the lively lad. Why should he be punished with cheerless evenings? Then, when their thoughts grew oppressive, and their conversation forced, they would take the candle and go up stairs to Nelly's room, over theirs, and they would eye the room half fearfully at first, as if it might be inhabited by a specter; then open the closet where her dresses hung as she had left them—not one disturbed; where a little pair of shoes stood in a corner. Then they would open the drawers of the old-fashioned bureau to gaze upon her keepsakes and the ribbons she used to wear in her black hair.

They had arranged this evening to omit their usual visit. "It makes us both unfit for everything," said Mr. Close, "and does no good. We must begin to break off sometime, and suppose we begin now."

To which his wife assented; but, as she sat in the kitchen, the old tide of feeling rushed over her irresistibly; she slipped into the entry and glided up stairs, like a saint hastening to a shrine.

"Mother can't give it up yet, Nelly; she must go and see your things," she whispered to herself. "So long ago it is, but O! it never will seem long ago to me."

"Here's a jolly good crack, mother—as much as I can carry," said James entering the kitchen. "Why, where is mother? I thought you left her here," turning to his father.

"So I did. I'll hunt her up." He opened the entry door upon her.

"I'm coming, you see," she said, quickly.

"Phoebe, you said we wouldn't," whispered Mr. Close.

##### CHAPTER II.

Nelly Close was alone in a dingy room in a fourth-rate boarding house in New York. Alone, sick in body, sick in spirit. She had been accounted at 18 the handsomest girl in her native village. Her beauty was a wreck now; and it was a promising sign of health in the girl's mind that she did not mourn for her faded looks! Twenty-three years! These last five seemed longer to her than all the rest! At first she spurned all thought of the past; her heart eagerly turned to pursue her mad career—forgot her oneness with the distant group in New England. The calm, cold life there became to her as a dream.

Can the human heart utterly forget? Her feverish fancy was cooling now. She had had a great shock. How she had suffered! Conscience is sure, sooner or later, to turn avenger. Long repressed force, when set at liberty, flows out with destructive fury. Passionate by nature, Nelly's soul seemed to writhe in the torments of the utterly lost. She rebelled against all law, human or divine. She tossed, away by spasms of frenzied despair, between nebula and known horror—death in life and the grave.

Then disease seized her. For months she wasted, hovering so near to the other life that she almost pictured to herself the weirdness waiting there for her. Death! Yes, she wished for death; but it was extinction she craved, not life beyond. Horrible thought! What would that be but change, simply? What better off would she be? One! she was not fit for that! Extinction! Nelly had been too religiously brought up to believe that possible. And so, while she coveted the infidel's theory, her training taught her its fallacy. She clung, in spite of her denial, to the same cross which shielded the Magdalen of old.

The same infinite Pity dealt with her. By degrees her health returned. What so sweet as convalescence surrounded by friends, grate-

ful that the destroyer has been propitiated, and that the grave has yielded back to them their treasure! Happy days of languid ease and never-ending wishes! When the loveliness of nature seems to have renewed itself in the interval, who would not be banished awhile to enjoy the full delight of coming back?

This pleasure was not Nelly's. Long days she spent alone. The woman who took care of her came in at regular times to perform her work, was paid and departed. It was all the invalid could expect; she asked no more. Yet she was not satisfied.

"Mother, now—"

Yes, there it was—mother! The symbol of the perfectness of human love. The faded dress began to be restored. How wonderfully fresh the old, unused household images were, after all! Not a crack, nor a scar—the rust polished itself clean by the mental friction. Nelly had found a theme for her musings, and now the days were not quite so long.

She loved, by and by, to picture, in waking reveries, the home-life in the distant village. Here white lips would smile as she recalled James' old pranks; what a thoughtless, affectionate tease he was. "He must be quite a young man now—" with a sigh.

"There's the father. He is getting up by this time to make the kitchen fire. He never would suffer mother to do it. She, dear soul, is wide awake, and planning what she shall cook for breakfast. I wonder if she thinks of me in the midst? I wonder if she wears the same wide ruffles, starched stiff as buckram, on her nightcaps? I wonder if old Brave is alive yet? He is the best watch-dog in the world. So affectionate, too! One kind word from me and he almost talked. I should like to see Brave! There's the coffee steaming—I can almost smell it; and the fried pork, with cream gravy poured over it; and the great plate of doughnuts—nobody ever made such white, spongy doughnuts as mother. She used to make bare-legged doughnuts, too, and set me turning them over in the hot fat. James always would eat them as fast as I took them out. Oh, well! How long ago that seems!

"Father's off to fodder the cattle by this time; and mother is washing the dishes. How they shine! She always dips them in hot water and cools them off before packing them together to carry away, and they smell as sweet as a rose.

"The dinner pot is on, with the meat boiling, for mother is one who will have tender meat. I can see her slice the turnip and pare it, carefully picking out all black spots. Then at 9 o'clock she drops in a big beet. Then she quarters the cabbages, and pulls open the leaves. Dear heart! she puts on her spectacles now, for fear she should overlook a speck. These she puts into a clean pan of cold water to stand until wanted.

"There is always some old coat to be mended in our house. Mother's poor fingers are never at rest. James don't think—boys never do. I wonder if he goes to school? He used to work off his sums in the kitchen, and his forehead would get as knotty as the problems." The girl laughed with quiet amusement.

"I wonder if they ever think of me, and what they think? O, dear!

"I should like to look in upon them all. I wonder if they would know me? Perhaps they wouldn't speak to me. I think mother would."

As the weeks wore away this thought came more frequently. A first it was rejected as impossible of realization. Then her longing heart entertained it more kindly.

"Well, why not? I have got money enough to take me there and back—when I shall go to work, if I can get anything to do. I will begin the new year honestly. I hope it is not too late. And I need not go in. I can look in on them. They'll never know or dream how near their lost Nelly had been to them."

She waited now for bodily eagerly; she was resolved upon going. Her mind eagerly fastened upon this expectation. At night she could not sleep for thinking of it; her days were spent in reverie.

The old year waned. She watched through those last days excitedly. To Nelly they were the slow slipping off of a hateful thing which bound her to a now detested servitude. She grew better with every day, and her preparations for the home pilgrimage began.

"Out of this house—never, thank God, to enter it again," she said to herself, as she felt the keen December wind on her forehead.

And now she was possessed of a ludicrous dread lest the train move before she could get to the depot. She hurried through the crowded streets, pushing along with frantic haste, and two bright red spots glowed on either cheek. She was exhausted when she reached the station, and she was an hour too early. "I can rest, at any rate," she thought, with a smile at her inconsiderate speed; "this place is better than that."

Whirling along toward home at last, Nelly leans out of the car window to note the places as they stop. Her thoughts are confused shreds of purposes, wishes and anticipations. She grudges the moments spent in stopping for passengers. Oh, if the miles would shorten somehow!

Nevertheless, she is somewhat astonished when she reaches her journey's end. She walks up the snowy road, a few recognizing her at the little station; she does not look up, but walks straight on. How strange and yet how familiar the village looks! The tall poplars in front of Deacon Sims' place stand like

skeleton sentinels. The same cross old dog rushes out to bark at her as she scuds by. Here by the roadside is the old watering trough, encrusted with glittering ice. How many times she has stopped there to let old Dobbin drink! She looks around upon the hills; everywhere snow, shining purely white in the soft starlight. The lights of the village recede as she leaves it. She comes full upon a party of girls and boys sliding down a long hill, and she turns aside to let them pass; they have only time to glance at her ankles as they sweep quickly by. "I used to slide here," she thought, as she plodded wearily up the hill.

Past Mr. Smith's farm. There is a light in the keeping room. Company, perhaps. Perhaps Miss Sarah has got a beau. Nelly sighs. This ancient maiden's singleness does not now provoke a smile. She wishes she was like Miss Sarah. A strong wind sweeps over the hills, almost lifting Nelly; she shivers in the blast and hurries on; a light shines to her over the snow; it nears slowly.

The old farm house! Nelly's tears start at the first sight. The curtains are up, as usual. Away on the back road what fear is there of intrusion? She steals to the window with this step of a culprit. Indeed, she felt like one as she looked in at the group wherein she had no place. The brief snatches of conversation came to her ear distinctly. She noted how pale her mother had grown in these five years with a thrill of anguish.

"What's the matter, James? cracked your fingers instead of the nuts?" laughed Mr. Close.

James' face was a series of contortions. "Dear, dear!" exclaimed his mother, with an alarmed face. "I'll get the liniment and do it up."

"No. It's all right." James flung his hand through the air once or twice, and brought it down on the offending nut. "I'll mash you this time, see if I don't!"—the nut flew in fragments.

Nelly laughed to herself. "That's just like James," she thought. "He can't bear any contradiction—even of a nut."

"James, I'm 'fraid you'll get sick eatin' but'nuts," at length observed his mother, peering into the basket anxiously. "They're a dreadful hearty nut."

"Pshaw! I'll risk it," replied the youth, loftily.

"There was Nathan Cain; he ate so many one night that they set him into fits. I was knowin' to it in the time out. I helped lay him out," said Mr. Close.

"I know what you two are up to," laughed James. "You want to scare me away from this basket; but you can't come it over me." He pounded away zealously.

The father and mother looked at each other and smiled. They thought their son was a marvel of acuteness.

"Now, if we only had about a dozen girls and fellows here, we should be pretty lively, shouldn't we?" quoted James.

"Why, I thought we were as it is," retorted his father.

"We could have a break down, you know, and dance the Old Year out and the New Year in," pursued the son.

"O, James!" exclaimed his mother.

"Why, yes. You used to dance, you say, when you were young folks, why not me and the rest of us?" James glanced up, logically.

"I suspect our boy has some girl in his mind, therefore he makes up quite a party so as to lull our suspicions," said Mr. Close, with a laugh.

James turned red as a beet.

"I don't want no girl," moaned the mother, "only Nelly. I wish Nellie was here." The tears rose to the eyes of all.

Outside the wanderer's heart leaped with an indescribable feeling—surprise, joy, pain, instantaneously blended. Her first impulse was to rush in and throw herself on her knees in their midst. But she restrained herself and waited.

"I wonder where she is?" said James, so-berly.

"In the hands of the Lord, my son?" replied his father.

The mother's restraint now gave way. Despite her attempt to be merry, her tears would flow, and in spite of herself the name of "Nelly" would escape from her lips. The watching girl's heart filled with emotion almost to bursting. At last Mrs. Close's feeling overcame her entirely; she flung her arms around her husband's neck, leaned her head upon his breast, and sobbed out pitiously: "Oh! Nelly, Nelly, come back—come back. Oh, God! return our Nelly to us."

"Phoebe, Phoebe, God is good, he will be merciful, trust in him," exclaimed Mr. Close, pressing her faded cheek affectionately.

James, in his surprise, held the hammer suspended over the big butternut he was about to crack, and for a moment all was silent save the sobs of the yearning mother.

Nelly's pulses thrilled with mingled emotions—repentance, pain, joy. She had been wept for, prayed for, hoped for—suddenly heaven had sent her. She glided swiftly to the door and opened it softly, and stood pale and palpitating, gazing upon the astonished group within. Mrs. Close was the first to see her.

"Nelly, Nelly," she exclaimed, starting to her feet and opening her arms. With a glad cry the girl rushed to their shelter.

"Oh, mother! mother!" was all Nelly could say, and then slid gently to her knees, and bowed her head humbly.



Mr. Close raised her to his breast, while James rusbed hither and thither in his excitement.

"God has beard and answered your prayer, Phoebe," said Mr. Close; "the last one is found."

"My child, my child, oh thank God," murmured the mother, taking Nelly in her arms again.

"Now we shall have a happy New Year, and no mistake," cried James, kissing his sister's cheek fondly. Nelly occupied her little room again that night, and the morrow was indeed a happy one for her, and for them all.—*Lydia Wood.*

### Salaries for Wives and Daughters.

The following is one of the last articles which the late Dr. Holland wrote for *Scribner's Magazine*: It is natural for woman, as it is for man, to desire to spend money in her own way—to be free to choose and free to economize, and free to spend whatever may be spent upon herself or her wardrobe. It is a delightful privilege to be free, and to have one's will with whatever expenditures may be made for one's own convenience or necessities. A man who will interfere with this freedom, and who will deny this privilege to those who depend upon him, is either thoughtless or brutal. We know—and women all know—men who are very generous toward their dependents, but who insist on reserving to themselves the pleasure of purchasing whatever the women of their household may want, and then handing it over to them in the form of presents. If these women could only have had in their hands the money which these gifts cost, they would have gratified their own tastes. A man may be generous enough to give a woman the dresses and ornaments she wears, who is very far from being generous enough to give the money that she may freely purchase what she wants, and have the great delight of choosing.

This is one side—not a very repulsive one—of man's selfishness in his dealings with women; but there is another side that is disgusting to contemplate. There are great multitudes of faithful wives, obedient daughters, and "left over" sisters, to whom there is never given a willing penny. The brute who occupies the head of the family never gives a dollar to the women dependent upon him without making them feel the yoke of their dependence, and tempting them to curse their lot with all its terrible humiliations. Heaven pity the poor women who may be dependent upon him—women who never ask him for money when they can avoid it, and never get it until they have been made to feel as meanly as if they had robbed a hen roost!

There is but one manly way in treating this relation of dependent women. If a man recognizes a woman as a dependent—and he must do so, so far, at least, as his wife and daughters are concerned—he acknowledges certain duties which he owes to them. His duty is to support them, and so far as he can do it, to make them happy. He certainly cannot make them happy if in all his treatment of them he reminds them of their dependence upon him. We know of no better form into which he can put the recognition of his duty than that of an allowance, freely and promptly paid whenever it may be called for. If a man acknowledges to himself that he owes the duty of support to the women variously related to him in his household, let him generously determine how much money he has to spend upon each, and tell her how much she is at liberty to call upon him for, per annum. Then it stands in the relation of a debt to the woman, which she is at liberty to call for and spend according to her own judgment. We have watched the working of this plan, and it works well. We have watched the working of other plans, and they do not work well.

THE pretensions which vanity sets up are not usually very high. It seldom aspires to considerations of goodness or greatness, far oftener basing its claims to admiration on a pretty face, a fine figure, a graceful bearing, a fashionable costume, a luxurious banquet, a costly dwelling. It is almost inevitable that, when people boast of such things or exhibit them ostentatiously, an impression should gain ground that they are destitute of any higher claims to consideration. If a man had genius, we think he would not value himself upon his carriage and horses; if he had force of character, he would not be proud of his tailor's skill; if he had merits of his own to stand upon, he would not try to borrow reputation from his ancestors. The very effort he makes to show off these things, and to claim a certain standing in society because of them, is of itself a kind of confession that he has nothing better to offer, and he is very naturally esteemed accordingly.

THE student who aims to become something more than a learner—namely a doer, possibly a creator—must never allow himself to think that the possibilities of any fact or phenomenon have been exhausted—so far, we mean, as its utilization is concerned. The habit of inventing, in other words, seeking novel and useful applications for the knowledge gained, should go hand in hand with acquisition. The apparent progress will not be so rapid perhaps as by the method of "cramming," but it will be real and not liable to backsliding, while the possible profit of it will be incomparably greater.

## YOUNG FOLKS' COLUMN.

### Our Puzzle Box.

#### Numerical Enigma.

I am composed of thirteen letters.  
My 1, 4, 11, 9, is a bound.  
My 6, 2, 8, is a kind of meat.  
My 3, 12, 10, 13, is a place for drying.  
My 7, 5, 4, is a unit.  
My whole is a large New England lake.

JAMES.

#### Hidden Proverb.

[One word of the proverb is concealed in each sentence.]

There's many a slip 'twixt the cup and the lip.  
Economy is in itself a good income.  
A guilty conscience needs must trouble its possessor.  
Honesty is the best policy.  
As the twig is bent the tree is inclined.  
A fool and his money are soon parted.  
A rolling stone gathers no moss.  
Before you jump the wall consider well its height.

JOSEPH.

#### Quotation Acrostic.

The earth was sad—the garden was a wild—  
And man—the hermit—sighed, till woman smiled.

Love drew your picture in my "heart of heart,"  
And memory preserves it beautiful.

The old oaken bucket, the iron-bound bucket,  
The moss-covered bucket which hung in the well.

But virtue bruised exhales a purer breath,  
Sighs fragrance forth, and triumphs over death.

One crash, the death hymn of the perfect tree,  
Declares the close of its green century.

A friend is gold; if true, he'll never leave thee;  
Yet both, without a touchstone, may deceive thee.

The initials of the authors of the above lines give the name of the author of the following:

Beware of desperate steps!—The darkest day,  
Live 'till to-morrow, will have passed away.

JERRY.

#### Decapitations.

1. Behead a man's surname and leave a fish.
2. Behead a vessel and leave a domestic animal.
3. Behead a plant and leave a kind of drink.

LEO P.

#### Rebus.

These letters name a town and the State containing it:

I  
T  
W  
I  
S

UNCLE CLAUDE.

#### Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Buffalo, New York.  
HIDDEN DEITIES.—1, Mars. 2, Venus. 3, Apollo. 4, Diana.

WORD-SQUARE.—P E A R  
E R I E  
A I R S  
R E S T

CHARADE.—Horse chest-nut.

REVERSAIS.—1, Tan net. 2, Anna Anna. 3, Rat tar. 4, Pan, nap. 5, Mug, gum.

### The Lion and the Shark.

It is now many years since a Captain Parker commanded a brig named the *Sarah*, and sailed from London for the coast of Africa with a general cargo to barter for produce. In one of his business transactions, amongst other commodities, he got a young cub lion, and resolved to bring it home to London. Bob Jones, the cabin boy took charge of it, and there not being a dog on board, put it into the dog kennel, and by his kindness to it, and his feeding it regularly, they became great friends.

The cub grew very fast, and Bob would play with it every chance he had, and even neglected his duty to gambol with the favorite. Still, the captain would not see this, for he was as fond of the cub as the boy was, though he dared not make so free with it.

A great number of people used to go to the deck to see this creature, as it became so fond of the boy, and would play and roll about the deck with him on a fine day, to the great amusement of the lookers-on; in fact, they were more like two lion whelps, tumbling over each other and wrestling, than anything else; but no one except Bob dared touch the cub.

Then the *Sarah* was chartered, at so much per month, to go to Akyab to load rice, and was about 18 months on the voyage round. When the vessel returned to London the lion had grown to be as large as a Newfoundland dog, and all the time the boy Jones had been his comrade and attendant, and could still take the same liberties with it, but no one else dared to do so, not even the captain, though he was very kind to it, and he would not allow any of the sailors to be otherwise. Once, half in jest, one of the men offered to take a rope's end to the cub, but its fury was so great that the jest was never repeated, and the same man was not safe on the deck afterwards. On the whole, however, all the sailors were fond of the creature, and would have liked to play with it, but none were permitted, or was it safe to do so, except his first friend, Bob Jones. With him the whelp was always docile.

A singular circumstance occurred on the homeward passage. Three days after passing the Cape of Good Hope the *Sarah* fell in with a number of sharks. It was a fine, calm day, and all on board set to work to try and catch one of these monsters. The officers tried to shoot one, and the sailors to harpoon one, but all in vain. At last the sailors got a long rope, in which they tied a sliding loop or noose, and with great difficulty they managed to throw this over the head of a shark which approached the vessel nearer than the rest; then they drew the rope tightly, and with immense exertion the monster was got on board, after about six hours' labor.

Once on the deck, the shark made such use of its tail that no one could venture to go near it. Presently the young lion, seeing a stranger on deck cutting such queer capers, seemed curious to have a nearer look at him, but his enterprise cost him dear, for the shark managed to get one of the lion's fore-paws in his mouth. He then became almost mad with rage and pain, for his foot could not be extracted until the upper and lower jaws of the monstrous shark were forced apart, while the roars of the lion were awfully hideous to hear.

A new office now devolved upon Bob Jones, for he alone could venture to go near the wounded whelp. He washed its injured paw and carefully bound it up, while the poor animal lay still and permitted him to do as he liked with it, and even seemed to be grateful for his attentions. These were constantly performed, and the noble animal evinced greater fondness than ever for his attendant; but the vessel had nearly reached England before the lion's foot was quite well.

Captain Parker was afraid to take the lion to sea again, although all on board, and especially Bob Jones, was sorry to part with it, but the risk was too great, so he sold his singular passenger to an American captain for \$15. What became of it afterward we never knew.—*Leisure Hour.*

## GOOD HEALTH.

### Talk at Dinner.

The English medical paper, the *Lancet*, has had a pertinent article on Fast Eating, and this article has gone the round of the American papers, so that the public shall benefit by it. Who does not know that fast eating is a bad practice, and who does not practice it all the same? The greatest sinners in this respect are the commercial men, who can be seen in shoals in commercial quarters, gulping down their dinners and luncheons, crying "check," then rushing off with the last morsel sticking in their throats, or perhaps the final crust between their fingers, to be finished in the street.

All things have their time, so has eating and drinking. Could man or woman turn their vision within and see how that poor misused organ, the stomach, wriggles and contorts before it can accommodate itself to the mass that is thrown into it, man or woman would have pity upon it and begin to reflect that the course pursued was not the right one.

People who eat fast should order their coffins, insure their lives for the benefit of their families and never start on hazardous journeys. It may be their last. More apoplectic fits are brought on by fast eating than by anything else; more indigestion and dyspepsia is the result of rushing down the food than of the food itself; more constipation is brought about by bolting meals than by the meals themselves.

Eat leisurely and you will enjoy the benefit of what you have eaten. Rather do not eat at all than eat fast, for hunger will not injure you as much as fast eating.—*Food and Health.*

THE SANITARY SCIENCE OF THE PENTATEUCH. A writer in the *Journal of Science* thinks that the knowledge of sanitary science possessed by Moses was in advance of that of today. He says: "So peculiar is human progress that it has taken 3,000 years to bring the civilized world to a point less advanced than that occupied by Moses. Less advanced we say, emphatically, because if we now admit the value of personal cleanliness, the importance of avoiding putrescent and loathsome matters, and of expelling them rapidly from our cities, and if we are theoretically aware of the disinfecting and deodorizing power of earth, we are far from embodying this, our knowledge, in the practice of actual life. As to the avoidance of blood of the flesh of foul-feeding animals, and of such as are liable to introduce entozoa into our systems, we do not recognize even verbally the importance of the Mosaic teachings. We eat 'blood puddings,' we feed swine with blood and with foul-smelling offal, and then we eat the animals which have been gorged on this revolting diet. And we pay the price of this uncleanness in shortened lives and in waning vigor. We again call attention to the remarkable physiological insight displayed in the sanitary code of the ancient Israelites, and we repeat the question, Whence did it spring?"

UNWHOLESOME SLEEPING ROOMS.—In many houses bed-rooms about seven by nine ft. in size, or not much larger, are found, in which two persons are often expected to sleep, and that too, sometimes, with closed window and closed door. If the carpenter who finished the room had been an extra good workman and had made the room pretty near air-tight, the two lodgers, or the one, who went to bed in one of these closed rooms at night would afford the undertaker a job next morning. These small, close bed-rooms are propagating beds for consumption, and prove perfectly successful. So successful, indeed, are they that about one-fifth of all the people who die in some portions of the country—New England, for instance—die of consumption. There are thousands of these small bed-rooms in New England, hence the large harvest of death from consumption. No room less than 12 ft. or 14 ft. square, and from 7 ft. to 10 ft. in height, is fit for a sleeping room, and even then there should be ample ventilation.

## DOMESTIC ECONOMY.

### Hints for the Cook.

[Written for the *RURAL PRESS* by A. E. T.]

Roast Turkey—Make the dressing in the following manner: One quart of milk, a piece of butter the size of an egg, salt, pepper, sage, according to taste, set on the stove, and when nearly boiling stir in bread crumbs (put through a cullender) until it is thick, add three well beaten eggs, dress the turkey carefully, and steam from an hour to one hour and a half, according to the size of the turkey. Have enough water in the vessel in which it is steamed to keep it from burning; then bake in a moderate oven for an hour, baste with the liquid left from steaming, place a piece of salt pork or butter on top of the turkey. When done, thicken the gravy for sauce; a little mustard improves it very much.

Delicate Cream Cake—One cup of cornstarch, one of butter, one and one-half of sugar, one of sweet milk, two of flour, the whites of seven eggs, rub butter and sugar to a cream, mix two teaspoonsful of cream tartar with flour and cornstarch, one teaspoonful of soda with the milk, add milk and soda to the sugar and butter, then the flour, and then the whites of eggs beaten stiff, flavor with lemon, bake in a moderate oven about two hours after the cake is baked, take a sharp knife and cut evenly the top off of the cake about two inches thick (first turn the cake upside down, and set in a soup plate), then cut again in the same manner, making the cake in three layers; take one quart of rich milk, the yolks of five eggs, one tablespoonful of cornstarch, two tablespoonsful of sugar, flavor with lemon, beat all together with an egg-beater, put in a tin, and set it in boiling water, stir constantly until it is thick, then spread between the layers of cake; frost with chocolate; frosting made as follows: One cup of grated chocolate, one of brown sugar, one wine glass of water, set on the stove and let it boil. When done, it will be rather hard (not too hard) when dropped in cold water have your cake ready, and frost as soon as possible. It improves its appearance very much by taking the white of one egg, one half cup of white sugar, make a frosting, and drop white spots all over the cake. If the rules are strictly followed, it is a delicious as well as an ornamental cake.

Queen of Puddings—Beat together the yolks of four eggs, two tablespoonsful of melted butter, and cup of sugar, add one quart of milk and one pint of bread crumbs, flavor with lemon, and bake in a deep dish. When done, spread over the top a layer of tart jelly, beat the whites of the four eggs, add two tablespoonsful of powdered sugar, and spread over the top of the jelly, return to the oven, and let brown slightly.

Chinese Camp, Tuolumne Co.

### Corn Beef.

EDITORS *PRESS*.—Will you, or some one through your journal, publish a good recipe for making corned beef? And oblige—R.

We have published several during the last two years. Will some readers give the ones they have found best?

RE-COOKING OF MEAT.—There are the remains of a joint of underdone mutton in the house; one woman will cut this meat up into slices and put it into a saucepan, with the materials of making the hash, and boil all together till done. The result is that the meat is cooked twice, and eats like leather, and people say that they hate hash. Another woman will cut all the meat off the bone in nice slices, flour the meat, sprinkle with a little pepper and salt, and set aside. The bone she will then break into fragments, and boil it in water for two hours in a nice, clean saucepan. The vegetable or seasoning she will then fry in fat or butter till they are cooked fairly and nicely browned. She will then strain out all the fragments of bone (so that people can eat the hash without fracturing their teeth) from the stock, add the fried vegetables, and lastly put in the meat. The whole will then be simmered for 10 minutes, so as just to warm the meat through, and carry the cooking of the underdone meat up to the proper point. Meanwhile some dipped toast will be made ready to set around the dish into which the hash is poured. Here, by attention to first principles, the remains of an underdone leg of roast mutton, instead of being spoiled for food and made disagreeable, are converted into a wholesome and delicious dish.

OLD ENGLISH PLUM-PUDDING.—To make what is termed a pound pudding take of raisins well-stoned and currants thoroughly washed one pound each; chop a pound of suet very finely and mix with them; add a quarter of a pound of flour, or bread very finely crumbled, three ounces of sugar, one ounce of grated lemon-peel, a blade of mace, half a small nutmeg, one teaspoonful of ginger, half a dozen eggs, well-beaten; work it well together, put it into a cloth, tie it firmly, allowing room to swell, and boil not less than seven hours. It should not be suffered to stop boiling.

At Santander, Spain, the excitement caused by the excommunication of the three liberal journalists is increasing. Several clergymen refused to read the Bishop's mandate from their pulpits.





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G. H. STRONG

SAN FRANCISCO:

Saturday, December 31, 1881

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The Boss Pruner, Geo. Woolsey, Agent, Lone City, Cal. Seeds, D. M. Ferry & Co., Detroit, Mich. Cuttings and Rooted Vines, M. Fishel & Co., Granby, Mo. Fruit Farm For Sale, J. B. Bibbee, Los Gatos, Cal. Carriages, Buggies and Wagons, R. F. Briggs & Co., S. F. Apple Root Grafts, Phoenix, Emerson & Co. Jersey Bull For Sale, W. Aitken, Healdsburg, Cal. Meeting—Wheat Growers' Association of California. Delinquent Sale—Grangers' Business Association of Cal. Foreign and Domestic Fruits, L. G. Sresovich & Co.

## The Week.

To all our readers, A HAPPY NEW YEAR. May the sun of prosperity illumine your homes and warm your hearts. May a good Providence smile upon your efforts and cover your fields with abundant harvests. May the right and the true fill your minds, elevate your aspirations, and be the secret of your successes. May death pass you by; may disease be averted, and the circle of blessings, led in by the revolving months, be unbroken.

There are now many indications that California is about to embark upon another good year. The shade of doubt rests, however, upon our southern friends, for they still dwell in a region of dust and drouth. The last few days of heavy rains have not reached the lower counties, and this week's letters thence speak of anxiety and fear. It is, however, too early to fear without hope, for water to fill the moderate needs of that region may come ere the weeper's tears be dry. Therefore, we weep not, but look forward for the refreshing there, and for the full realization of the tide of advancement which has been of late setting in in southern California affairs.

The central and northern areas of the State have now secured rain enough for all present needs, and the plowing and seeding which has been delayed will now go forward rapidly. It will be likewise with the hosts of orchard and vineyard ventures, and the New Year will begin in a whirl of agricultural activity.

YEAR BOOK OF SAN BENITO COUNTY.—We have received a copy of the Year Book of San Benito Co. for 1882, published by the Hollister Democrat and edited by Herr Wagner, a sprightly writer. The publication contains much information about the county, descriptions of its chief agricultural districts, record of local events in Hollister, statistics of leading products of the county, and a host of advertisements well displayed.

## The Old and the New Volumes.

This issue of the RURAL brings us to the close of Volume XXII and the end of the year. During 1881 we have given our readers 53 issues instead of 52, which usually cover the year's work. We expected to make the present number a double sheet, but are compelled to defer the enlarged issue until next week, at which time we hope to complete the report of the Sacramento Fruit Growers' Convention, and present other matters of interest and importance. The index to Volume XXII occupies our last page this week, and shows what a wide range of subjects has fallen within our view, and as the index has been prepared with unusual care, it will be an invaluable guide to those who desire to refer to the various facts and ideas which have been presented under each subject. The space taken by the index forces us to give unusual places to some of the regular departments, and thus disarrange the issue somewhat.

As for the new volume which we shall begin next week, we note with pleasure that the additional pages which we shall introduce will give us freer space for the presentation of many important matters which have been sometimes laid aside. As stated last week, the RURAL PRER hereafter will be 25% larger than it has been—the issues averaging at least 20 pages each. We are determined to improve and build up the RURAL PRESS just as fast and just as far as lies in our power and in this work we ask the co-operation of all friends of our journal. We are proud of the growth of California agriculture. We rejoice in the many indications of progress which the closing year has brought to view. Let these be duly recorded and we will go forward to the new triumphs of the newer year.

## Carp Chat.

It seems likely to go upon record beyond disputes that carp is a good food fish, and it is well to have that point well settled thus early in the local mind. In addition to the testimony of carp eaters, which we have given in recent issues, we find a statement on the subject in *Food and Health*, a New York journal, which brings forward points which may be found worthy of attention. To the remark of the *Stockton Herald* that "it takes a dollar's worth of good things to make a carp palatable," it replies:

Just as you take it; you can do it with a few cents if you get a rich, fat fish. But a poor, lean carp, boiled in a kettleful of water till not an atom of natural flavor is left in it, will certainly want a large amount of material to make it go down pleasantly.

Fish cooking is a high class art. Every fish has his characteristics, and has to be dealt with according to them. Carp is one of those fish that are really only valuable if they are prepared in a manner to enhance the value of their flesh. It would be a pity if a wrong impression gained ground about carp, as it is really a very valuable fish when properly cultivated and properly prepared. It replaces meat perfectly, and if well-accompanied with suitable vegetables, will make a substantial meal for a family as roast beef. To be really palatable and nourishing, the carp must have grown to a certain size—fat must have deposited under its skin, before it is in a condition to make good food. No poor, young, undersized carp should ever be caught and brought to table. To perfect the carp for food, he must be well fed himself.

As we have had our eye especially on carp since the objection urged against them by our Stockton contemporary, we have chanced upon several interesting things about them, not strictly in the line of their food value. One of our recent European exchanges brings a story of how a Frenchman gained a carp and lost his dinner. The *Journal of the Aia* reports the successful capture of a carp which measured about 28 inches in length and weighed 17 lbs. Its place of abode was Elreux, and the device by which it was entrapped was nothing more than an *epervier* or casting net, wielded, as it appears, by a single individual, and not, as is usually the case, dragged by a whole party of sportsmen. The captor, M. Boulanger, did not, however, complete his capture without an adventure, for at the sight of the apparently miraculous draught which he was about to haul in, he was seized with faintness; and although sufficient strength was left him to draw the net to land, the exertion, combined with the amazement inspired by his good luck, was altogether too much for him, so that the poor man is ill and unable to do gastronomic justice to the splendid trophy of his art.

Probably this M. Boulanger may have been more accustomed to the sort of sport which the banks of the Seine afford, and has not extended his inquiries far into the natural history of the carp. Otherwise, he might have known that in other countries this pacific fish grows not infrequently to still more portly dimensions. In the Volga there are reported to have been caught carp five ft. in length, weighing 70 lbs.; and if the testimony of Paul Jove is to be believed, there were once in the Lake of Como, and for all that is known to the contrary may be now, fish of this species weighing as much as 200 lbs. In France such a colossal stature is unknown to carp, even in the Royal ponds of Fontainebleau, where there are said to be in-

mates belonging to the era of Francis I., which have grown a little every year since that remote period of their youth.

It remains to be seen how large carp can be grown in California waters. It is quite evident that a carp weighing 17 lbs. will not frighten a Californian. Whether we shall be able to rival the pork-like specimens of the Volga and Lake Como, remains to be seen. Will readers send us the age and weight of the largest carp they have thus far taken from their ponds?

## QUERIES AND REPLIES.

## Disinfection with Sulphur.

EDITORS PRESS:—Let me suggest that in the search for a cheap and efficient means for destroying insects infesting fruit houses, empty packages and other transportable material, fumigation with sulphur should be thoroughly tried. This is an old fashioned weapon against insects, but I do not remember to have heard it mentioned in the discussion now going on in regard to the disinfection of return boxes. If found efficient in destroying the codlin moth and other pests, in all stages, fumigation would be preferable to any system involving the wetting of packages, and consequent swelling of the wood and rusting of nails. Sulphur fumes should also destroy all traces of mold, which so often hastens the decay of fruit in old boxes. It is possible that oranges infested with the red scale bug could be treated in this way and the scales brushed off a few days later, in the way that retailers remove the down from peaches, with a hat brush. Crude sulphur is so cheap that the expense of the fumigation would consist mainly in securing a tight room or box in which to make the application. Those most interested should experiment and report results.—C. H. DWINELLE, University of California, Dec. 26, 1881.

## Items in Meat Canning.

EDITORS PRESS:—There is one important item in my article on canning meat, fruit, etc. (RURAL PRESS Dec. 7th), that I am afraid is not clear enough to insure everyone success. I should have said, be sure and tap with a small bradawl, the last thing after boiling, as fast as taken out, and solder up again just as quickly as the steam is out enough to let you do so.—ISAAC B. RUMFORD, Bakersfield.

## What it Costs to Have Scabby Sheep in New Zealand.

The colonial government of New Zealand evidently intends to stamp out the scab or bankrupt their owners in the attempt. In this State, where there is nothing but self-interest and moral suasion to fight the scab with, and where a flock owner can do what he likes with his diseased sheep, it strikes the eye queerly to read of the dangers which environ the scab spreaders in the southern hemisphere. From the act adopted by the New Zealand government, we take the following schedule of penalties:

Obstructing inspection, not exceeding \$100; refusing to give evidence, \$20; if sheep not clean nine months after inspection given notice, not less than \$4 nor exceeding \$1 per sheep; if sheep not clean six months after first conviction, not less than \$4 nor exceeding \$4, and so on for every succeeding period of six months each, not giving notice to neighbors, not less than \$10 and not exceeding \$50; not branding scabby sheep with S, not less than \$1 and not exceeding \$5 per sheep; not branding when directed by inspector, not less than \$5 and not exceeding \$25; removing infected sheep to another run, \$50; abandoning infected sheep on highway, \$50 and imprisonment for six months; removing skins taken from scabby sheep, not less than \$5 and not exceeding \$20; neglecting to assist inspector, \$20 a day; removing sheep from one district to another without giving seven days' notice to inspector, not less than \$10 and not exceeding \$100; driving sheep through infected run, \$10; driving sheep across another run without notice, not less than \$1 and not exceeding \$5 per sheep; when dip and material are not ready for use, not less than \$25 and not exceeding \$100; throwing carcass of infected sheep into ponds, etc., not less than \$5 and not exceeding \$20; not burning or burying dead sheep infected, per carcass, not less than \$10 and not exceeding \$5; not giving notice of muster, \$20; driving sheep from run not in his own occupation, \$50; willfully communicating scab or catarrh, guilty of misdemeanor.

It is difficult to see how a negligent or evilly disposed wool grower can run the gauntlet of those penalties.

JAPANESE PERSIMMONS.—We have received from J. W. Wolfskill, of Los Angeles, the finest samples of Japan persimmons we have yet seen. Some of them were fully three inches in diameter, and the ripe ones a mass of rich, heavy jelly, with a delicate, characteristic flavor. These persimmons, in our opinion, realize all that has been claimed for the kaki in size, beauty of form and color and flavor. The samples were of three varieties—the flat, the roundish and the oblong, called the "Imperial," which is most highly esteemed by the growers. We saw the tree which bore this fruit during our visit to Los Angeles in September last. They have made a very satisfactory growth, and had set a heavy crop of fruit. They are evidently at home in the deep, mellow soil of the Wolfskill orchard.

EARLY BARLEY.—The Sutter County Farmer of last week says that James Littlejohn, who resides about a mile and a half southwest of Yuba City, has a bunch of barley that is headed out. How is that for Christmas?

## A Grand Dairy Establishment.

By the courtesy of J. H. Reall, Secretary of the American Agricultural Association, we are enabled to reproduce portions of a very interesting and handsomely illustrated article from the last number of the Society's *Journal* descriptive of one of the most perfect dairy establishments in the United States. Mr. Reall is succeeding in bringing out the most high-toned agricultural literature in the country and in the best style which has ever yet been attempted. The *Journal* is a quarterly publication in the "review" style—each issue forming a handsome volume. We do not at all sympathize with the views expressed in some of the articles, for example the weight of the publication seems to be thrown on the wrong side of the transportation question, and yet the *Journal* contains so much information upon the agricultural practices and the sciences underlying them that one can afford to go elsewhere for the doctrine on some matters.

To show what the *Journal* is doing, and at the same time to give our readers an idea of the way in which Eastern men with large capital are embarking it in dairy establishments, we reproduce a portion of an essay by F. D. Moulton, President of the International Dairy Fair Association, which treats in detail of the agricultural operations of Mr. Theodore A. Havemeyer. "Mountain Side," the farm of Mr. Havemeyer, one of New York's leading merchants and citizens, lies in Bergen county, northern New Jersey, at the base of the Ramapo mountains. It is about two miles from the New York State line, and the same distance from Mahwah station on the Erie railway, 29 miles from New York City, in the beautiful Ramapo valley, which at this point is scarcely a mile wide. The mountain range, curving in broken lines on either side, presents a grand and striking setting to a charming picture, the whole affording a most picturesque and beautiful view. Through the farm from north to south flows the Ramapo river, an attractive feature of the landscape, and an eminently valuable and practical adjunct to the farm. "Mountain Side" comprises 600 acres, 300 of which lie in the valley, and are under cultivation, and the remainder on the sides of the mountains, which at this point rise to the height of about 600 ft. The natural herbage of this latter portion affords excellent pasturage for sheep and cattle. The soil of the bottom land is a gravelly loam, and under the advanced system applied, and the admirable methods adopted, it is being brought to a high condition of fertility. At the time when Mr. Havemeyer came into possession of the farm, the buildings comprised only the mansion and horse stable and a few minor structures. He at once began a series of improvements, which have resulted in the establishment of a foundation for the best appointed farm of its size in this country. I use the term foundation, because Mr. Havemeyer considers that his work has only been begun. It is not too much to say that the barn, dairy, silo, chicken-house and piggery, are without equals on this continent, while the barn has been pronounced by good judges equal to anything of the kind in Europe. Some idea of the extent and architectural importance and beauty of these structures may be gained from the illustrations accompanying this paper. In every detail of their construction the utmost care, judgment and taste have been exercised. The work was done by day's labor, while the materials were selected from the best obtainable, and no expense of time or thought was spared to render each structure perfect and complete in all particulars. In the construction of the buildings an average number of 75 men were constantly employed for a year and a half, and 800,000 ft. of lumber, 600,000 brick and 6,000 perches of stone were consumed.

Mr. Havemeyer's barn, dairy and silos are comprised in one building, forming the letter T. The barn is 1,000 ft. back from the main road, on a lane which extends across the river through to the base of the mountains. The barn proper stands east and west, and contains the cattle floor, the hay loft, feed bins and manure cellars. The south wing contains the ice-house, dairy, engine-room and quarters for the dairyman; in the north wing are the silos. The length of the barn from east to west is 263 ft., its width 44 ft.; the length from north to south, including the dairy and silos, 263 ft., the south end being 31 ft. wide, and the north end, or silos, 40 ft. wide. The foundation of the building is of stone masonry, 2½ ft. thick and 23 ft. high. Beneath the barn, on each side, and directly under the cattle, are the manure cellars, each 14 ft. in width and 180 in length. All the droppings from the animals pass into these, and earth is carted in daily to absorb the moisture. Horse or ox-carts can be driven to all parts of these cellars to haul out the manure.

Under the center of the barn, and surrounded by the manure beds, is a room for keeping roots, 150 ft. long and 15 ft. wide, with stone walls and cemented sides and bottom. This root cellar is thoroughly ventilated by flues of its own, quite disconnected from those for the manure cellar and for the cattle floor above. At the extreme west end of the barn cellar, between the two cart-ways, is built a cistern of cemented work, 53 ft. long, 15 ft. wide and 12 ft. deep, having a capacity of 35,000 gallons of water, which is supplied from the river. From this great cistern, into which, also, the water from



the barn roofs can be carried at will, a steam pump raises water to two large tanks high up in each end of the main barn, and from these tanks, giving an excellent head, water is supplied by a system of pipes to all parts of the various farm buildings. Back of this cistern stands the gas machine which supplies the house and all the buildings with light. Entering the main floor of the barn one is struck with its immensity of size, its cleanliness, absence of all odors, and its exact adaptation to the purposes it is designed to subserve. It is 42 ft. wide in the clear, and has two ranges of stalls, one on either side, numbering in all 98, while the distance between the stalls in the center is 13 ft. These stalls are 5 ft. long and 3 ft. 6 inches wide, with a gutter 1 ft. 6 inches wide and 4 inches in depth, running in the rear 5 ft. from the head of the stall, for the droppings of the cattle. Behind the stalls is a passageway 8 ft. wide, extending along the sides of the barn. At the end of the row of stalls on the right are 10 box-stalls, 12 ft. long, 8 ft. wide, and 4 ft. 4 inches high, lined with tongued and grooved boards, in which at all times are kept some of the most valuable animals, and others, when they are calving. On the left are the feed-boxes and feed-mill, and room for more box-stalls, with an entrance to the veranda which runs along the engine room, ice house and dairy. In the center of the floor, extending the whole length of the barn and connecting with the silos, entering the right of the barn at the west end, is a railroad track. The height of the barn, from the floor to the hay-mows, is 10 ft.; the latter are 13 ft. high, and extend the length of the barn, to the roof, having a capacity for 300 tons of hay. In the peak of the barn, at each end, is a water tank, already mentioned, 14 ft. in diameter and 10 ft. in height, having a capacity of 11,000 gallons each, from which the cattle are watered. Besides the main entrance at either end, the barn is entered by 7 doors on each side, 6 ft. by 9. It has 84 windows, 5 by 2½ ft., and, together with the distance from the barn floor to the peak of the roof, and the passage through the main doors from east to west, has the best system of ventilation and lighting which can be devised. Both in winter and summer the air here is pure, and almost free from odor, a fact which affords the best assurance that the condition of health of the animals, and the purity of their products, are sedulously maintained. On the south side of the barn, and east of the dairy, ice-house and engine-room, is the cattle yard, which is always kept scrupulously clean. This yard is 230 ft. long and 115 ft. wide, divided into compartments, and is in immediate connection with the stables. The engine-room occupies that portion of the south wing which lies immediately contiguous to the main building, and is 30 ft. long by 29 ft. wide, with a floor above for storing machinery, etc. In it is an engine of 15-horse power, the pump, which forces the water from the river to the cistern in the barn, having a capacity of 1,500 gallons per hour. At the side, under the piazza, are the coal-bin and other accommodations for fuel. Adjoining the engine-room is the ice-house, which is built upon the Fisher pattern, and is 36 ft. long and 27 ft. wide, with a storage capacity of 400 tons of ice. So excellent are the arrangements for the preservation of ice that on Aug. 29th last but 15% had been lost. Beneath the ice-house, on a level with the ground in the rear, the building being on the slope of a hill, is a summer dairy, which has the same dimensions as the ice-house, except the height, which is 10 ft. from the floor to the ceiling. The walls of this building are 2½ ft.

thick, of solid stone masonry, pierced with 6 windows, which are of three thicknesses—one on the outside, one on the inside, and one in the center of the wall. The floor and sides are tiled, and the ceiling is finished with ash boards, planed, tongued and grooved. The facilities for ventilation are such that the temperature can be kept at about 40° in summer and regulated at will. This dairy is perfectly dry, and is entirely free from atmospheric or other impurities, and is regarded as the finest dairy and

of the engine room, ice house and dairy is the veranda, 8 ft. wide, 11 ft. high, and covered with a slanting roof.

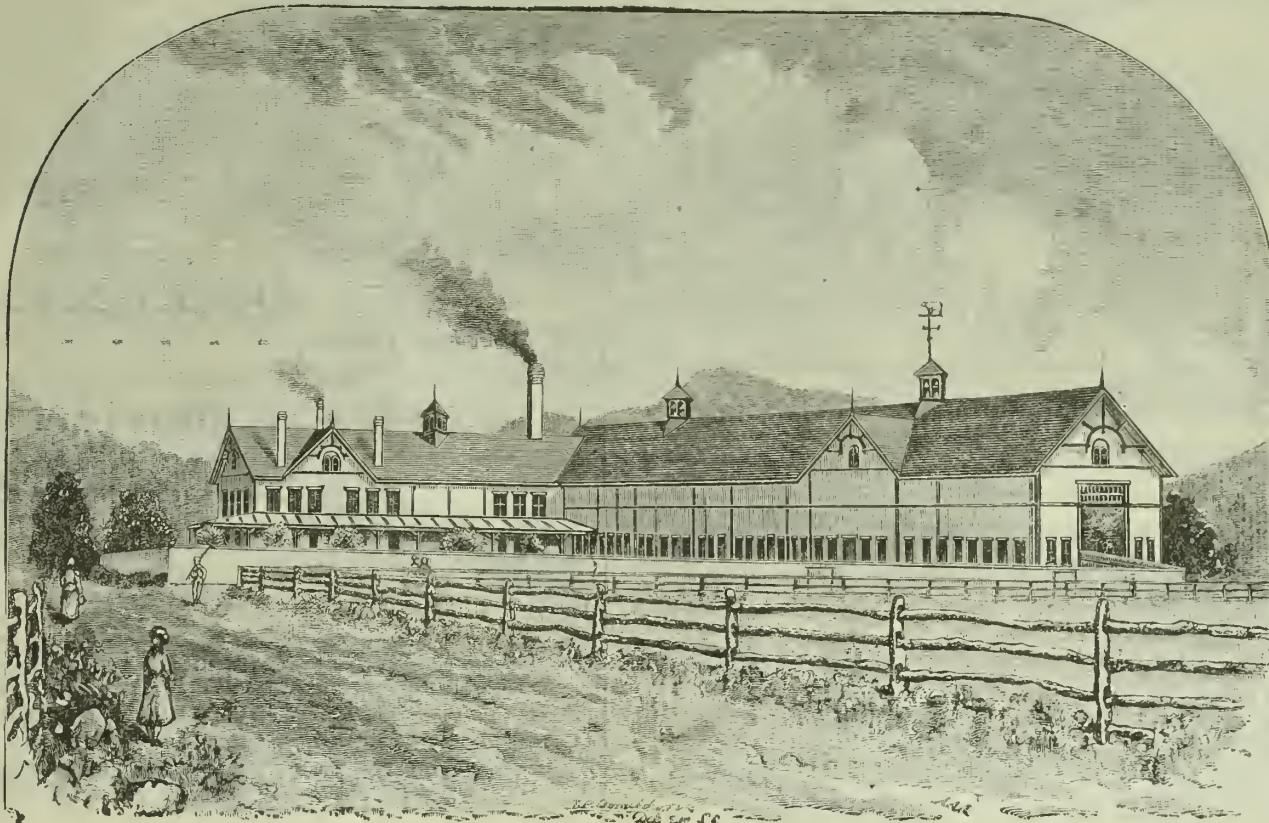
The arrangement of the ice house is such as to govern the vital question of the temperature of the dairy with absolute certainty. And here again the economy of the entire farm is exemplified. The dripping from the ice is utilized by being drawn into the tanks or coolers in which the milk is placed in cans, the latter standing in the ice water. The accommodations of the

standing upon a concrete pavement east of the north wing, carriers conveying the cut stuff through large doors 25 ft. above, and into any compartment desired. For the present season, owing to the long continued drouth, the fodder crop of the farm furnished material for but partially filling one of the large silos, about 400 tons being ensiled. It has now been decided to divide the large concrete silos, by interior walls of wood, into compartments for different kinds of green food, corn, rye, clover, millet, peas, etc., and of such size as to enable one to be easily filled, closed and weighted in a day. The average capacity of the compartments will be 100 tons, and there will be 20 of them. The cement barrels emptied in building these silos were filled with earth, headed up, and used for weights. The ensilage will be cut out from the top, and with hoisting apparatus carried to the tramway on the feeding floor.

Mr. Havemeyer is doing much towards the practical demonstration of the value of ensilage, and will inaugurate a series of experiments which must prove of great practical benefit to the farmers of the whole country. His silos are probably the best that have been built, and he will spare no pains or expense in establishing the value of the new system of preserving fodder. He realizes the great good which will come from it, especially to the farmer of the East, and believes that it is the only system that can restore the agricultural prestige of the New England and Middle States, and enable them to compete with the West. It places them upon a better footing than they have known for half a century.

**PRESERVING GRAPES.**—Thomas Turner gives the Healdsburg Enterprise proof of the success of his method of keeping grapes fresh on the vines, which is to envelop the vines in linen or cotton cloth—linen being preferable. The cloth is gathered loosely at the trunk of the vine so as to admit a circulation of air. By this treatment the grapes are protected against frost, and will remain on the vine, in sound condition, until Christmas. Another method of keeping grapes fresh described by Mr. T. is to cut off canes containing a number of bunches; immerse the large end of the cane in water containing a small quantity of charcoal—say a piece as large as an egg to a gallon of water, to be changed every ten days or two weeks. They must be kept in a room with temperature above freezing, and the canes should be suspended by strings. By this means the grapes can be kept fresh and solid until mid-winter. We may remark in connection with the last method that it is used to some extent in England and we see in our English exchanges pictures of ornamental iron frame which hold a large number of bottles in an inclined position, the frame being attachable to the wall of the room. In each of these bottles a piece of cane holding a cluster of grapes is inserted, the cluster hanging down from the mouth of the bottle. They also have frames suitable for placing upon a table or side-board thus exhibiting a pyramid of grapes to the beholder. The charcoal in the water prevents its becoming fetid.

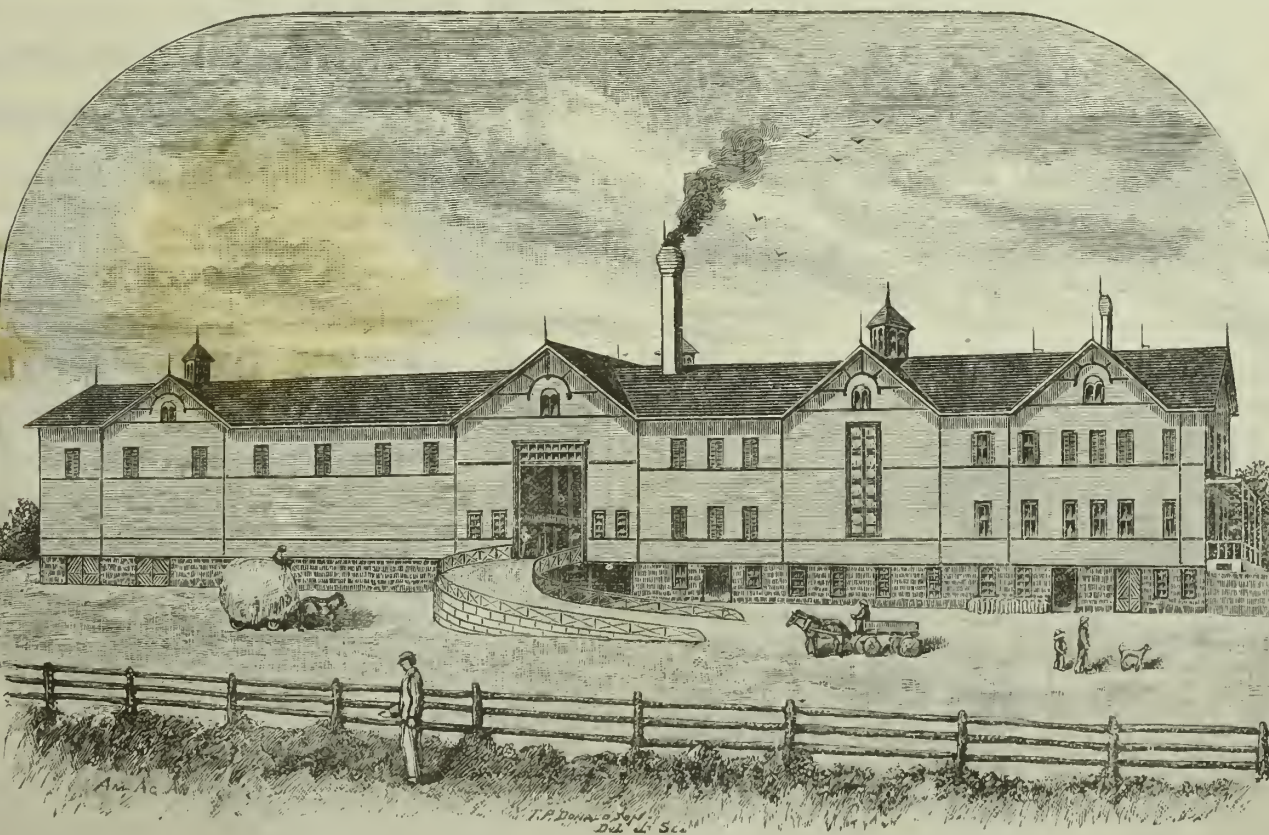
No track laying has been done on the Nevada and Oregon Railroad for the past three weeks, because of delay in the rolling of the rails. A shipment is expected next Monday, when track laying will be resumed. The rails are now laid out between 18 and 19 miles. The bed is ready for 13 miles beyond. Eighty men are at work grading.



COW BARN AND DAIRY BUILDING ON MOUNTAIN SIDE, NEW JERSEY.

milk room in the country. Adjoining is a room on a level with the summer dairy, 49 ft. long and 29 ft. wide, the same height as the summer dairy, and with walls of the same thickness,

dairy department will thus be seen to be perfect in capacity and arrangement. No similar establishment is known to us as existing on any farm in the country; and there is to be said of



REAR VIEW OF BARN AND DAIRY BUILDINGS.

and having a floor of cement. This is used for a wash room, churning room, etc., and is itself equal to the best dairy room in the United States. It forms a basement, while above it is the winter dairy of the same dimensions. The two are connected by an inclosed elevator and also by a staircase. The floor, sides and ceiling of the winter dairy are also tiled in variegated colors and artistic figures, affording, with the blue and white tints, a most agreeable and restful picture. These rooms, fitted so as to cream the milk by cold air alone, or by deep setting in water, have capacity for handling the milk of 400 cows. The most improved churn and butter worker are used. A shaft from the engine room runs through the dairy work room, so that power can be had whenever desired. Above it is the dairyman's residence, comprising ten rooms, handsomely fitted up, constituting a beautiful and comfortable home. Extending along the east side and south end

it, besides all that regards its unequalled facilities for its purpose, that its absolute cleanliness in all its departments, its freedom from odors, and the economy displayed in its management, are true indications of the exceptional wisdom and foresight which characterize every arrangement about this admirable farm.

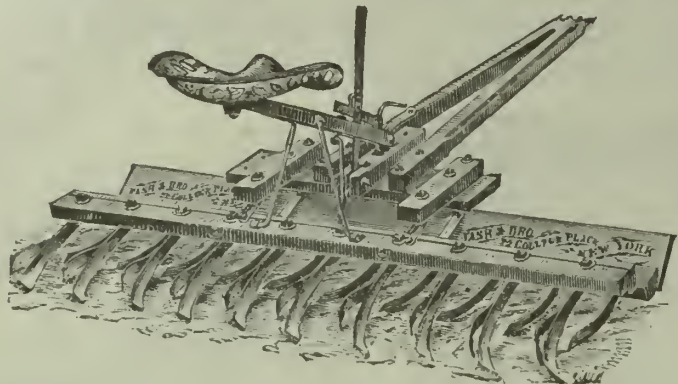
The north wing of the barn, devoted exclusively to the silos, is 99 ft. long and 40 ft. wide. The peculiarity of this part of the work is that the silos, although 25 ft. deep, stand entirely above ground. Upon a massive stone foundation, concrete walls 2½ ft. thick were constructed, forming originally four large silos; two at the south end are 59 ft. long and 14 ft. wide, their ends against the main barn, and two 35 ft. long and 12 ft. wide extend across the north end of the silo wing. All are inclosed and covered by a strong frame building, its exterior uniform with the rest of the barn. The filling is done from the outside, the two giant cutters



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Patients ordering from our depository in San Francisco, should, at the same time, write to us, and give a statement of their case, in order that we may send such advice and direction in the use of the Treatment as their special disease may seem to require.

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Manufacturers and Importers of all Kinds of

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### Alfalfa and Clover,

And more can be put in. Ditches are all ready for irrigation, and water abundant. Fine

### Vineyard and Orchard

Sites. Improvements are very complete. For further particulars and terms, apply to

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**EXCHANGE & MART,**

Santa Cruz, Cal.

## EGGS TO HATCH

From the following varieties:

### LANGSHANS,



Black Cochins, Plymouth Rocks, Brown and White Leghorns, Toulouse Geese and Pekin Ducks.

My breeding yards are composed of selected birds from the leading strains mated to secure the best results.

Fair dealing and satisfaction guaranteed. Correspondence promptly answered. Send for circulars and prices.

**GEO. TREFZER, Napa City, Cal.**

## ASTHMA

Quickly and Permanently

Dr. Stinson's Asthma Remedy is unequalled as a positive Alternative and Cure for Asthma and Dyspepsia, and all their attendant evils. It does not merely afford temporary relief, but is a permanent cure.

Mrs. B. F. Lee, of Belmont, O., says of it: "I am surprised at the speedy effects of your remedy. It is the first medicine in six years that has loosened my cough and made expectoration easy. I now sleep all night without coughing." If your druggist does not keep it, send for treatise and testimonials to **H. P. K. PECK & CO.,** 833 Broadway, New York.

## CURED

### Whitmore's Improved Gear,

ADAPTED TO

### Buckwagons, Buggies and Light Business Wagons.

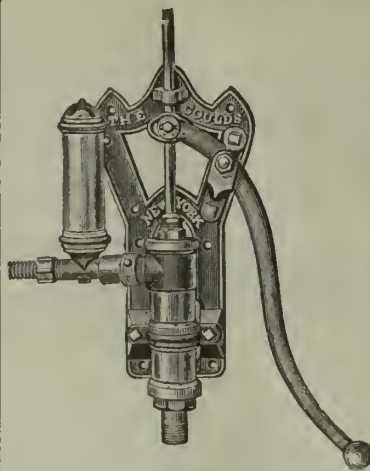
Weight carried to the extremities of the Axles. Long, soft, double sweep springs. No side sway or pitching motion. It is jointed, relieving all strain.

**E. WHITMORE, MAKER,**  
1507 Polk St., San Francisco, Or Charles Whitmore, Traveling Agent for the Pacific Coast.

### Stockton Savings and Loan Society.

Paid up Capital, \$500,000.

Transacts a General Banking Business, Foreign and Domestic Exchange; receives Deposits or makes Loans on the most favorable terms. **L. U. SHIPPEE, President.** **FRED. M. WEST, Cashier.**



**H. P. GREGORY & CO.,**

2 & 4 California Street, San Francisco.

Sole Agents for the Pacific Coast for

## GOULD'S SPRAYING PUMP.

Used by Orchardists for Spraying Fruit Trees with

### INSECT EXTERMINATING LIQUIDS.

This Pump has been gotten up expressly for the purpose noted. The working parts are constructed entirely of Brass and are not affected by the corrosive solutions used in them. The sale of over 100 of these Pumps last year—principally in the Santa Clara valley—is strong testimony as to their merit. Further information can be obtained by addressing the Agents,

**H. P. GREGORY & CO.,**

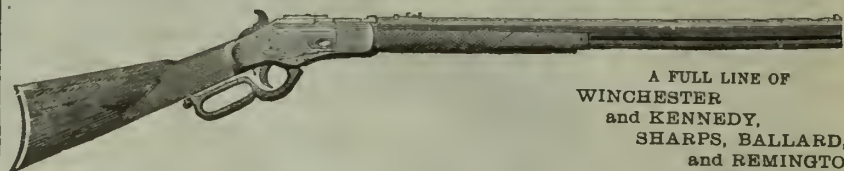
SAN FRANCISCO, CAL.

## C. D. LADD,

821 Kearny Street, - - - - - San Francisco, Cal.

SOLE AGENT FOR THE PACIFIC COAST FOR

### THE BALLARD RIFLE, AND MARLIN'S NEW BALLARD REPEATER.



A FULL LINE OF  
WINCHESTER  
and KENNEDY,  
SHARPS, BALLARD,  
and REMINGTON  
RIFLES.

Complete Assortment of Shot Guns and Pistols of all Makers. Ammunition in lots to Suit. Liberal discount to the trade. Send for Special Price List for Marlin's New Repeater and Ladd's Improvement on the Kennedy Rifles.

**SEND FOR 1881 PRICE LIST.**

## HARDWOOD LUMBER,

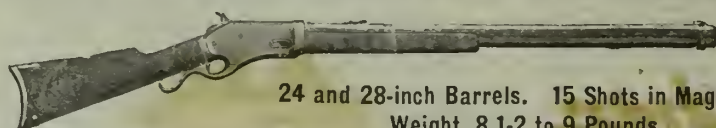
Oak Timber and Plank, Thin Fancy Woods,

— AND —

### VENEERS and DOWELS.

**JOHN WIGMORE, 129, 131, 133 and 135 Spear St., S. F.**

## THE KENNEDY REPEATING RIFLE.



24 and 28-inch Barrels. 15 Shots in Magazine.  
Weight, 8 1-2 to 9 Pounds.

USES THE WINCHESTER MODEL 1873 CARTRIDGE, 44 CALIBRE, 40 GRAINS, CENTER FIRE. Out of 500 Glass Balls thrown from a trap, 479 were broken with this Rifle. Prices Low. Circulars on application to

**F. T. ALLEN, Pacific Coast Agent,**

416 Market St., San Francisco.

## PURE BRED POULTRY.



Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.



I have a large stock of the above varieties for Sale Cheap, considering the quality of stock. For further information, send 3 cent stamp for new circular and price list to **R. C. HEAD, Napa, Cal.**

**Grangers' Business Association of California.** Principal place of business, No. 33 California Street, in the City and County of San Francisco, State of California.

Notice is hereby given that, at a meeting of the Directors of said Corporation, held on Monday the 21st day of November, A. D. 1881, an Assessment has been levied of ten per cent (10%) upon the Capital Stock of said Corporation amounting to the sum of Two and one-half (\$2.50) Dollars upon each and every share of said Capital Stock, payable December 26th, 1881, to Amos Adams, the Secretary of said Corporation, at his office, No. 38 California Street, in the City and County of San Francisco, State of California.

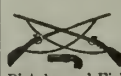
Any stock upon which this assessment shall remain unpaid on the 28th day of December, A. D. 1881, will be delinquent, and advertised for sale at public auction, and unless payment is made before, will be sold on Monday, the 17th day of January A. D. 1882, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

**AMOS ADAMS,**  
Secretary of the Grangers' Business Association of California. Office—No. 38 California St., San Francisco, Cal.

### Woolsey's Steam Generator and Power and Steam Cheese Vat for Ranchmen and Dairies.

This is the Cheapest and Best Steam Generator ever invented; and the cheese vat is so constructed that the temperature can be kept even and steady.

**WOOLSEY'S TARPOLA GOPHER TRAP,** never fails to kill all varmints when properly set. Price \$2.50. **WOOLSEY'S IMPROVED LAWN SPRINKLER,** Cheapest and Best in use. Price, \$5. Address **JOHN S. WOOLSEY,** Inventor and Manufacturer, Gilroy, Cal.



**H. H. WILSON & SON,**  
513 Clay St., S. F.

Importers and Dealers in Guns, Rifles, Pistols, and Fishing Tackle, etc.

**SMITH & JOHNSON,**

(Successors to J. S. Davis.)

MAUFACTURERS OF THE

**Davis' Gain Twist Regulating Windmill,**

Tanks, Troughs, Etc., Etc.,

Jobbing of all Kinds Promptly Attended to.

No. 183 Commerce St., Stockton, Cal.

## Veterinary Homœopathy !!

Every Farmer and Stock Raiser should have a Veterinary Homœopathic Manual and Medicine Chest. Send for Veterinary Index (mailed free on application). Family Homœopathic Medicine Chests also supplied.

**BOERICKE & TAFEL,**

Homœopathic Pharmacy, 234 Sutter St., S. F.

### Fruit Farm For Sale.

Containing 24 acres fronting on Davis Avenue, one mile north of the flourishing town of Los Gatos. Good house, barn, chicken house and yard. A good well of soft water; 1,000 fruit trees, assorted, and 550 grape vines, all set out last winter. About 50 oak trees, large and small, adds to the beauty of the place. This beautiful, healthy place, situated in the charming warm belt climate of the foothills, is sold for the want of health and means to carry it on. Price, \$2,700. Address **G. W. McCREW,** Los Gatos, Cal. Reference—Dewey & Co., Rural Press.

### Hunter's Eccentric Patent Coupling.

For carriages, pumps and whiffletrees and other couplings. No bolts, no rattling and no unhitching. State and County rights for sale. Address **HUNTER & FRANCIS,** Merced, Cal.

**40** Comic Transparent Cards, name on, 10 cents, or 50 fine Chromos, 10 cents, Wise & Co., Clintonville, Ct.



## BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

## CATTLE.

**COL. C. YOUNGER**, Forest Home Herd, San Jose, Cal. Breeder of Short-Horn Durhams, and pure bred Cotswold Sheep. Young Bulls and Bucks always for sale. Herd took Gold Medal, 1881.

**WILLIAM NILES**, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

**HENRY PIERCE**, 723 Montgomery Street, S. F. Jersey Cattle, bred from importation direct from Jersey Island, and winners of most of the prizes at Oakland, Stockton and the State Fairs. "Victor of Yerba Buena," of noted butter strains on the Island, and known to be the best Bull ever imported to this coast, now stands at the head of this famous herd. "King of Scituate," son of the famous 705 pound butter Cow, Jersey Belle, of Scituate, which now stands at the head of Mr. Pierce's noted herd, at Scituate, Mass., will soon be brought here.

**PETER SAXE & SON**, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

**PAGE BROTHERS**, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and Spanish Merino Sheep.

**MRS. M. E. BRADLEY**, San Jose, Cal. Breeder of recorded thoroughbred Short Horn cattle and Berkshire hogs. A choice lot of young stock for sale.

**R. J. MERKELEY**, Sacramento, Cal. Breeder of Short-Horn Durhams and Norman-Percheron horses.

**ROBT. BECK**, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

**R. NOELL**, Grass Valley, Nevada Co., Cal. Breeder and Importer of Thoroughbred Jerseys.

**R. MCENESPY**, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

## HORSES.

**P. J. SHAFTER**, Olema, Marin Co., Cal. Breeder of choice Jerseys, bred from butter strains. Hambletonian horses by the Silver Gray Stallion, "Rustic," remarkable for size, speed, and kind disposition.

**J. R. ROSE**, Lakeville, Sonoma Co., Cal. Breeder of Thoroughbred Devons, roadster horses and Percheron draft horses.

**E. A. SACKRIDER**, 325 Eleventh St., Oakland, Cal. Importer of Norman-Percheron horses. Horses on hand and for sale at reasonable terms.

**WM. FARRINGTON**, Santa Clara, Cal. Breeder of Norman horses; owner of the horse "Cunard," of stock of Perry's importation.

**W. A. MUNNION**, Dixon, Solano Co., Cal. Owner and Breeder of the celebrated Jack, "John Henry." Took First Premium State Fair, 1881, also Percheron Half-breeds.

**J. W. BRYAN**, Santa Clara, Cal. Breeder of Norman-Percherons from the celebrated Hercules Stock.

## SHEEP AND GOATS.

**L. U. SHIPPEE**, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

**J. B. HOYT**, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

**E. W. WOOLSEY & SON**, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

## POULTRY.

**H. S. SARGENT**, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

**MRS. L. J. WATKINS**, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

**A. O. RIX**, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

**MRS. M. E. NEWHALL**, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rock, Pekin Ducks.

**HALSTED'S NEW INCUBATOR**. Price \$30. 1011 Broadway, Oakland. Send for circular.

## SWINE.

**ALFRED PARKER**, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

**T. WAITE**, Brighton, Sacramento Co. Breeder of Thoroughbred Berkshire Hogs and choice Imported Poultry. Took Premium State Fair, 1880 and 1881 of Leghorns (brown and white), Speckled Hamburgs, Plymouth Rocks and Pekin Ducks.

**JOHN RIDER**, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

**ELIAS GALLUP**, Hanford, Cal., Breeder of Poland China Swine. Stock recorded in American Poland China Record. Are descendants of the celebrated McCrory-Bismarck, bred by D. M. Magie, Oxford, Ohio. Took five First Premiums at State Fair in 1880.

**TYLER BEACH**, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by L. Stanford.

## BEES.

**J. D. ENAS**, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

TRADE

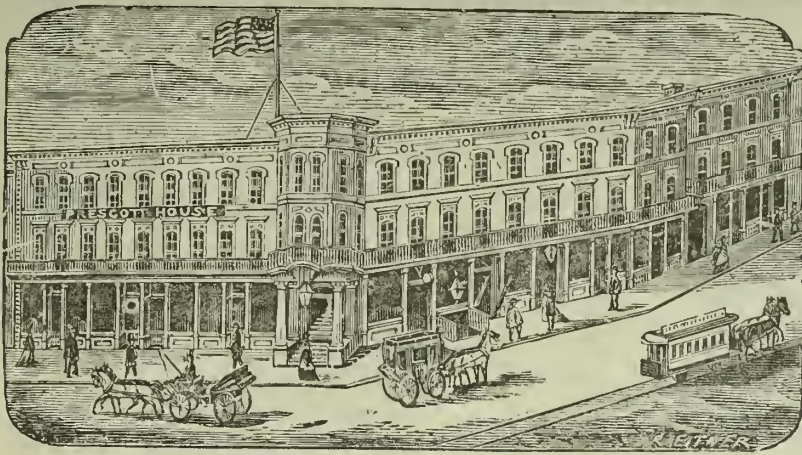


MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.00 per gallon. For directions and testimonials apply to **FALKNER, BELL & CO.** Sole Agents, 430 California Street, S. F.

## PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House.

O. F. BECKER, Proprietor

## The Fresno Colony,

On the line of the Southern Pacific Railroad and adjoining Fresno City and the Central Colony. Has the most favorable location of any Colony, as well as other superior advantages. Abundant water secured. Land unsurpassed for Vine Raising and Fruit Culture. Send for Map and Circular, or come and examine. Address

THOMAS E. HUGHES &amp; SONS, Fresno City, Cal.

JOS. FREDERICKS &amp; CO.,

IMPORTERS AND DEALERS IN

## CARPETS, FURNITURE, BEDDING,

Rugs, Mats, Linoleum, Oilcloths, Upholstery Goods, Etc.

Lace Curtains, Window Shades and Draperies,

649 and 651 Market St., Opposite Kearny, S. F.

## IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock: Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & SON.

## HOPE FOR THE DEAF

Dr. Peck's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address, H. P. K. PECK & CO., 853 Broadway, New York.

## Improved Patent Rotary Force Pump for Pumping Water by Horse Power.

This is a Durable and Compact apparatus for pumping, that will force water 100 feet and 2,000 to 4,000 gallons an hour. It can be moved from one well to another for irrigating. For further particulars, address,

R. M. BEEBEE, Gridley, Butte Co., Cal.

## Short Horn Bulls For Sale.

The undersigned now have for sale a few choice Thoroughbred and high grade bulls from the best milk strains. Our herd consists of "Young Marys," "Daisies," "Imp Britannias," etc. Prices Reasonable.

HYDE &amp; MOORE, Visalia, Cal.



H. T. DORRANCE,

Manufacturer and Importer of

SADDLERY AND HARNESS,

CALIFORNIA, LADIES' AND IMPORTED SADDLES, Whips, Robes, Team, Concord, Buggy, Coach and Trotting Harness, Horse Blankets, Linen Covers, Etc.

No 185 Hunter Street, - - Stockton, Cal

LADIES'

## Purchasing Agency.

Commissions executed and purchases made of all kinds of household articles, dry goods, art and fancy work materials, etc.

MRS. M. S. HARMON,  
131 Hancock St., S. F.

## To Fish Raisers.

I am now ready to sell Carp which were imported from Germany in 1872, in lots to suit. Address

J. A. POPPE, Sonoma, Cal.

## 70 YOUR NAME

In New Type 100 on 70 Cards 100 New styles, by best artists: Bouquets, Birds, Gold Cherries, Landscapes, Water Scenes, etc.—no 2 white. Agents' Complete Sample Book 25c. Great variety Advertising and Book-Edge Cards. Lowest prices to dealers and printers. 100 Samples Fancy Advertising Cards, 50c. Address STEVENS BROS., Box 22, Northford, Ct.

## THE MYERS PLOWS.

All extras for Patent

Slip-share Gang Plows,

SIDE-HILL, SUB-SO'L

AND

SINGLE PLOWS,

Constantly on hand and for sale at

RICE'S ENGINE WORKS,

SOLE AGENCY,

Nos. 52, 54, 56 and 60 Bluxome St., S. F., Cal.

## B. STEACEY,

Lockeford, San Joaquin Co., Cal.,

MANUFACTURER OF ALL KINDS OF

## FARMERS' WAGONS,

Buckboards, Family Buggies

Of all kinds and sizes.

Keeps a good supply of well seasoned wood on hand. Blacksmithing and painting departments in connection

## MAMMOTH FURNITURE HOUSE,

STOCKTON,

OPPOSITE YOSEMITE HOUSE,

SYLVESTER &amp; MOYE.

We Manufacture our own goods and sell Bed Room sets from \$22 up. Our styles are the latest, and made under our own supervision by the best workmen. Our immense stock of Carpets imported direct from the Eastern markets in large stock and of all the latest patterns, and sold at prices to suit the Times.

We are the Agents for the Celebrated Decker Pianos, and Organs from \$35 upwards.

## Poultry and Stock Book

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address WILLIAM NILES, Los Angeles, Cal.

## GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,  
In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$500,000.

Reserve Fund and Paid up Stock, 25,760.

## OFFICERS:

G. W. COLBY.....President  
JOHN LEWELLING.....Vice-President  
ALBERT MONTPELLIER.....Cashier and Manager  
FRANK McMULLEN.....Secretary

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J. H. GARDNER.....Stanislaus Co  
T. E. TYNAN.....Santa Clara Co  
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J. C. MERYFIELD.....Yolo Co  
H. M. LARUE.....San Mateo Co  
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C. J. CRESSEY.....Napa Co  
SENECA EWER.....Colusa Co  
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty.

COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received.

CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 3 months; 5% per annum if left for 6 months; 6% per annum if left for 12 months.

BILLS of EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1881.

## Holstein Cattle.

CLYDESDALE AND HAMBLETONIAN

## HORSES.

The largest and deepest milking herd of Holsteins in the world. 225 head, pure bred, mostly imported, males and females of different ages.

A Large and elegant stud of imported Clydesdale Stallions and Mares of all ages.

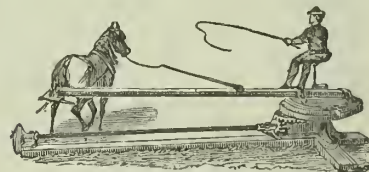
Hambletonian Stallions and Mares of superior breeding.

Personal inspection invited. Separate catalogues of each class, and milk records of cows mailed free on application.

All inquiries promptly answered. State that you saw this advertisement in the PACIFIC RURAL PRESS.

SMITHS &amp; POWELL,

Lakeside Stock Farm, Syracuse, N. Y.



## WINDMILLS! HORSE POWERS!

TANKS AND ALL KINDS OF PUMPING MACHINERY BUILT TO ORDER.

No. 51 Beale Street, S. F.

Send for Circulars.

F. W. KROGH &amp; CO.

(Successors to W. L. TUSTIN.)

## California Washer.

This machine is an improvement on the celebrated "Humboldt." For Families or Hotels it will pay for itself in less than six months. Lace curtains and other delicate fabrics can be washed without injury. Price \$15. Manufacture, 431 Fourth St., S. F. Local or traveling Agents wanted. G. M. PURSELL, Patentee.

## California Improved Rotary Churn,

PATENTED AUGUST, 1881.

A Box Churn with dashers, or can be used without dashers. Can be run with reverse motion with one man or two. A trial will convince that this is the best Churn in use. For Churns and Agencies, apply to

E. L. PRIEST & CO.,  
629 Market St., Oakland.



Calvert's Carbolic

SHEEP WASH.

\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



M. P. HENDERSON

Carriage Manufactory.

ALL KINDS OF CARRIAGES AND WAGONS FOR SALE.

Cor. Main &amp; American Sts., Stockton, Cal.

Makes to order all kinds of Carriage and Buggy Work, Express and Thoroughbred Wagons and Stage Work. Painting and Trimming done to order.

Jobbing done with Neatness and Dispatch.

## JOHN JENNINGS.

Hooper's South End Grain Warehouses,

Cor. Japan and Townsend Sts., S. F.

First-class Fire-proof Brick Building. Capacity 10,000 tons. Goods taken from the Dock and the Cars of the C. P. R. R. and S. P. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

52 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet, 10c. Clinton Bros., Clintonville, Co.



## SAN FRANCISCO MARKET REPORT.

(CONTINUED FROM PAGE 445.)

## Domestic Produce.

WHOLESALE.

WEDNESDAY M., December 28, 1881.

BEANS & PEAS.	
Bayo, etc.	1 75 @ 25
Butter, etc.	3 00 @ 25
Castor, etc.	3 50 @ 25
Pea, etc.	1 75 @ 85
Red, etc.	1 75 @ 85
Black, etc.	1 75 @ 85
Large White, etc.	3 00 @ 25
Small White, etc.	3 50 @ 25
Lima, etc.	4 50 @ 25
Field Peas, etc.	2 00 @ 25
do, green, etc.	2 00 @ 25

BROOM CORN.	
Southern, etc.	3 @ 31
Northern, etc.	4 @ 31

CHEESE.	
California, etc.	4 @ 41
German, etc.	6 @ 41

DAIRY PRODUCE, ETC.	
Cal. Fresh Roll, lb.	35 @ 37
do. Fancy Brands, etc.	40 @ 37
Firkin, new, etc.	27 @ 30
Eastern, etc.	20 @ 25
New York, etc.	— @ —

FEED.	
Cal. Fresh, doz.	36 @ 38
Ducks, etc.	— @ 35
Oregon, etc.	38 @ 38
Eastern, by exprs.	32 @ 35
Pickled here, etc.	— @ —
Utah, etc.	— @ 32

FRESH MEAT.	
Beef, 1st quality, lb.	6 @ 8
Second, etc.	4 @ 5
Third, etc.	4 @ 4
Mutton, etc.	4 @ 5
Spring Lamb, etc.	6 @ 6
Pork, undressed, etc.	5 @ 6
Dressed, etc.	9 @ 9
Veal, etc.	6 @ 7
Milk Calves, etc.	7 @ 8

GRAIN.	
Barley, feed, etc.	1 47 @ 52
do, Brewling, etc.	1 55 @ 62
Chevalier, etc.	1 55 @ 57
do, Coast, etc.	1 42 @ 45
Buckwheat, etc.	— @ 62
Corn, White, etc.	1 42 @ 47
Yellow, etc.	1 45 @ 47
Small Round, etc.	— @ 47
Oats, etc.	1 70 @ 77
Milling, etc.	1 75 @ 90
Rye, etc.	2 40 @ 45
Wheat, No. 1, etc.	1 60 @ 61
do, No. 2, etc.	1 55 @ 57
do, No. 3, etc.	1 45 @ 45
Choice Milling, etc.	— @ 62

SEEDS.	
Alfalfa, etc.	12 @ 13
do, Chile, etc.	— @ —
Canary, etc.	3 @ 4
Clover, Red, etc.	14 @ 15
White, etc.	45 @ 50
Cotton, etc.	— @ 20
Flaxseed, etc.	2 @ 31
Hemp, etc.	— @ 5
Italian Rye Grass, etc.	25 @ —
do, Perennial, etc.	25 @ —
Millet, German, etc.	10 @ 12
do, Common, etc.	7 @ 10
Mustard, White, etc.	12 @ 23
Brown, etc.	2 @ 3
Rape, etc.	2 @ 24
Ky Blue Grass, etc.	20 @ 25
Royal, etc.	16 @ 17
Stoward, etc.	16 @ 17
Eastlake, etc.	16 @ 17

SIDES.	
Hides, dry, etc.	18 @ 18
Wet salted, etc.	9 @ 10

HONEY, ETC.	
Beeswax, lb., etc.	23 @ 25
Honey in comb., etc.	15 @ 20
Extracted, light, etc.	9 @ 10
do, dark, etc.	7 @ 9

HOPS.	
Oregon, etc.	20 @ 21
California, new, etc.	25 @ 27
Wash. Ter., etc.	23 @ 24
Old Hops, etc.	— @ —

NUTS—Jobbing.	
Walnuts, Cal., etc.	10 @ 11
do, Chile, etc.	7 @ 8
Almonds, Ind. shell, etc.	8 @ 10
Soft shell, etc.	14 @ 15
Brazil, etc.	10 @ 11
Pecans, etc.	13 @ 15

## Fruits and Vegetables.

WHOLESALE.

WEDNESDAY M., December 28, 1881.

FRUIT MARKET.	
Apples, bx., etc.	75 @ 2 01
Bananas, hch., etc.	2 50 @ 4 00
Cocoanuts, 100, etc.	6 00 @ 7 00
Cranberries, lb., etc.	13 00 @ 14 00
Figs, bx., etc.	4 00 @ 7 50
Grapes, etc.	1 25 @ 2 25
Limes, Mex., etc.	4 00 @ 6 00
do, Cal. box., etc.	1 50 @ 2 50
Lemons, Cal. bx., etc.	1 00 @ 2 00
Sicily, box., etc.	6 50 @ 7 50
Australian, etc.	— @ —
Oranges, Cal. bx., etc.	2 00 @ 3 50
do, Tabiti M., etc.	— @ —
do, Mexican, etc.	15 00 @ 20 00
do, Loroto, etc.	— @ —
Pears, bx., etc.	1 10 @ 1 15
Pineapples, doz., etc.	7 00 @ 9 00
Plums, bx., etc.	50 @ 75
Strawberries, ch't., etc.	— @ 10

VEGETABLES.	
Artichokes, doz., etc.	— @ 50
Beans, Lima, lb., etc.	— @ 5
do, String, etc.	7 @ 10
Cabbage, 100 lbs., etc.	75 @ 1 00
Carrots, etc.	30 @ 50
Cauliflower, doz., etc.	85 @ 1 00
Cucumbers, doz., etc.	— @ 15
Garlic, lb., etc.	1 @ 2
Green Peas, lb., etc.	— @ 5
do, Sweet, etc.	— @ 5
Gr'n Pepp'r, bx., etc.	— @ 50
do, Chile, etc.	— @ 75
Lettuce, doz., etc.	10 @ 15
Mushrooms, lb., etc.	— @ 8
Okra, lb., etc.	5 @ 8
Paraulps, lb., etc.	— @ 4
Horseradish, etc.	— @ —
Marrow, etc.	— @ —
Tomatoes, etc.	10 @ 12
Turnips, etc.	— @ 75

DRIED FRUIT.	
Apples, sliced, lb., etc.	6 @ 61
do, quartered, etc.	5 @ 51
Apricots, etc.	15 @ 17
Blackberries, etc.	14 @ 16
Citron, etc.	25 @ 30
Dates, etc.	9 @ 10
Figs, pressed, etc.	4 @ 6
do, loose, etc.	3 @ 5
Nectarines, etc.	14 @ 15
Peaches, etc.	11 @ 13
do, pared, etc.	14 @ 15

Signal Service Meteorological Report.	
SAN FRANCISCO.—Week ending December 27, 1881.	HIGHEST AND LOWEST BAROMETER.

Dec. 21	Dec. 22	Dec. 23	Dec. 24	Dec. 25	Dec. 26	Dec. 27
30.256	30.230	30.235	30.243	30.210	30.138	30.236
30.213	30.174	30.196	30.199	30.159	30.018	30.045

MAXIMUM AND MINIMUM THERMOMETER.	
52	54
45	45.5

MEAN DAILY HUMIDITY.	
83	80.3
82.7	86.3
78.3	83.3

PREVAILING WIND.	
NE	N
SE	W
W	S
S	W

WIND—MILES TRAVELED.	
92	115
90	136
137	221
193	193

STATE OF WEATHER.	
Clear.	Clear.
Clear.	Clear.
Fair.	Fair.
Cloudy.	Foggy.

RAINFALL IN TWENTY-FOUR HOURS.	
0.33	0.37
0.13	0.13

Total rain during the season, from July 1, 1881, to 6.55 inches.	
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## Grangers' Business Association of California.

Principal place of business, No 38 California street, San Francisco, State of California.

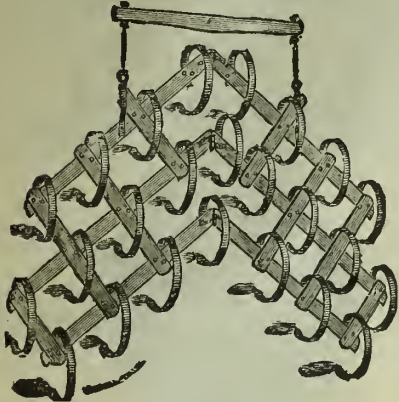
NOTICE.—There are delinquent upon the following described stock on account of an assessment levied on the Twenty-first (21st) day of November, 1881, the several amounts set opposite the names of the respective shareholders, as follows:

Name.	Number of Certificate.	Number of Shares.	Amount.
Adams, D. Q.	467	4	\$10 00
Allen, James.	1401	2	5 00
Allen, H. M.	1220	25	100 00
Anway, L. B.	299	6	15 00
Anway, L. B.	1465	2	5 00
Ashley, Geo. W.	1429	3	7 50
Ashburner, Rob't.	242	10	25 00
Bagge, Emily C.	172	1	2 50
Bagge, Christian.	107	1	2 50
Balwin, R. O.	1135	8	20 00
Baldwin, John M.	231	10	25 00
Barnett, Chas.	1617	3	7 50
Barnett, Chas.	1121	2	5 00
Bangs, J. L.	44	5	12 50
Bennett, Albert.	671	4	10 00
Blythe, Emande E.	589	1	2 50
Bouton, A.	1187	2	5 00
Bolinger, A. J.	312	4	10 00
Bosworth, C. M.	1029	3	7 50
Bosworth, Mrs. C. M.	1027	3	7 50
Barnes, Nathan.	919	20	50 00
Buford, S. H.	622	2	5 00
Brake, G. W.	610	1	2 50
Baxter, Geo. C.	1063	5	12 50
Carpenter, J. H.	873	5	12 50
Carroll, M.	633	4	10 00
Carr, Nelson.	490	10	25 00
Castro, Juan B.	435	8	20 00
Castro, Juan B.	1593	2	5 00
Clock, Mrs. Sarah D.	1621	4	10 00
Clark, Jas. A.	611	8	20 00
Clark, Jas. A.	277	2	5 00
Clark, Annetta.	595	1	2 50
Clark, Annetta.	276	1	2 50
Coburn, A. F.	771	1	2 50
Colby, G. W.	1243	40	100 00
Cooper, J. T.	146	1	2 50
Corcoran, Jas.	302	1	2 50
Coulter, Rachael M.	1082	1	2 50
Cox, William W.	1374	4	10 00
Cox, Mrs. M. E.	1376	1	2 50
Cox, Peter.	236	10	25 00
Cox, E. J.	507	5	12 50
Cox, Mary E.	4	5	12 50
Coulter, S. T.	1039	5	12 50
Clark, W. J.	1462	10	25 00
Campbell, S. A.	1670	10	25 00
Dozier, A.	912	3	7 50
Edgington, J. S.	107	1	2 50
Edgington, Mrs. J. S.	113	1	2 50
Edgington, Mrs. Levisa.	1054	18	45 00
Elliott, J. M.	1131	1	2 50
Elmore, J. G.	1133	10	25 00
Fuerr, M. F.	475	5	17 50
Flourney, W. S.	456	4	10 00
Frazier, Thomas.	1680	10	25 00
Frazier, G. W.	270	2	5 00
Frazier, W. W.	1611	6	15 00
Frazier, Mrs. A. E.	612	1	2 50
Frost, T. G.	271	1	2 50
Frances, Joseph.	356	2	5 00
Frances, Joseph H.	357	2	5 00
Fulton, James.	093	5	12 50
Ferguson, M. P.	11	2	5 00
Ferguson, M. P.	1672	1	2 50
Gamble, May C.	579	20	50 00
Gates, T. M.	602	1	2 50
Gartelman, Daniel.	994	2	5 00
Gartelman, Daniel.	1001	2	5 00
Gaston, Hugh.	663	4	10 00
Gibbs, W. H.	103	10	25 00
Gibbs, W. H.	1209	5	12 50
Gibbs, Mrs. W. H.	103	1	2 50
Gilchrist, J. B.	364	4	10 00
Glenn, D. C.	273	1	2 50
Glenn, Mrs. Mary E.	594	1	2 50
Gladwin, W. N.	1191	4	10 00
Gordon, E. E.	252	20	50 00
Gordon, E. E.	1473	8	20 00
Gordon, E. E.	1221	44	110 00
Gordon, Miss Minnie.	1222	40	100 00
Grigsby, A. F.	117	1	2 50
Grigsby, A. F.	170	3	7 50
Grigsby, Mrs. M. C.	118	1	2 50
Gyte, Joseph.	139	1	2 50
Hasset, E. Aaron.	1561	10	25 00
Heald, J. G.	998	4	10 00
Heald, J. G.	1066	2	5 00
Heald, J. G.	1064	1	2 50
Heald, Rachael.	1064	1	2 50
Heald, D. G.	1123	4	10 00
Heald, Mrs. E.	1129	4	10 00
Hershey, Ella L.	476	10	25 00
Hershey, D. N.	1394	2	5 00
Hershey, D. N.	1709	2	5 00
Hershey, D. N.	1394	2	5 00
Hershey, Rosa M.	613	2	5 00
Hinton, J. L.	1475	5	12 50
Johnston, T. M.	661	2	5 00
Johnson, L. B.	238	5	12 50
Ketchum, Thomas E.	9 9	10	25 00
Ketchum, Thomas E.	1685	4	10 00
Ketchum, Mrs. T. E.	920	6	15 00
Kerr, J. F.	1114	10	25 00
Lewis, David.	1076	7	17 50
Lindner, Lucinda.	839	2	5 00
Lindner, John D.	847	10	25 00
Long, Peter.	22	5	12 50
Lowe, Dawson.	792	10	25 00
Lyman, Charles.	498	10	25 00
Martin, S. M.	79	2	5 00
Martin, S. M.	483	2	5 00
Marshall, A. S.	645	5	12 50
Marshall, A. S.	1015	5	12 50
Marshall, James.	1348	5	12 50
McMullin, F. A.	327	2	5 00
Meneffe, H. E.	885	4	10 00
Meyer, Waldemar.	583	10	25 00
Meyer, Waldemar.	1635	10	25 00
Mee, William.	1158	2	5 00
Miller, Rudolph.	1393	2	5 00
Miller, Rudolph.	1625	18	45 00
Moore, Samuel L.	1116	2	5 00
Morris, J. R.	1176	20	50 00
Morris, J. R.	1609	1	2 50
Morris, J. R.	1687	5	12 50
Morris, Maggie C.	1177	2	5 00
Moch, J. L.	666	5	12 50
Munson, W. J.	926	4	10 00
Oliver, Wm H.	804	1	2 50
Perdue, Mrs. Mary.	593	1	2 50
Pease, R. D.	493	2	5 00
Pease, R. D.	1730	2	5 00
Perez, F.	1211	2	5 00
Pittman, Carrie.	580	2	5 00
Pittman, Mrs. C. J.	581	3	7 50
Pilkington, Thomas.	897	2	5 00
Pilkington, Thomas.	358	2	5 00
Proctor, Geo. W.	1655	12	30 00
Proctor, Geo. W.	1713	8	20 00
Prince, N. J.	642	10	25 00
Prince, N. J.	877	5	



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Spring Tooth Harrow  
CULTIVATOR & SEEDER.



As IMPROVED and PERFECTED for 1881 will work equally as well on loose or wet land as in hard or dry soil, and what every farmer needs to destroy vegetation on the summer fallow. Will save reaping and put the land in the best possible condition for early sowing.

**LOOK TO YOUR INTERESTS**  
And make money by saving time and working your fallows before harvest. Our new size six foot ORCHARD or VINEYARD HARROWS are provided with handles, rendering them as easily controlled as the Cultivators. These implements are acknowledged by all who are familiar with their work, to be the most practical for general use in the orchard or vineyard of any yet offered to the public. Manufactured only by

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The Famous "Enterprise,"  
PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
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Took the Premium over all at the great plowing Match in Stockton, in 1870.  
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world.  
Iron Founders, Machinists and Manufacturers of Improved Agricultural Implements. General Jobbing and repairing done in the best manner at most reasonable rates. Send for circular to  
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Self-Regulating and Improved Gear.  
Using the Celebrated "Davis Wheel." Took First Premium at Stockton Fair, 1881. Water troughs always on hand. Address,  
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**Adams' Patent Pillow Sham Holder**  
Thousands have proved it the best. Can be adjusted to any ordinary bed. Black walnut and nickel plate, \$2.25; cedar and brass, \$1.75. Sent by mail with directions. G. W. WAGGONER, General Agent, 405 Tenth St., Oakland, Cal. The trade supplied.

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Send the prices mentioned below, and receive by return mail one of these splendid new Music Books for holiday presents:

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Charming Nursery and Kindergarten Songs.

PIANO SCORES, containing all the airs of

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**BROWN LEGHORN HENS**  
FOR SALE.

Parties desiring to obtain stock from this wonderful breed can do so by addressing the undersigned. I have about

**Sixty Fine Hens**

That I am willing to sell either as a whole or in small lots

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**TWO DOLLARS EACH.**

They have finished moulting and are in excellent condition. Address

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The Best Implement for Pulverizing, Harrowing, Cultivating; using steel curved teeth, and can be regulated to any depth.  
**GARDINER'S HAY ELEVATOR AND CARRIER.**  
This is Automatic and Self-regulating, raising hay or straw to any height, and carries to any desired point. It will pay for itself in one season. L. D. BURGESS, Agent, Rio Vista, Cal.

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**209 Percheron Horses**

Arrived in New York Aug. 25th  
And under Customs valuation  
Were Bonded for  
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These horses were imported by  
**M. W. DUNHAM,**  
WAYNE, DUPAGE CO., ILL.,  
upon whose farm can now be seen  
**One-Fifth of All Imported French Horses Now Living in America.**

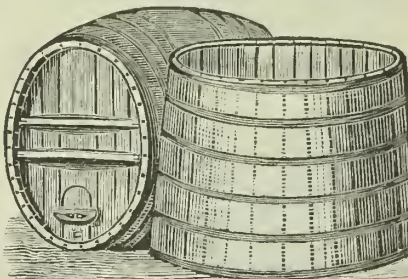
During the past 17 months 360 STALLIONS AND MARES have been imported from France to this establishment, being MORE than the combined importations of all other importers of Draft Horses from all parts of Europe for any one year.  
100 Page Catalogue sent free on application. Contains over 40 illustrations and the history of the Percheron race. Order "Catalogue S."

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**GREAT CHICAGO FAIR, 1881,**  
In COMPETITION with the LARGEST and FINEST collection of CLYDESDALE HORSES IN AMERICA,  
**M. W. DUNHAM'S**  
**Herd of Percherons**

WAS AWARDED THE  
**1st PRIZE—\$1,000—and GRAND GOLD MEDAL.**

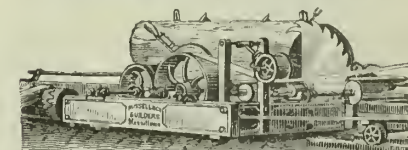
His Mare "Mignonette" was awarded the 1st Prize—\$500—and Grand Gold Medal; and his Stallion "Vidocq" was specially recommended to receive the Society's Gold Medal.  
Mention the PACIFIC RURAL PRESS.

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Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved.  
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**Agricultural Implements.**

AND SOLE AGENTS FOR THE  
**J. I. CASE T. M. CO.'S**  
Celebrated Straw and Wood-burning En-  
gines, Separators and Horse-Powers.

Also a complete assortment in stock of the J. I. CASE  
PLOW CO.'S Center and Side draft Wood and Steel-beam,  
Machine Chilled, Breaking, Vineyard, Sulky and Gang  
Plows and Harrows.  
Every plow or implement sold is warranted to give un-  
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**No. 31 Market St., S. F.**  
**BRANCH HOUSE,**

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Special inducements offered to Dealers, Farmers and  
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## BURNHAM'S ABIETENE,

The Great Family Remedy.

No Compound but a Pure Distillation of a Peculiar kind  
of Fir Balsam found in a Certain locality of the Sierras of  
California. It is used both Internally and Externally.

W. W. Haney, 221 Sacramento St., S. F., says: Abietene  
cured me of Rheumatism after other remedies had failed.  
Also relieved me of Dyspepsia and Kidney Troubles.  
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We use Abietene for Coughs, Colds, Sore Throat, Hoarse-  
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Those to whom its value and mode of application are  
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**Is a Sure Cure for Poison Oak, Headache,  
Skin Diseases, Etc.**

None Genuine without the name of WM. M. HICKMAN,  
Druggist, Stockton, Cal., on the Label. For Sale by  
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SQUIRREL



POISON.

The most successful Poison in use for Squirrel Killing

**C. E. WILLIAMS & CO., Proprietors,**  
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Moore's Sulphur Dip; Safe, Sure and Cheap prepara-  
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get out of order.

### PRICES:

200 Egg capacity..... \$60.00  
300 Egg capacity..... 75.00  
600 Egg capacity..... 90.00

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## LAUREL RANCH!

Thoroughbred

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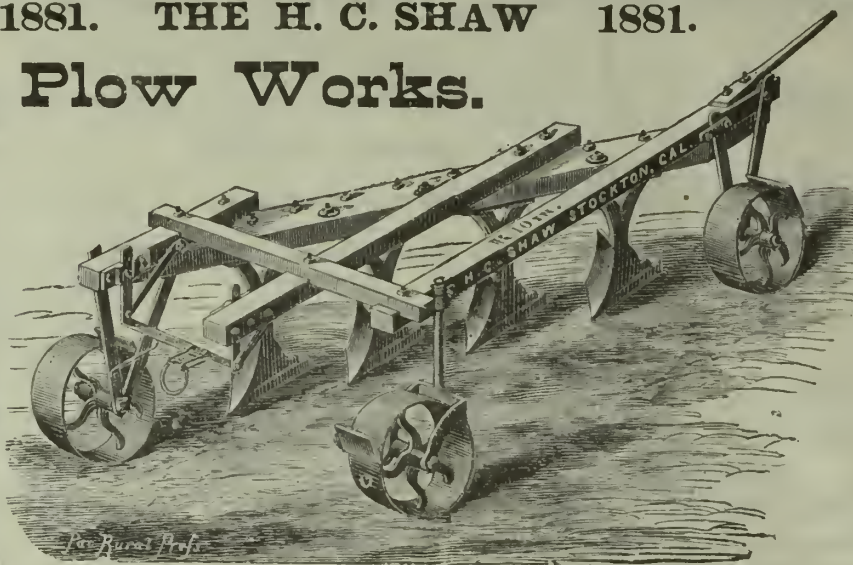
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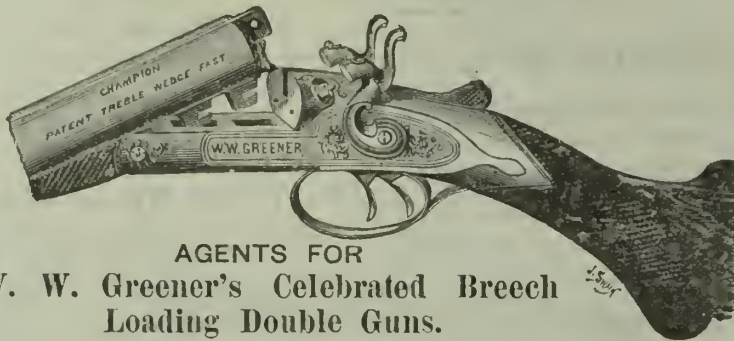
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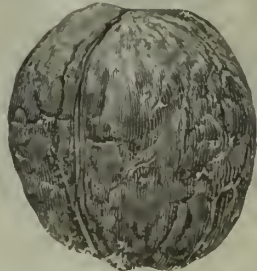
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## The Value of the Rural.

EDITORS PRESS:—I wish to say a word in commendation of your paper, which I have taken since 1st of January last, by simply remarking that I consider any one of three articles in August 13th issue, viz., "Evaporation from Stirred Soil," "The Linnet Nuisance," and "Scale Insects at San Jose," to be worth to me fully the price of a year's subscription in information on those subjects. I shall save a good many "three dollars" next year by putting in practice the suggestions there made.—SUBSCRIBER, Anaheim, Cal.

THE NICARAGUA CANAL.—A bill was introduced into the United States Senate, on Dec. 15th, by Senator Miller, to incorporate the Maritime Canal Co. of Nicaragua. The names of persons to be so incorporated are U. S. Grant, E. D. Morgan, H. J. Jewett, Howard Potter, Wm. R. Garrison, Fred. Billings, Geo. B. Loring, Wm. L. Merry, Wm. B. Franklin, Solon Humphreys, Frederick Butterfield, E. F. Beal, Wm. H. Barnum, Geo. F. Baker, Daniel Ammen, Edw. C. Anderson, Alex. Taylor, U. S. Grant, Jr., Elw. M. Clymer, S. T. Phelps, Chas. Dana, Robert Harris, Edw. F. Smith, Robert Tenbroeck, Wm. Dennison, Manuel Cuadra, Thos. DeFranc and A. G. Menocal. The bill proposes to authorize this company to do all lawful things to secure full enjoyment of the powers, privileges, rights, benefits and grants contained in the canal concession, made by the Republic of Nicaragua to the Provincial Inter-oceanic Canal Society, and confirmed May 22, 1880. The principal office of the company is to be in New York city. Its capital stock is to consist of not less than 500,000 shares, nor more than 1,000,000 shares, of \$100 each, which shall, in all respects, be deemed personal property, and its affairs are to be managed by a Board of Directors, one of whom shall be appointed by the President of the United States, and one by the government of Nicaragua.

PORCINE MONSTER.—The most notable animal slaughtered, to adorn the city markets on Christmas, was a Jersey Red or Duroc hog, grown by Messrs. Hincley & Getchel, on their Laureles ranch, in Monterey county. This hog weighed 1,018 lbs., dressed. He had been fed upon alfalfa and sour milk from the dairy. The butchers assured us that 60 days' grain would have put 300 lbs. more upon his mammoth carcass. A hog of this size will do for Christmas, but is, of course, too large for ordinary use, but the beauty of it is that the disposition to growth and fattening which the Durocs have can be arrested at any time, and one can grow marketable hogs much sooner than by using the common stock. Messrs. Hincley & Getchel are introducing the Duroc into different parts of the State and he seems bound to become popular.

IMPROVED INDIA RUBBER.—A French inventor has recently patented a method of improving India rubber and gutta-percha by the addition of a distillate of birch bark. By distilling the outer layers of the bark he obtains a dense, black, gummy matter, which possesses the properties of ordinary gutta-percha, with the additional quality of resisting both the action of air and the strongest corrosive acids. He claims also that by adding a small proportion of the birch bark gum to gutta-percha or to India rubber (one-twentieth part will suffice), the durability of the rubber or the gutta-percha will be greatly increased, the new mixture not being acted upon by the air or by acids.























